Chapter 11 Body

Contents

	Section
Body - maintenance	2
Body repair - major damage	6
Body repair - minor damage	5
Bonnet - removal, refitting and adjustment	9
Bonnet release latch - removal and refitting	10
Bumpers - removal and refitting	12
Centre console and floor lever trims - removal and refitting	24
Dash trim panels - removal and refitting	23
Door - removal, refitting and adjustment	19
Door latch, lock cylinder and handles - removal and refitting	15
Door trim panel - removal and refitting	14
Door window glass - removal and refitting	16
Door window glass regulator - removal and refitting	17
Front fender - removal and refitting	13
General information	1
Hinges and locks - maintenance	7
Instrument panel - removal and refitting	25
Outside mirrors - removal and refitting	18
Radiator grille - removal and refitting	11
Seats - removal and refitting	26
Steering column covers - removal and refitting	22
Tailgate doors - removal, refitting and adjustment	20
Tailgate (utility models) - removal, refitting and adjustment	21
Upholstery and carpets - maintenance	4
Vinyl trim - maintenance	3
Windscreen and fixed glass - renewal	8

1 General information

The vehicles covered by this manual are built with a body-on-frame construction. The frame is a ladder-type, consisting of two box steel side rails joined by crossmembers. These crossmembers are welded to the side rails, with the exception of the transmission crossmember which is bolted into place for easy removal. The vehicle bodies are secured to the chassis by rubber insulated mounts and can be completely removed from the chassis.

Certain components are particularly vulnerable to accident damage and can be unbolted and repaired or renewed. Among these parts are the body mouldings, fenders, doors, bumpers, the bonnet and tailgate and all glass. Only general body maintenance practices and body panel repair procedures within the scope of the do-it-yourselfer are included in this Chapter.

2 Body - maintenance

1 The condition of your vehicle's body is very important, because the resale value depends a great deal on it. It's much more difficult to repair a neglected or damaged body than it is to repair mechanical components. The hidden areas of the body, such as the wheel wells, the frame and the engine compartment, are equally important, although they don't require as frequent attention as the rest of the body.

2 Once a year, or every 25,000 kilometres, it's a good idea to have the underside of the body steam cleaned. All traces of dirt and oil will be removed and the area can then be inspected carefully for rust, damaged brake lines, frayed electrical wires, damaged cables and other problems. The front suspension components should be greased after completion of this job.

3 At the same time, clean the engine and the engine compartment with a steam cleaner or water-soluble degreaser.

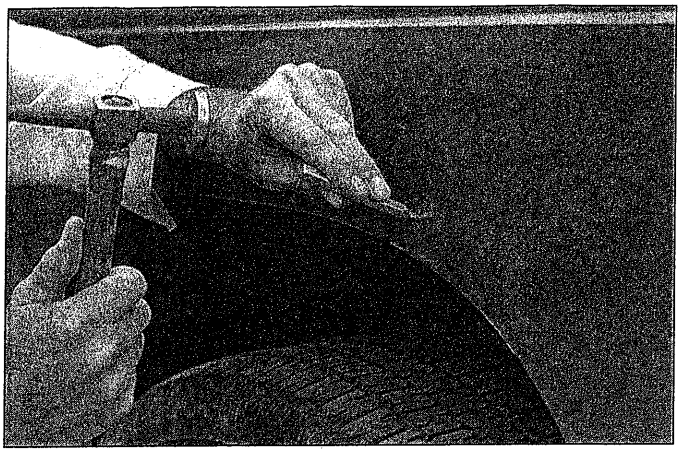
4 The wheel wells should be given close attention, since undercoating can peel away and stones and dirt thrown up by the tyres can cause the paint to chip and flake, allowing rust to set in. If rust is found, clean down to the bare metal and apply an anti-rust paint.

5 The body should be washed about once a week. Wet the vehicle thoroughly to soften the dirt, then wash it down with a soft sponge and plenty of clean soapy water. If the surplus dirt is not washed off very carefully, it can wear down the paint.

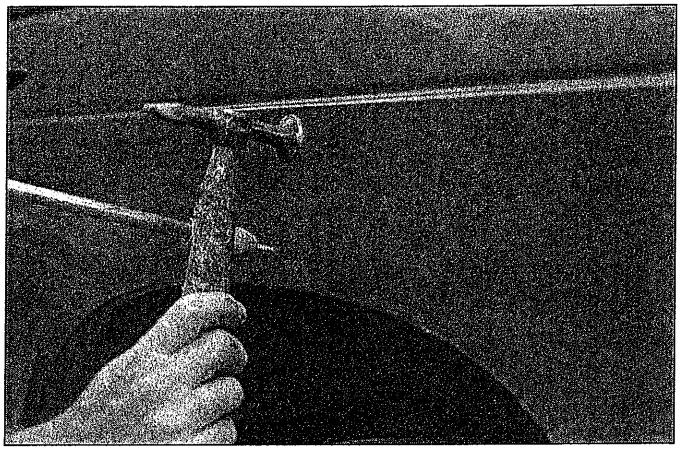
6 Spots of tar or asphalt thrown up from the road should be removed with a cloth soaked in solvent.

7 Once every six months, wax the body and chrome trim. If a chrome cleaner is used to remove rust from any of the vehicle's plated parts, remember that the cleaner also removes part of the chrome, so use it sparingly.

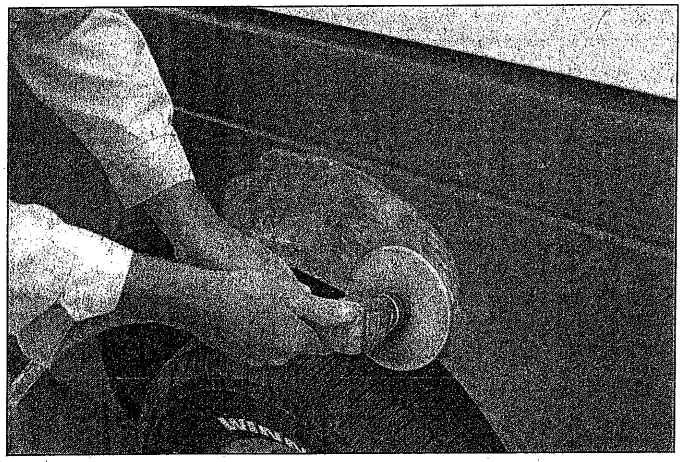
These photos illustrate a method of repairing simple dents. They are intended to supplement *Body repair - minor damage* in this Chapter and should not be used as the sole instructions for body repair on these vehicles.



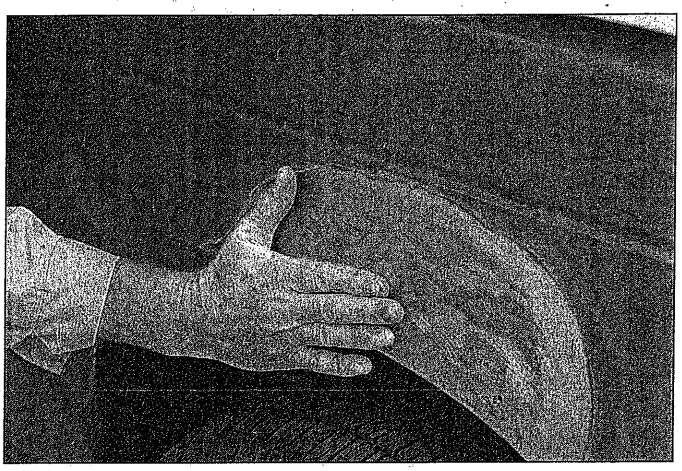
1 If you can't access the backside of the body panel to hammer out the dent, pull it out with a slide-hammer-type dent puller. In the deepest portion of the dent or along the crease line, drill or punch hole(s) at least one inch apart . . .



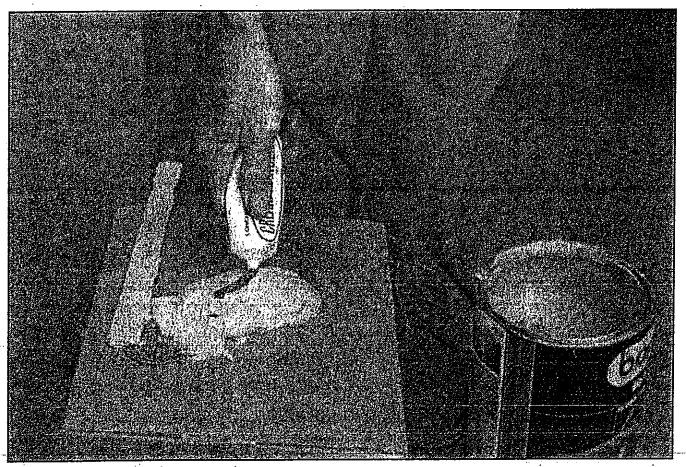
2 . . . then screw the slide-hammer into the hole and operate it. Tap with a hammer near the edge of the dent to help 'pop' the metal back to its original shape. When you're finished, the dent area should be close to its original contour and about 1/8-inch below the surface of the surrounding metal



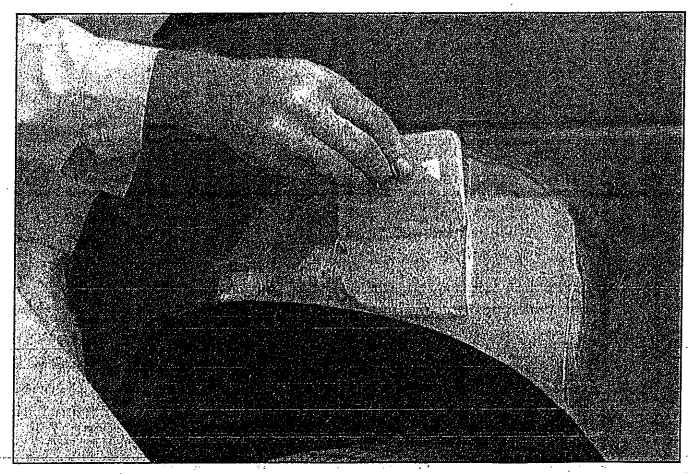
3 Using coarse-grit sandpaper, remove the paint down to the bare metal. Hand sanding works fine, but the disc sander shown here makes the job faster. Use finer (about 320-grit) sandpaper to feather-edge the paint at least one inch around the dent area



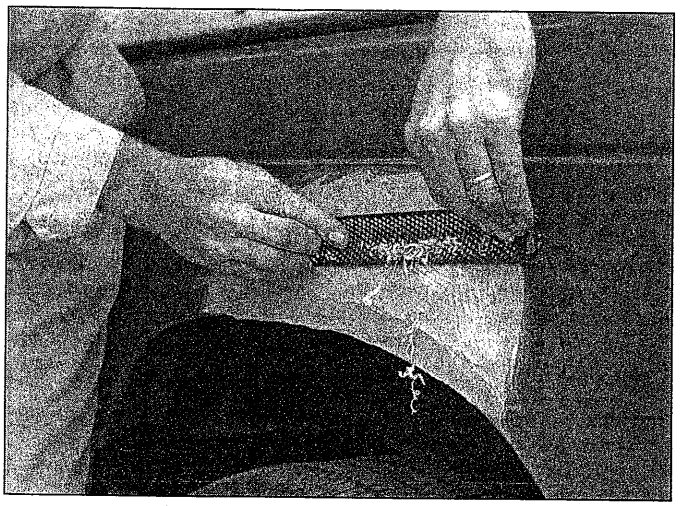
4 When the paint is removed, touch will probably be more helpful than sight for telling if the metal is straight. Hammer down the high spots or raise the low spots as necessary. Clean the repair area with wax/silicone remover



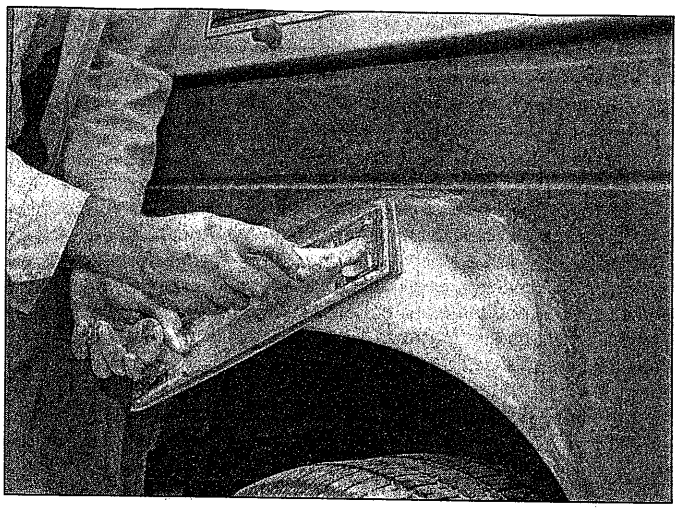
5 Following label instructions, mix up a batch of plastic filler and hardener. The ratio of filler to hardener is critical, and, if you mix it incorrectly, it will either not cure properly or cure too quickly (you won't have time to file and sand it into shape)



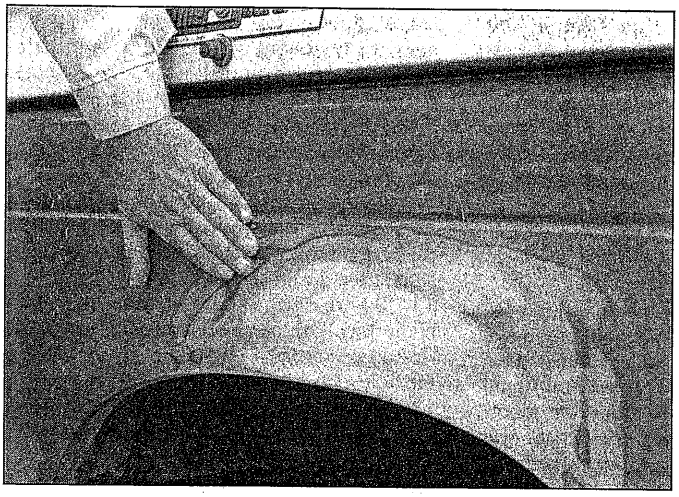
6 Working quickly so the filler doesn't harden, use a plastic applicator to press the body filler firmly into the metal, assuring it bonds completely. Work the filler until it matches the original contour and is slightly above the surrounding metal



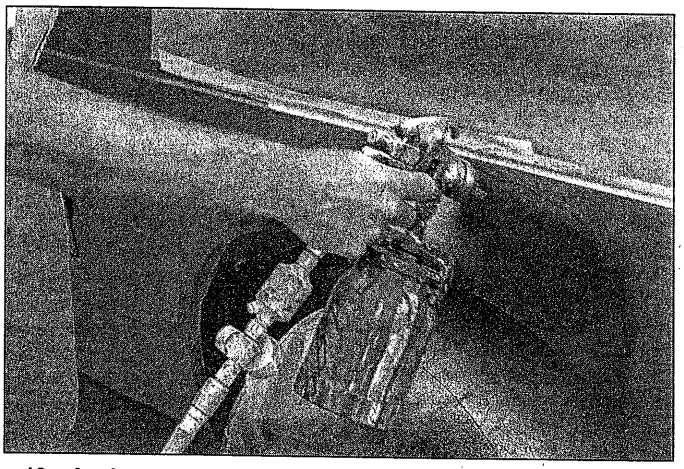
7 Let the filler harden until you can just dent it with your fingernail. Use a body file or Surform tool (shown here) to rough-shape the filler



8 Use coarse-grit sandpaper and a sanding board or block to work the filler down until it's smooth and even. Work down to finer grits of sandpaper - always using a board or block - ending up with 360 or 400 grit

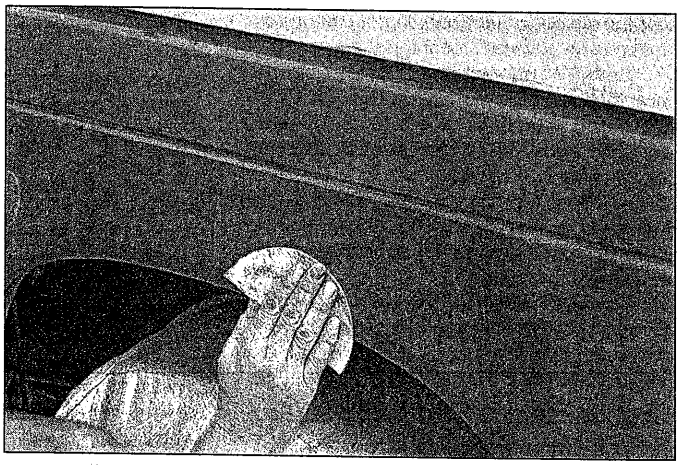


9 You shouldn't be able to feel any ridge at the transition from the filler to the bare metal or from the bare metal to the old paint. As soon as the repair is flat and uniform, remove the dust and mask off the adjacent panels or trim pieces



10 Apply several layers of primer to the area. Don't spray the primer on too heavy, so it sags or runs, and make sure each coat is dry before you spray on the next one. A professional-type spray gun is being used here, but aerosol spray primer is available inexpensively from auto parts stores

11 The primer will help reveal imperfections or scratches. Fill these with glazing compound. Follow the label instructions and sand it with 360 or 400-grit sandpaper until it's smooth. Repeat the glazing, sanding and respraying until the primer reveals a perfectly smooth surface



12 Finish sand the primer with very fine sandpaper (400 or 600-grit) to remove the primer overspray. Clean the area with water and allow it to dry. Use a tack rag to remove any dust, then apply the finish coat. Don't attempt to rub out or wax the repair area until the paint has dried completely (at least two weeks)

3 Vinyl trim - maintenance

Don't clean vinyl trim with detergents, caustic soap or petroleum-based cleaners. Plain soap and water works just fine, with a soft brush to clean dirt that may be ingrained. Wash the vinyl as frequently as the rest of the vehicle. After cleaning, application of a high-quality rubber and vinyl protectant will help prevent oxidation and cracks. The protectant can also be applied to weatherstripping, vacuum lines and rubber hoses, which often fail as a result of chemical degradation, and to the tyres.

4 Upholstery and carpets - maintenance

1 Every three months remove the floor mats and clean the interior of the vehicle (more frequently if necessary). Use a stiff whisk broom to brush the carpeting and loosen dirt and dust, then vacuum the upholstery and carpets thoroughly, especially along seams and crevices.

2 Dirt and stains can be removed from carpeting with basic household or automotive carpet shampoos available in spray cans. Follow the directions and vacuum again, then use a stiff brush to bring back the "nap" of the carpet.

3 Most interiors have cloth or vinyl upholstery, either of which can be cleaned and maintained with a number of material-specific cleaners or shampoos available in auto supply stores. Follow the directions on the product for usage, and always spot-test any upholstery cleaner on an inconspicuous area (bottom edge of a back seat cushion) to ensure that it doesn't cause a colour shift in the material.

4 After cleaning, vinyl upholstery should be treated with a protectant. **Note:** *Make sure the protectant container indicates the product can be used on seats - some products may make a seat too slippery.* **Caution:** *Do not use protectant on vinyl-covered steering wheels.*

5 Leather upholstery requires special care. It should be cleaned regularly with saddle soap or leather cleaner. Never use alcohol, petrol, nail polish remover or thinner to clean leather upholstery.

6 After cleaning, regularly treat leather upholstery with a leather conditioner, rubbed in with a soft cotton cloth. Never use car wax on leather upholstery.

7 In areas where the interior of the vehicle is subject to bright sunlight, cover leather seating areas of the seats with a sheet if the vehicle is to be left out for any length of time.

5 Body repair - minor damage

Repair of scratches

1 If the scratch is superficial and does not penetrate to the metal of the body, repair is very simple. Lightly rub the scratched area with a fine rubbing compound to remove loose paint and built-up wax. Rinse the area with clean water.

2 Apply touch-up paint to the scratch, using a small brush. Continue to apply thin layers of paint until the surface of the paint in the scratch is level with the surrounding paint. Allow the new paint at least two weeks to harden, then blend it into the surrounding paint by rubbing with a very fine rubbing compound. Finally, apply a coat of wax to the scratch area.

3 If the scratch has penetrated the paint and exposed the metal of the body, causing the metal to rust, a different repair technique is required. Remove all loose rust from the bottom of the scratch with a pocket knife, then apply rust inhibiting paint to prevent the formation of rust in the future. Using a rubber or nylon applicator, coat the scratched area with glaze-type filler. If required, the filler can be mixed with thinner to provide a very thin paste, which is ideal for filling narrow scratches. Before the glaze filler in the scratch hardens, wrap a piece of smooth cotton cloth around the tip of a finger. Dip the cloth in thinner and then quickly wipe it along the surface of the scratch. This will ensure that the surface of the filler is slightly hollow. The scratch can now be painted over as described earlier in this Section.

Repair of dents

See photo sequence

4 When repairing dents, the first job is to pull the dent out until the affected area is as close as possible to its original shape. There is no point in trying to restore the original shape completely as the metal in the damaged area will have stretched on impact and cannot be restored to its original contours. It is better to bring the level of the dent up to a point which is about 3 mm below the level of the surrounding metal. In cases where the dent is very shallow, it is not worth trying to pull it out at all.

5 If the back side of the dent is accessible, it can be hammered out gently from behind using a soft-face hammer. While doing this, hold a block of wood firmly against the opposite side of the metal to absorb the hammer blows and prevent the metal from being stretched.

6 If the dent is in a section of the body which has double layers, or some other factor makes it inaccessible from behind, a different technique is required. Drill several small holes through the metal inside the damaged area, particularly in the deeper sections. Screw long, self tapping screws into the holes just enough for them to get a good grip in the metal. Now the dent can be pulled out by pulling on the protruding heads of the screws with locking pliers.

7 The next stage of repair is the removal of paint from the damaged area and from 25 mm or so of the surrounding metal. This is easily done with a wire brush or sanding disk in a drill motor, although it can be done just as effectively by hand with sandpaper. To complete the preparation for filling, score the surface of the bare metal with a screwdriver or the tang of a file or drill small holes in the affected area. This will provide a good grip for the filler material. To complete the repair, see the Section on *filling and painting*.

Repair of rust holes or gashes

8 Remove all paint from the affected area and from 25 mm or so of the surrounding metal using a sanding disk or wire brush mounted in a drill motor. If these are not available, a few sheets of sandpaper will do the job just as effectively.

9 With the paint removed, you will be able to determine the severity of the corrosion and decide whether to renew the whole panel, if possible, or repair the affected area. New body panels are not as expensive as most people think and it is often quicker to refit a new panel than to repair large areas of rust.

10 Remove all trim pieces from the affected area except those which will act as a guide to the original shape of the damaged body, such as headlight shells, etc. Using metal snips or a hacksaw blade, remove all loose metal and any other metal that is badly affected by rust. Hammer the edges of the hole on the inside to create a slight depression for the filler material.

11 Wire brush the affected area to remove the powdery rust from the surface of the metal. If the back of the rusted area is accessible, treat it with rust inhibiting paint.

12 Before filling is done, block the hole in some way. This can be done with sheet metal riveted or screwed into place, or by stuffing the hole with wire mesh.

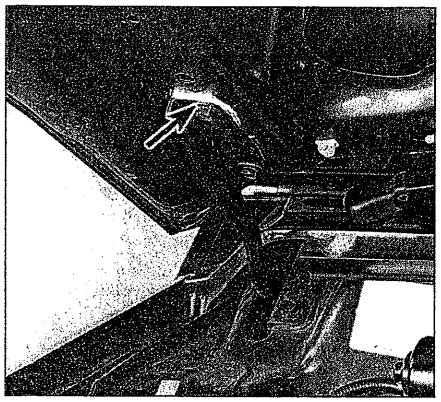
13 Once the hole is blocked off, the affected area can be filled and painted. See the following subsection on *filling and painting*.

Filling and painting

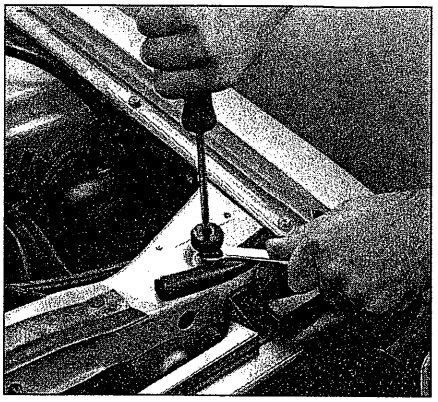
14 Many types of body fillers are available, but generally speaking, body repair kits which contain filler paste and a tube of resin hardener are best for this type of repair work. A wide, flexible plastic or nylon applicator will be necessary for imparting a smooth and contoured finish to the surface of the filler material. Mix up a small amount of filler on a clean piece of wood or cardboard (use the hardener sparingly). Follow the manufacturer's instructions on the package, otherwise the filler will set incorrectly.

15 Using the applicator, apply the filler paste to the prepared area. Draw the applicator across the surface of the filler to achieve the desired contour and to level the filler surface. As soon as a contour that approximates the original one is achieved, stop working the paste. If you continue, the paste will begin to stick to the applicator. Continue to add thin layers of paste at 20-minute intervals until the level of the filler is just above the surrounding metal.

16 Once the filler has hardened, the excess can be removed with a body file. From then on, progressively finer grades of sandpaper should be used, starting with a 180-grit paper and finishing with 600-grit wet-or-dry paper.



9.2 Use white paint or a pencil to mark the exact positions of the bonnet hinges (arrow). During refitting, match the marks up - the bonnet should close and latch perfectly



9.11 If the front of the bonnet is loose or is too high in relation to the fenders, these stops can be adjusted to give firm closure and correct height

Always wrap the sandpaper around a flat rubber or wooden block, otherwise the surface of the filler will not be completely flat. During the sanding of the filler surface, the wet-or-dry paper should be periodically rinsed in water. This will ensure that a very smooth finish is produced in the final stage.

17 At this point, the repair area should be surrounded by a ring of bare metal, which in turn should be encircled by the finely feathered edge of good paint. Rinse the repair area with clean water until all of the dust produced by the sanding operation is gone.

18 Spray the entire area with a light coat of primer. This will reveal any imperfections in the surface of the filler. Repair the imperfections with fresh filler paste or glaze filler and once more smooth the surface with sandpaper. Repeat this spray-and-repair procedure until you are satisfied that the surface of the filler and the feathered edge of the paint are perfect. Rinse the area with clean water and allow it to dry completely.

19 The repair area is now ready for painting. Spray painting must be carried out in a warm, dry, windless and dust free atmosphere. These conditions can be created if you have access to a large indoor work area, but if you are forced to work in the open, you will have to pick the day very carefully. If you are working indoors, dousing the floor in the work area with water will help settle the dust which would otherwise be in the air. If the repair area is confined to one body panel, mask off the surrounding panels. This will help minimise the effects of a slight mismatch in paint colour. Trim pieces such as chrome strips, door handles, etc., will also need to be masked off or removed. Use masking tape and several thickness of newspaper for the masking operations.

20 Before spraying, shake the paint can thoroughly, then spray a test area until the spray painting technique is mastered. Cover the repair area with a thick coat of primer. The thickness should be built up using several thin layers of primer rather than one thick one. Using 600-grit wet-or-dry sandpaper, rub down the surface of the primer until it is very smooth. While doing this, the work area should be thoroughly rinsed with water and the wet-or-dry sandpaper periodically rinsed as well. Allow the primer to dry before spraying additional coats.

21 Spray on the top coat, again building up the thickness by using several thin layers of paint. Begin spraying in the centre of the repair area and then, using a circular motion, work out until the whole repair area and about 50 mm of the surrounding original paint is covered. Remove all masking material 10 to 15 minutes after spraying on the final coat of paint. Allow the new paint at least two weeks to harden, then use a very fine rubbing compound to blend the edges of the new paint into the existing paint. Finally, apply a coat of wax.

6 Body repair - major damage

1 Major damage must be repaired by an auto body shop specifically equipped to perform body and frame repairs. These shops have the specialised equipment required to do the job properly.

2 If the damage is extensive, the body must be checked for proper alignment or the vehicle's handling characteristics may be adversely affected and other components may wear at an accelerated rate.

3 Due to the fact that all of the major body components (bonnet, fenders, etc.) are separate and replaceable units, any seriously damaged components should be renewed rather than repaired. Sometimes the components can be found in a wrecking yard that specialises in used vehicle components, often at considerable savings over the cost of new parts.

7 Hinges and locks - maintenance

Once every 5000 kilometres, or every three months, the hinges and latch assemblies on the doors and bonnet should be given a few drops of light oil or lock lubricant. The door latch strikers should also be lubricated with a thin coat of grease to reduce wear and ensure free movement. Lubricate the door and luggage compartment locks with spray-on graphite lubricant.

8 Windscreen and fixed glass - renewal

Renewal of the windscreen and fixed glass requires the use of special fast-setting adhesive/caulk materials and some specialised tools and techniques. These operations should be left to a dealer service department or a shop specialising in glass work.

9 Bonnet - removal, refitting and adjustment

Note: *The bonnet is heavy and somewhat awkward to remove and refit - at least two people should perform this procedure.*

Removal and refitting

Refer to illustration 9.2

1 Use blankets or pads to cover the cowl area of the body and the fenders. This will protect the body and paint as the bonnet is lifted off.

2 Paint marks or scribe a line around the bonnet hinge to ensure proper alignment during refitting **(see illustration)**.

3 Disconnect any washer hoses that will interfere with removal.

4 Have an assistant support the bonnet. Remove the hinge-to-bonnet nuts or bolts.

5 Lift off the bonnet.

6 Refitting is the reverse of removal.

Adjustment

Refer to illustration 9.11

7 Fore-and-aft and side-to-side adjustment of the bonnet is done by moving the hinge plate slot after loosening the bolts or nuts.

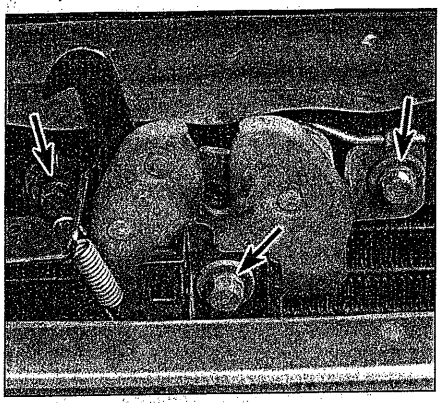
8 Scribe a line around the entire hinge plate so you can judge the amount of movement.

9 Loosen the bolts or nuts and move the bonnet into correct alignment. Move it only a little at a time. Tighten the hinge bolts and carefully lower the bonnet to check the position.

10 If necessary after refitting, the entire bonnet latch assembly can be adjusted up-and-down as well as from side-to-side on the radiator support so the bonnet closes securely and flush with the fenders. To make the adjustment, scribe a line or mark around the bonnet latch mounting bolts to provide a reference point, then loosen them and reposition the latch assembly, as necessary. Following adjustment, retighten the mounting bolts.

11 Adjust the bonnet stop bumpers to achieve the correct bonnet height at the front edges **(see illustration)**.

12 The bonnet latch assembly, as well as the hinges, should be periodically lubricated with white, lithium-base grease to prevent binding and wear.



10.1 After loosening the bolts (arrows), the latch can be repositioned to pull the bonnet down more or less tightly

10 Bonnet release latch - removal and refitting

Refer to illustration 10.1

1 Scribe a line around the latch to aid alignment when refitting, then detach the latch retaining bolts from the radiator support **(see illustration)** and remove the latch.

2 Disconnect the bonnet release cable by disengaging the cable from the latch assembly.

3 Refitting is the reverse of the removal procedure. **Note:** *Adjust the latch so the bonnet engages securely when closed and the bonnet bumpers are slightly compressed.*

11 Radiator grille - removal and refitting

Refer to illustrations 11.3a and 11.3b

1 Open the bonnet and support it.

2 Remove the screws, disconnect the wiring and remove the front turn signal lamps, if equipped.

3 Release all of the grille clips by turning them a quarter turn and then puling them out **(see illustrations)**.

4 If required for clearance, remove the push bar.

5 Lift the grille out from the top.

6 Refitting is the reverse of removal. Snap all of the clips into place as you refit it.

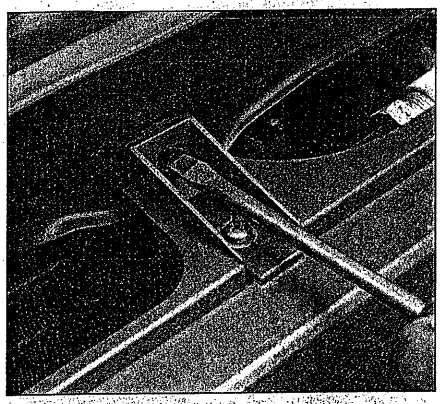
12 Bumpers - removal and refitting

1 Disconnect any electrical connections that interfere with bumper removal. Remove any trailer hitch and its wiring harness if it will interfere with bumper removal.

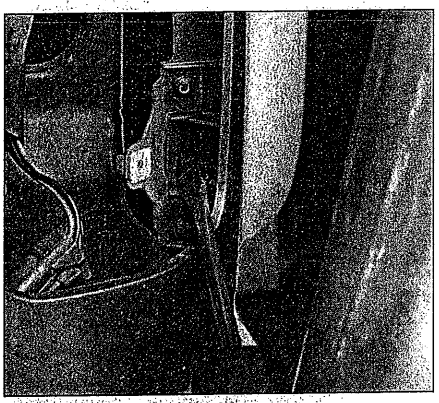
2 Support the bumper with a jack or jackstands. Alternatively, have an assistant support the bumper as the bolts are removed. Use masking tape to suspend a towel between the bumper end and the body to make certain there is no contact made between the two.

3 Working from the back of the bumper, remove the retaining bolts securing the bumper bracket to the outside of each frame rail. Remove the bumper from the vehicle.

4 Refitting is the reverse of removal. It is easiest to have two assistants align the bumper while you refit the bolts.



11.3a These quarter-turn fasteners secure the plastic grille to the radiator core support



11.3b On some models, the turn signal light must be removed for access to some of the clips

13 Front fender - removal and refitting

1 Loosen the front wheel lug nuts, raise the vehicle and support it securely on jackstands. Remove the wheel.

2 Remove the front bumper (see Section 12).

3 Remove the side marker and turn signal light assembly, if equipped (see Chapter 12).

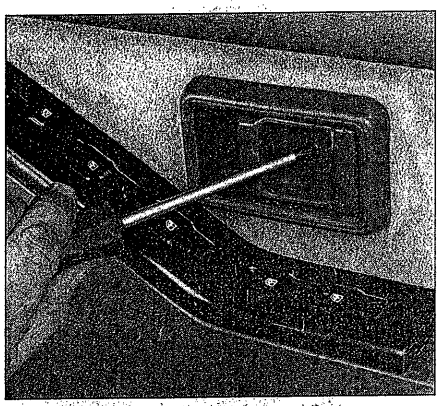
4 If removing the passenger side fender, disconnect the aerial (see Chapter 12).

5 Remove the grille.

6 Remove the fender mounting bolts and nuts. Make note of any shims used and their positions.

7 Detach the fender. It's a good idea to have an assistant support the fender while it's being moved away from the vehicle to prevent damage to the surrounding body panels.

8 Refitting is the reverse of removal.



14.2a Remove the door handle bezel screw . . .

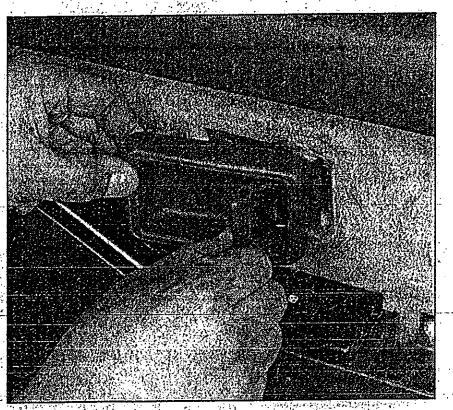
14 Door trim panel - removal and refitting

Refer to illustrations 14.2a, 14.2b, 14.2c, 14.4a, 14.4b, 14.4c, 14.5a, 14.5b, 14.5c, 14.5d, 14.5e, 14.6 and 14.8

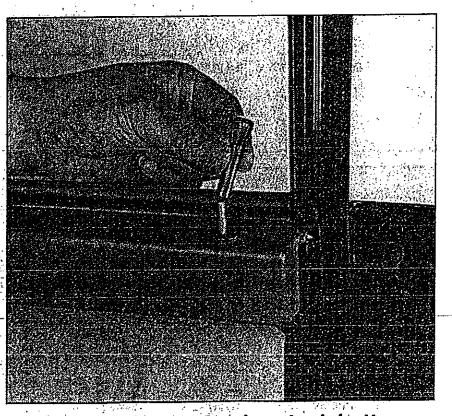
1 Disconnect the negative cable from the battery.

2 Remove the inside door handle trim bezel **(see illustrations)**. Unscrew the door lock knob **(see illustration)**.

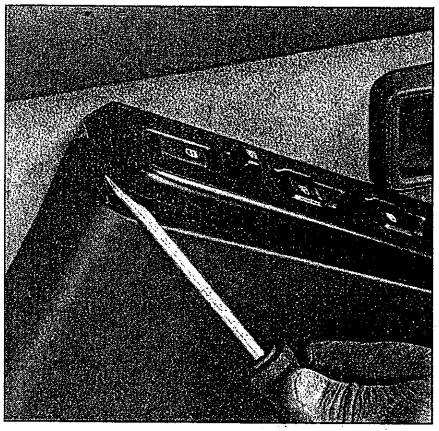
3 On manual window equipped models, remove the window crank, using a hooked tool to remove the retainer clip. A special tool



14.2b . . . and lift the bezel off

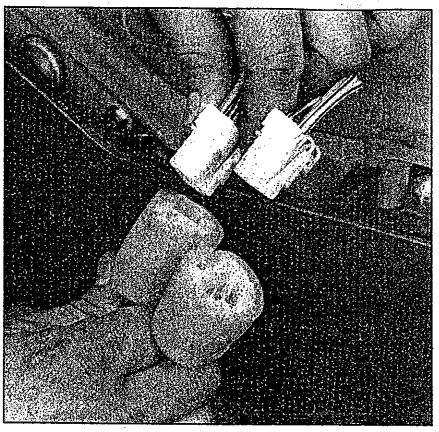


14.2c Unscrew the door lock button

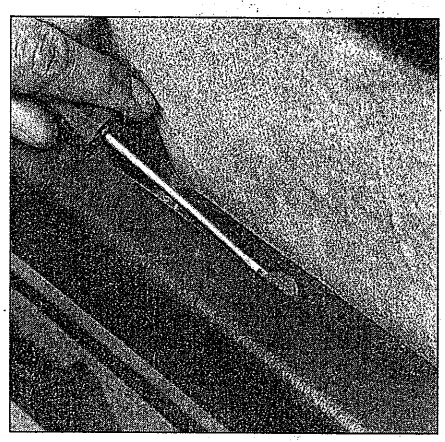


14.4a On power window equipped vehicles, the front of the control panel can be pried up

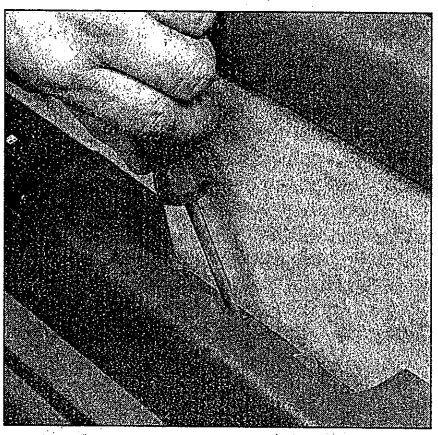
14.4b Grasping it at the front, lift the unit from the armrest



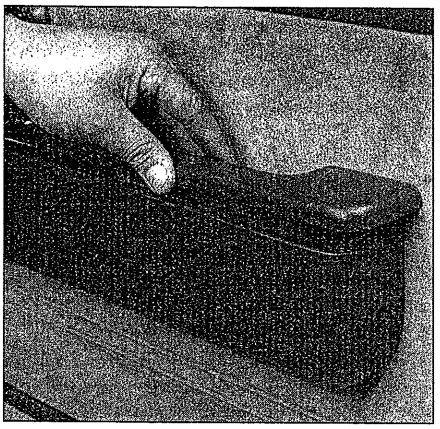
14.4c Disconnect the wiring from the switches



14.5a The armrest screws are concealed beneath these plastic covers. A flat blade screwdriver will remove them



14.5b A Phillips screwdriver is needed to remove the screws beneath the covers



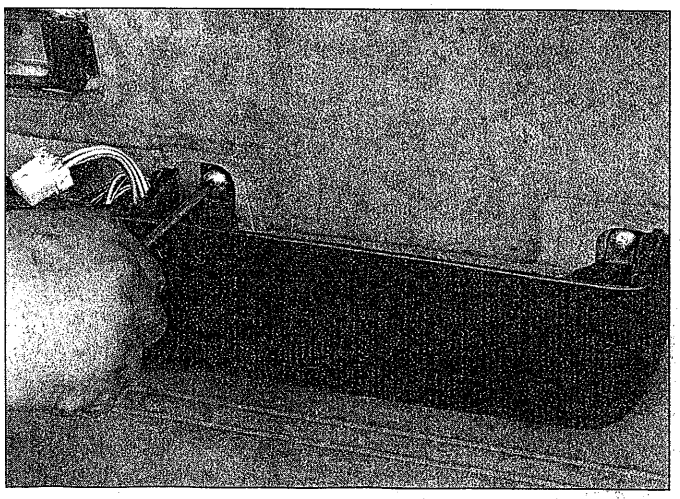
14.5c Lift the cover from the armrest

is available for this purpose, but it's not essential. With the clip removed, pull off the handle.

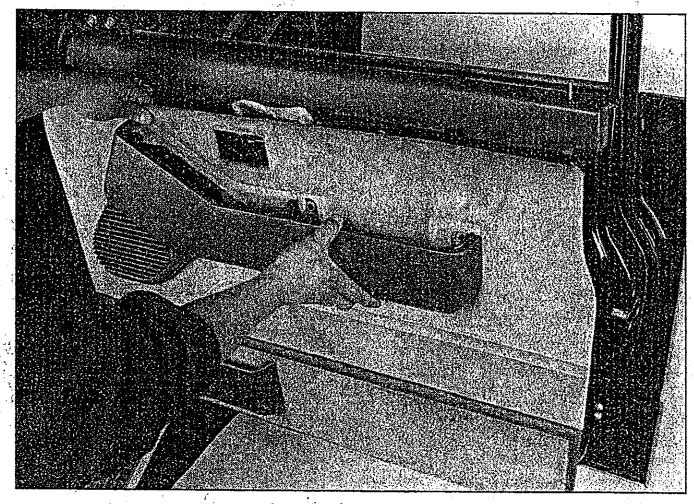
4 On power window equipped models, prise out the armrest switch control plate **(see illustrations)** and disconnect the electrical connections.

5 Remove the cover from the armrest **(see illustrations)**. Detach the armrest pull handle retaining screws and lift off the armrest **(see illustrations)**.

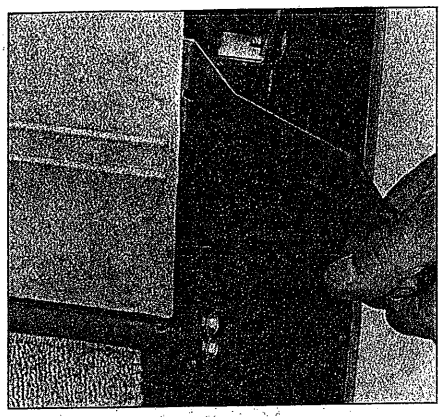
6 Remove the remaining door panel retaining screws at the lower edge of the door panel. Insert a wide putty knife, a thin screwdriver or a special trim panel removal tool between the trim panel and the head of the retaining clip to disengage the door panel retaining clips **(see illustration)**.



14.5d The large screws which secure the armrest are now accessible



14.5e Lift the armrest from the door panel



14.6 A wide tool with no sharp edges should be used to remove the panel from the frame of the door - a putty knife works well

7 Once all of the clips and screws are disengaged, detach the trim panel, disconnect any electrical connectors and remove the trim panel from the vehicle by gently pulling it up and out.

8 For access to the inner door remove the door panel support bracket (if equipped), then peel back the watershield, taking care not to tear it **(see illustration)**. To refit the trim panel, first press the watershield back into place. If necessary, add more sealant to hold it in place.

9 Refitting is the reverse of removal.

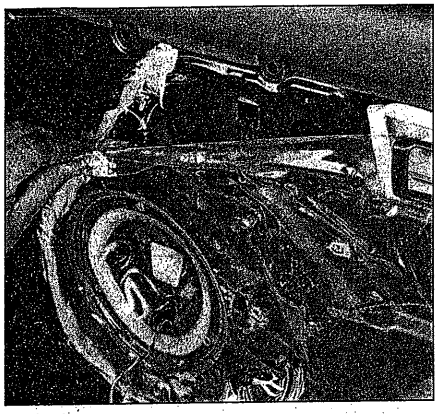
15 Door latch, lock cylinder and handles - removal and refitting

Door latch

Refer to illustrations 15.3 and 15.4

1 Raise the window then remove the door trim panel and watershield as described in Section 14.

2 Working through the large access hole, disengage the outside door handle to latch rod, outside door lock to latch rod, the inside lock to latch rod, the inside handle to latch rod and the lock solenoid to latch rod (if equipped).



14.8 Be careful as you remove the watershield from the door. It must be renewed to prevent moisture from damaging the door trim panel

3 All door locking rods are attached by plastic clips **(see illustration)**. The plastic clips can be removed by unsnapping the portion engaging the connecting rod and then by pulling the rod out of its locating hole.

4 Remove the screws securing the latch to the door **(see illustration)**, then remove the latch assembly from the door.

5 Refitting is the reverse of removal.

Outside handle and door lock cylinder

Refer to illustrations 15.7 and 15.8

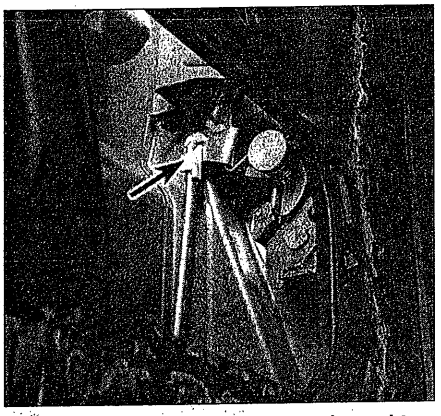
6 To remove the outside handle and lock cylinder assembly, raise the window then remove the door trim panel and watershield as described in Section 14.

7 Working through the access hole, disengage the plastic clips that secure the outside handle to latch rod and the outside door lock to latch rod **(see illustration)**.

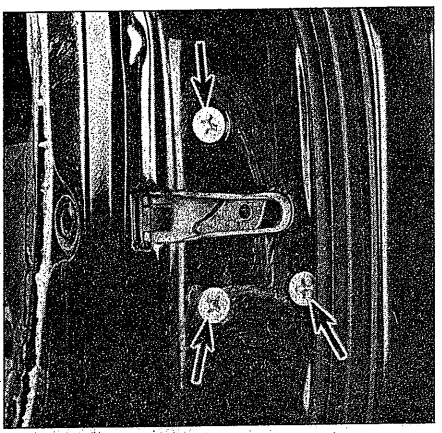
8 Remove the handle retaining bolts and the lock cylinder clip **(see illustration)**.

9 Remove the handle and lock cylinder assembly from the vehicle.

10 Refitting is the reverse of removal.



15.3 These plastic clips (arrow) need to be released to remove the control rods from the latch



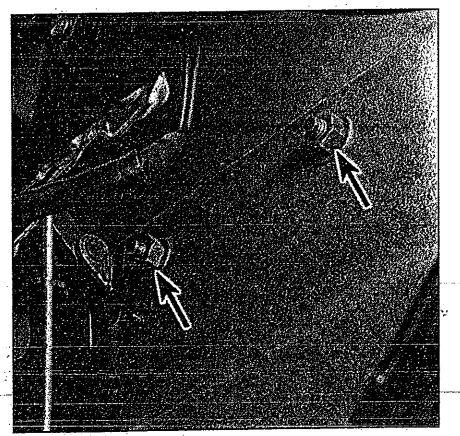
15.4 The latch is retained to the door frame by these flat-head screws (arrows). A large (#3) Phillips screwdriver should be used to avoid damaging the heads

Inside handle

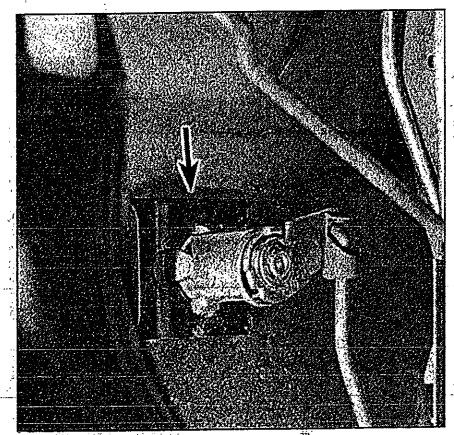
Refer to illustration 15.12

11 Remove the door trim panel as described in Section 14 and peel away the watershield.

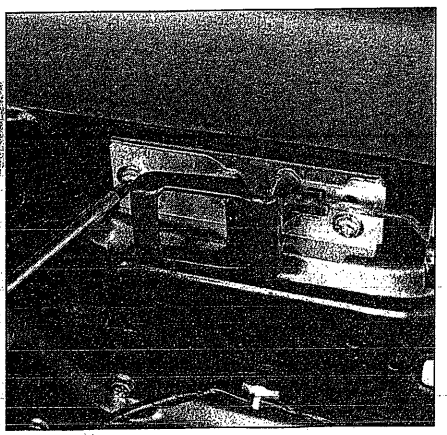
12 Unclip the door actuating rod guide,



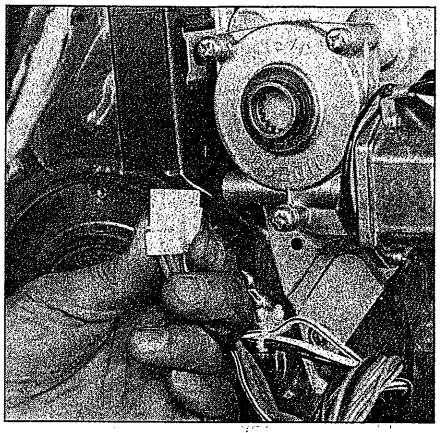
15.7 Remove these nuts (arrows) to allow the outside handle to be lifted off



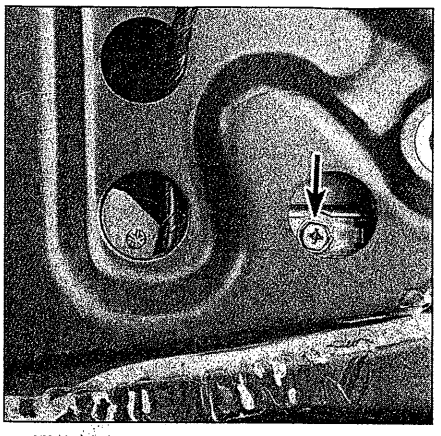
15.8 This flat clip (arrow) secures the lock cylinder; slide it forward with a screwdriver to remove it



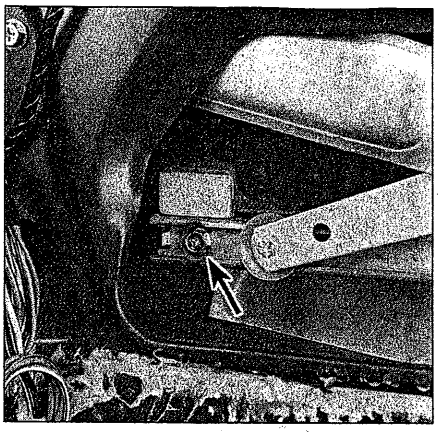
15.12 The inside handle assembly is held with two screws



17.3 The wiring to the window motor must be disconnected on vehicles equipped with this option



17.4a There are holes provided in the door for access to the rear . . .



17.4b . . . and the front window regulator screws

then remove the door handle retaining screws **(see illustration)**.

13 Pull the handle free from the door, then disconnect the actuating rod from the backside of the handle control and remove the handle from the door.

14 Refitting is the reverse of removal.

16 Door window glass - removal and refitting

1 Remove the door trim panel and the plastic watershield (see Section 14).

2 Lower the window glass all the way down into the door.

3 Carefully prise the inner weatherstrip out of the door window opening.

4 Raise the window just enough to access the window retaining bolts through the hole in the door frame.

5 Remove the vent window (if equipped).

6 Place a rag over the glass to help prevent scratching the glass and remove the two glass mounting bolts.

7 Remove the glass by pulling it up and out.

8 Refitting is the reverse of removal.

17 Door window glass regulator - removal and refitting

Refer to illustrations 17.3, 17.4a and 17.4b

1 Remove the door trim panel and the plastic watershield (see Section 14).

2 Remove the window glass assembly (see Section 16).

3 On power operated windows, disconnect the electrical connector from the window regulator motor **(see illustration)**.

4 Remove the equaliser arm bracket and the regulator mounting bolts **(see illustrations)**.

5 Pull the equaliser arm and regulator assemblies through the service hole in the door frame to remove it.

6 Refitting is the reverse of removal.

18 Outside mirrors - removal and refitting

Refer to illustrations 18.1a, 18.1b, and 18.2

1 Remove the screw, then prise off the mirror trim cover **(see illustrations)**.

2 Remove the mirror retaining screws and detach the mirror from the vehicle **(see illustration)**.

3 Disconnect the electrical connector from the mirror (if equipped).

4 Refitting is the reverse of removal.

19 Door - removal, refitting and adjustment

Note: *The door is heavy and somewhat awkward to remove and refit - at least two people should perform this procedure.*

Removal and refitting

Refer to illustrations 19.6 and 19.8

1 Raise the window completely in the door and then disconnect the negative cable from the battery.

2 Open the door all the way and support it on jacks or blocks covered with rags to prevent damaging the paint.

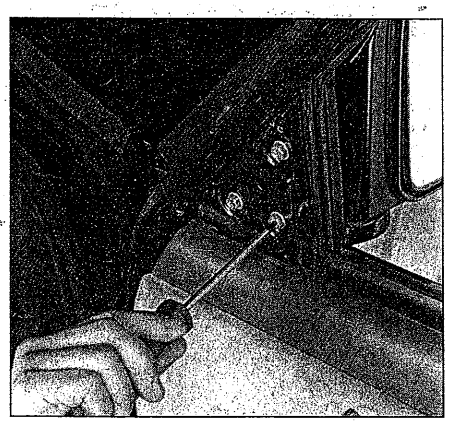
3 Remove the door trim panel and water deflector as described in Section 14.

4 Disconnect all electrical connections, earth connecting wires and harness retaining clips from the door. **Note:** *It is a good idea to label all connections to aid the reassembly process.*

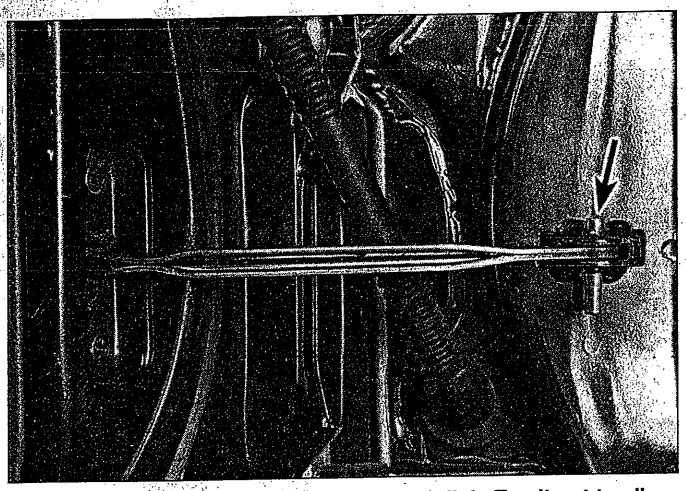
5 From the door side, detach the rubber conduit between the body and the door. Then pull the wiring harness through the conduit hole and it remove from the door.

18.1a One screw secures the inner cover of the mirror

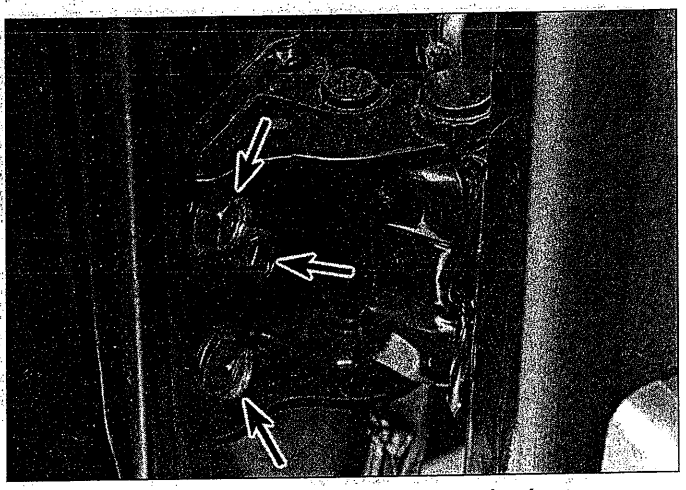
18.1b Lift the cover off - a little levering with a padded screwdriver may be necessary



18.2 Remove the three screws. Support the weight of the mirror as you remove the last two



19.6 This pin (arrow) retains the door stop link. Tap it out to allow the door to swing open and then be removed



19.8 You will need an assistant to support the door as you remove these hinge bolts (arrows). Always disconnect the lower hinge first to ease removal

6 Remove the door stop strut centre pin **(see illustration)**.

7 Mark around the door hinges with a pen or a scribe to facilitate realignment during reassembly.

8 With an assistant holding the door, remove the hinge to door bolts and lift the door off **(see illustration)**.

9 Refitting is the reverse of removal.

Adjustment

10 Having proper door to body alignment is a critical part of a well functioning door assembly. First check the door hinge pins for excessive play. Fully open the door and lift up and down on the door without lifting the body. If a door has 2 mm or more excessive play, the hinges should be renewed.

11 Door-to-body alignment adjustments are made by loosening the hinge-to-body bolts or hinge-to-door bolts and moving the door. Proper body alignment is achieved when the top of the doors are parallel with the roof section, the front door is flush with the fender, the rear door is flush with the rear quarter panel and the bottom of the doors are aligned with the lower rocker panel. If these goals can't be reached by adjusting the hinge-to-body or hinge-to-door bolts, body alignment shims may have to be purchased and inserted behind the hinges to achieve correct alignment.

12 To adjust the door closed position, scribe a line or mark around the striker plate to provide a reference point, then check that the door latch is contacting the centre of the latch striker. If not adjust the up and down position first.

13 Finally adjust the latch striker sideways position, so that the door panel is flush with the centre pillar or rear quarter panel and provides positive engagement with the latch mechanism.

20 Tailgate doors - removal, refitting and adjustment

Note: *The tailgate doors are heavy and somewhat awkward to remove and refit - at least two people should perform this procedure.*

Removal and refitting

Refer to illustrations 20.2a, 20.2b, 20.6a and 20.6b

1 Refer to Section 19 and follow the procedure for the side doors, then proceed to Step 2. All wiring must be disconnected and pulled out of the door.

2 Cover the lower bumper area around the opening with pads or cloths to protect the painted surfaces when the tailgate door is removed **(see illustration)**. Remove the inner door pull handle **(see illustration)**.

3 Disconnect the speaker wiring and remove the speaker from the door.

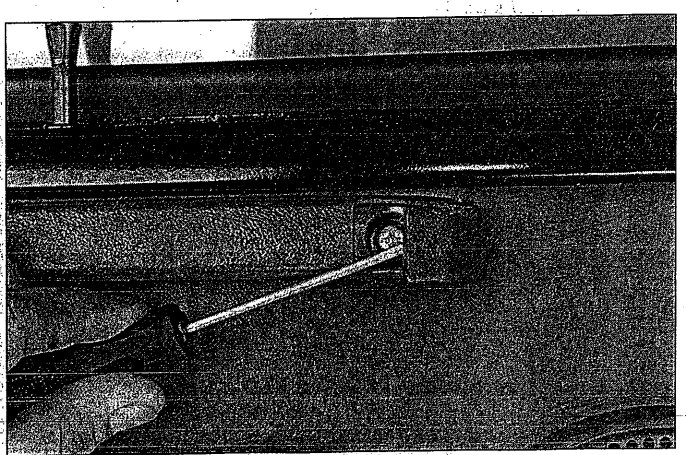
4 On the right door, remove the spare wheel and disconnect the washer hose.

5 Disconnect the lamp wiring and remove the turn signal lamps if they interfere.

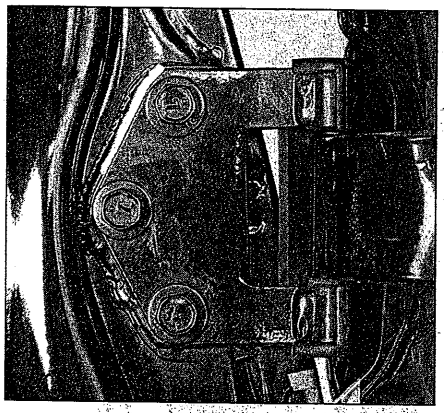
6 Detach the hinge to tailgate bolts and remove the tailgate from the vehicle **(see illustrations)**.

7 Refitting is the reverse of removal.

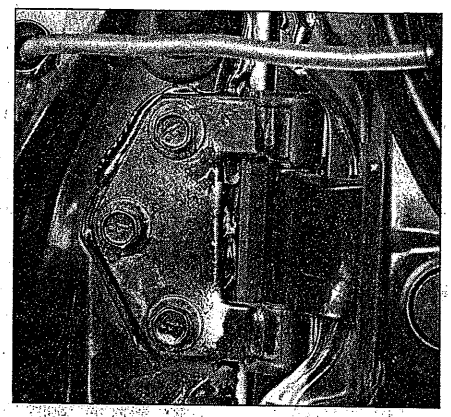
20.2a The rear door entry is protected by a rubber sill, but lay a blanket over it to protect the exposed painted areas



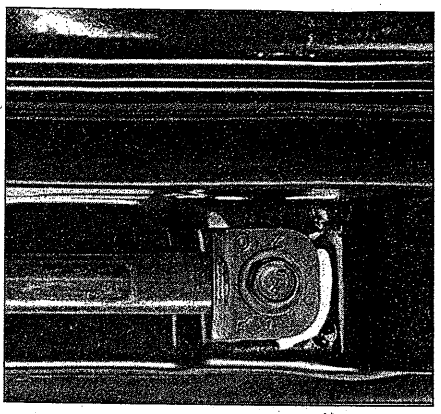
20.2b The rear door pull handle can be removed after levering up the screw covers



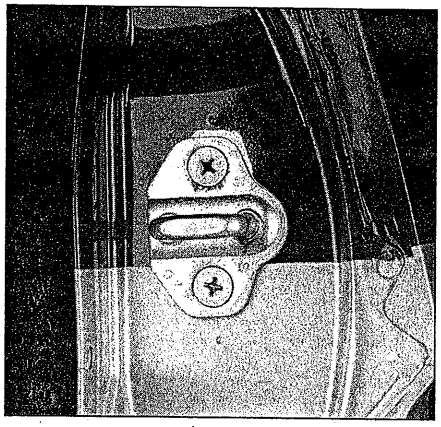
20.6a The rear doors can be swung wide open for easy access to the upper . . .



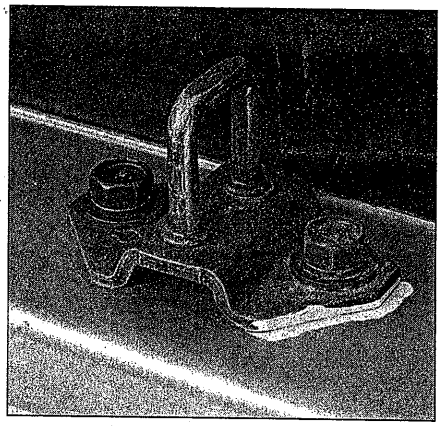
20.6b . . . and the lower hinge bolts



20.9a There is an alignment bar . . .



20.9b . . . a door striker . . .



20.9c . . . and a lower striker which can be slightly adjusted for improved rear door sealing

Adjustment

Refer to illustrations 20.9a, 20.9b and 20.9c

8 Most tailgate door adjustments are made by loosening the hinge-to-tailgate door bolts and moving the tailgate door. Proper alignment is achieved when the top of the tailgate door is aligned with the top of the rear quarter panel. If these goals can't be reached by adjusting the hinge to body or hinge to tailgate door bolts, body alignment shims may have to be purchased and inserted behind the hinges to achieve correct alignment.

9 Additional alignment can be done by loosening the bolts and repositioning the alignment bar and the strikers **(see illustrations)**.

21 Tailgate (utility models) - removal, refitting and adjustment

Note: *The tailgate is heavy and somewhat awkward to hold - at least two people should perform this procedure.*

Removal and refitting

1 Open the tailgate and allow it to hang from the support chains.

2 Use a pencil to mark the exact locations of the hinges.

3 While an assistant supports the tailgate, detach both support chains.

4 Unscrew the hinge to tailgate bolts. and remove the tailgate from the vehicle.

5 Refitting is the reverse of removal.

Adjustment

6 Adjustments are made by loosening the hinge-to tailgate bolts and moving the tailgate. Proper alignment is achieved when the edges of the tailgate are parallel with the rear quarter panel and the top of the tailgate.

22 Steering column covers - removal and refitting

Refer to illustrations 22.2, 22.3 and 22.4

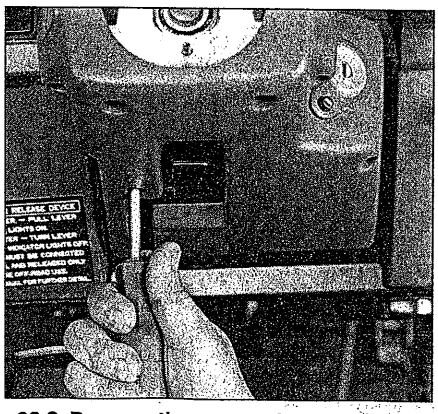
1 Remove the steering wheel (see Chapter 10).

2 Remove the steering column cover screws **(see illustration)**.

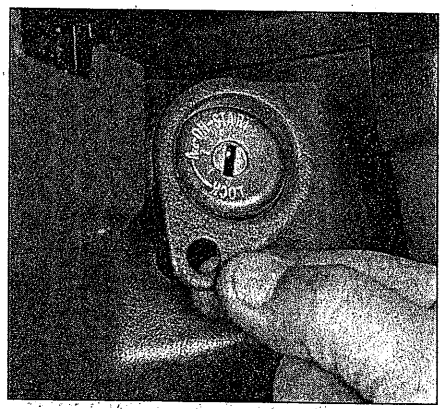
3 Remove the ignition switch bezel **(see illustration)**.

4 Separate the cover halves and detach them from the steering column **(see illustration)**.

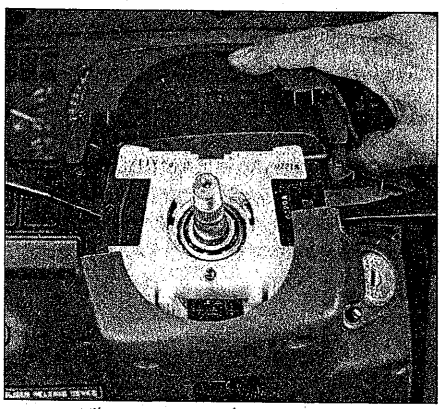
5 Refitting is the reverse of removal.



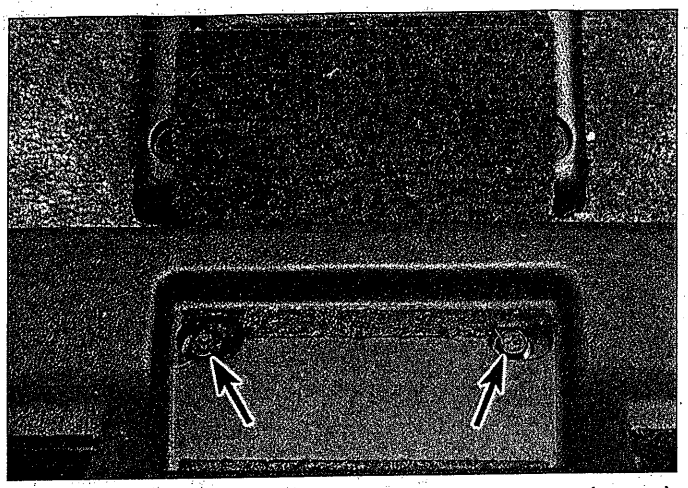
22.2 Remove the screws from the lower column cover



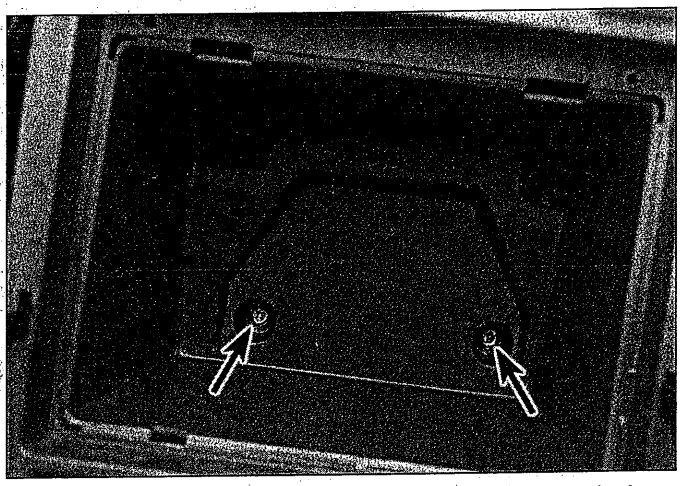
22.3 The bezel for the ignition switch is removed from the upper steering column cover



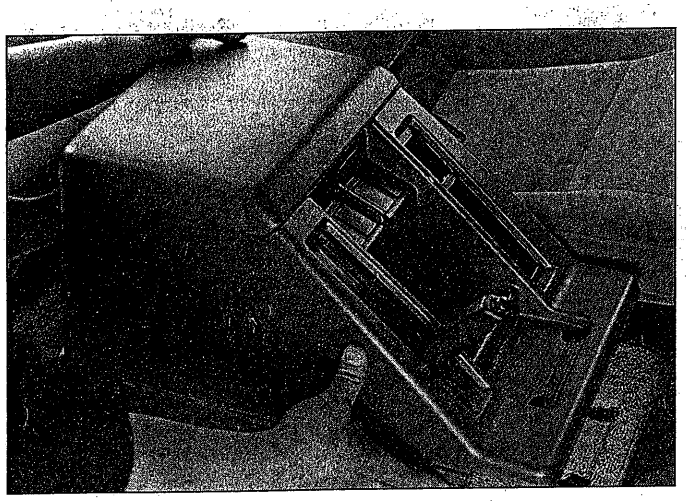
22.4 The two column covers can now be removed



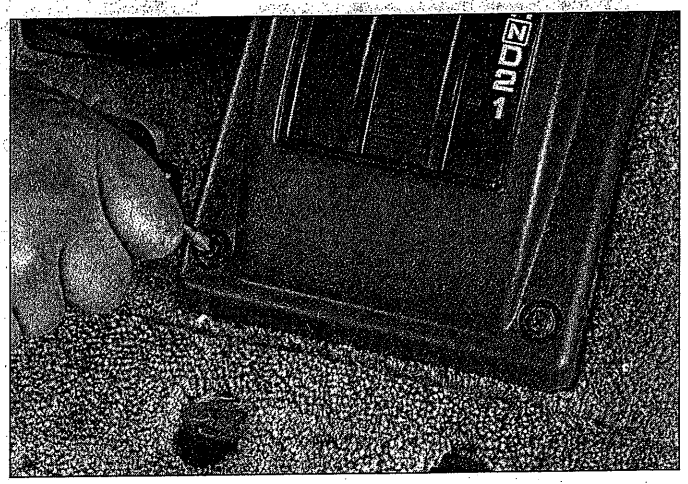
24.1 A small piece of carpet covers two console screws (arrows)



24.2 These screws (arrows) are also covered by carpet in the bottom of the storage compartment



24.4 Lift the console up just enough to disconnect all the wiring beneath it



24.6a The automatic transmission shift lever cover is secured by these screws at the rear

23 Dash trim panels - removal and refitting

Note: *Removal of some trim pieces is covered in Section 25,* Instrument panel removal.

1 All of the dashboard trim panels are held in place by clips and screws. Remove any screws or clips and disengage the trim panels as necessary.

2 Disconnect any wiring harness connectors which would interfere with removal.

3 Refitting is the reverse of removal.

24 Centre console and floor lever trims - removal and refitting

Refer to illustrations 24.1, 24.2 and 24.4

Console

1 Lift the carpet from the front of the console and remove the screws beneath it **(see illustration).**

2 Lift the carpet from the bottom of the console storage compartment and remove the screws beneath it **(see illustration).**

3 Raise the console and disconnect the wiring, such as the power window harness, if any.

4 Lift the console over the parking brake lever assembly and remove it from the vehicle **(see illustration).**

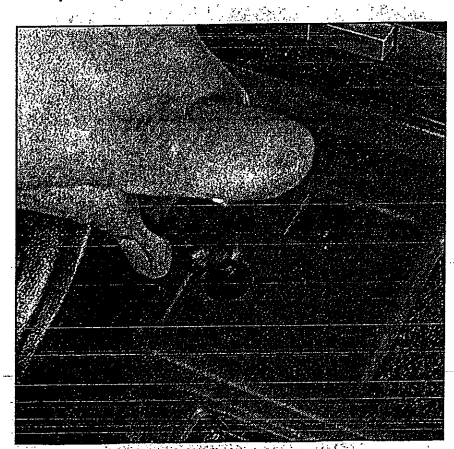
5 Refitting is the reverse of removal. Use a dab of RTV silicone sealer or weatherstrip adhesive to fasten the carpet, if necessary.

Floor lever trim panels

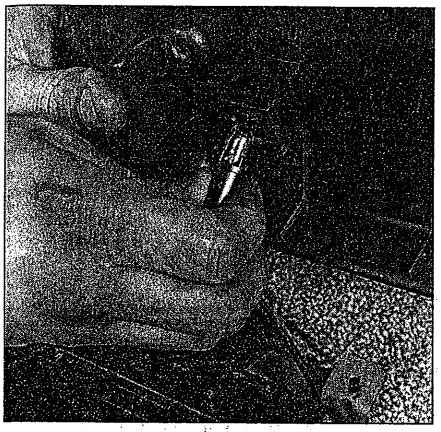
Refer to illustrations 24.6a, 24.6b, 24.6c, 24.7, 24.8 and 24.9

6 Remove the retaining screws from the trim panel **(see illustrations).**

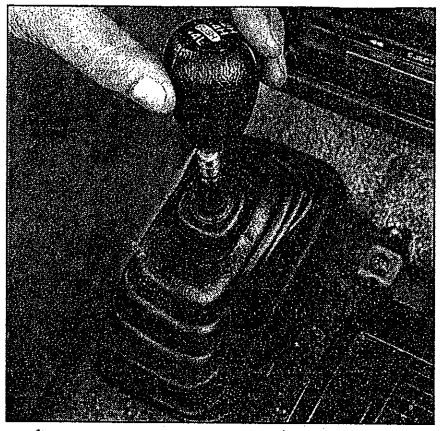
24.6b Peel back this label . . .



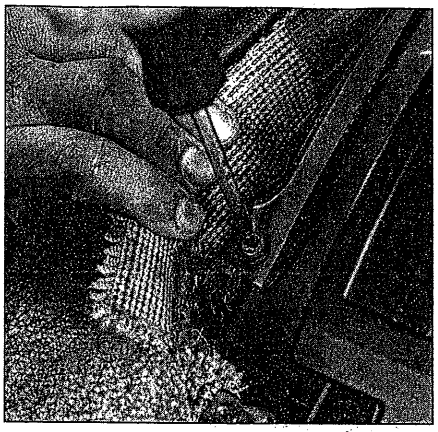
24.6c . . . to reveal the screw under it



24.7 There is a small lamp for illumination of the indicator which can be disconnected after the cover is carefully lifted



24.8 The transfer case lever knob is removed for access to the boot



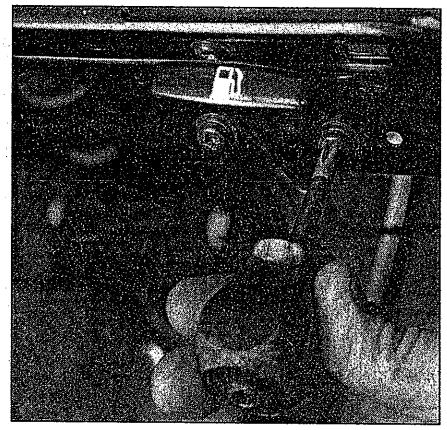
24.9 The boot mounting plate can be removed after pulling back the carpet for access to these screws

7 Lift the cover over the handle and remove the automatic transmission lamp **(see illustration)**. Remove the cover.
8 Remove the transfer case shift lever **(see illustration)**.
9 Pull back the carpet and remove the shift lever boot mounting screws **(see illustration)**.
10 Lift the mounting plate and the boot from the floor.

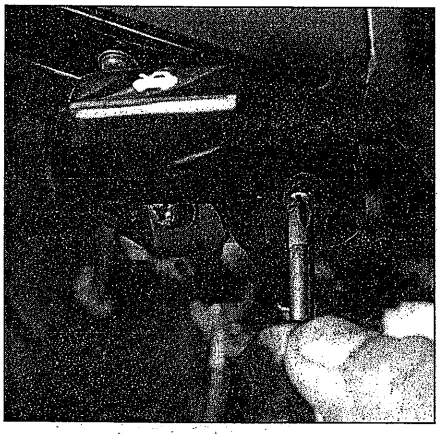
25 Instrument panel - removal and refitting

Refer to illustrations 25.5a, 25.5b, 25.8, 25.9a, 25.9b, 25.10, 25.12, 25.13a, 25.13b, 25.14, 25.15a, 25.15b, 25.15c, 25.15d, 25.15e, 25.16 and 25.17

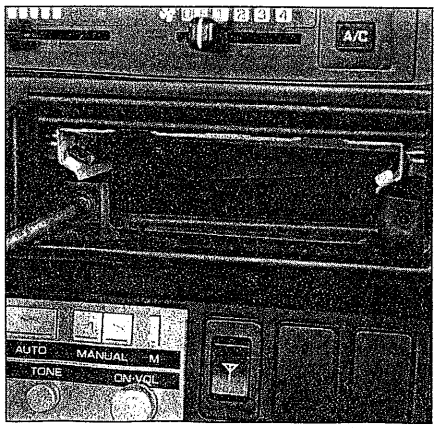
1 Disconnect the negative battery cable.
2 Remove the steering wheel (see Chapter 10).
3 Remove the steering column covers (refer to Section 22).
4 Remove the instrument cluster bezel (refer to Chapter 12).
5 Disconnect the cables for the various cable-controlled mechanisms (such as the fuel door release, bonnet release and the stabiliser release) from beneath the dash **(see illustrations)**.
6 Remove the screws, then remove the trim panel below the steering column. **Note:** *There are many fasteners used in the instrument panel assembly. Lay out all of the screws, bolts and clips in order as you remove them to prevent confusion later.*
7 Disconnect the hand throttle assembly, if equipped.
8 Remove the ash tray and the screws beneath it **(see illustration)**.
9 Remove all screws retaining the centre section of the dash **(see illustrations)**.
10 Remove the glove compartment unit all the screws around the glove compartment opening **(see illustration)**.



25.5a Remove the fuel door cable bracket . . .

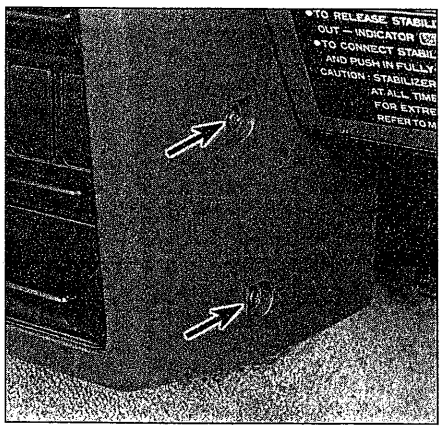


25.5b . . . and the cable assembly for the bonnet release

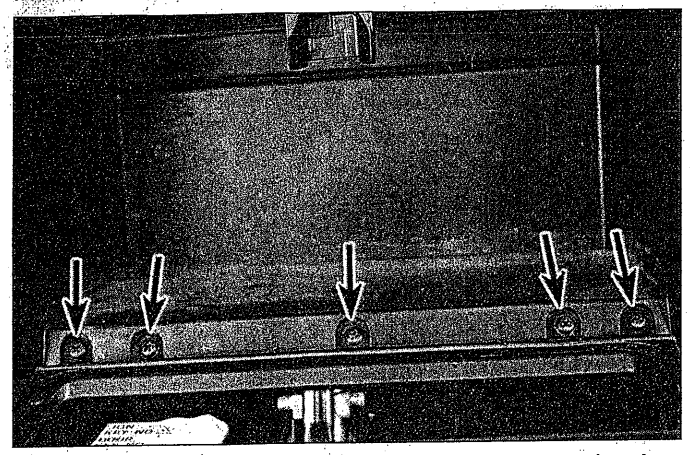


25.8 These screws are visible after the ash tray has been removed

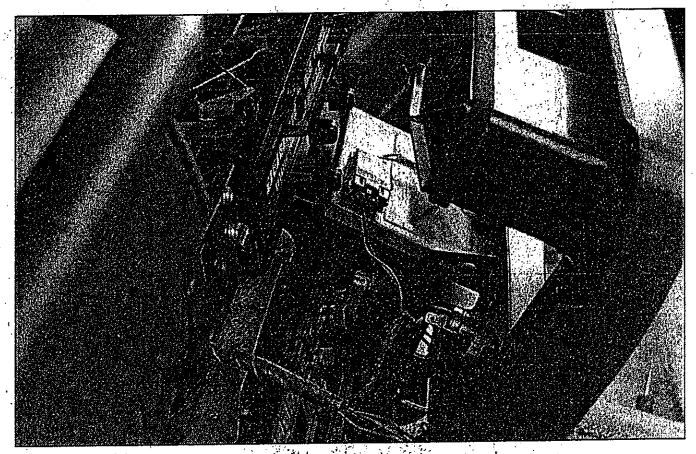
25.9a The cover for the entire centre of the dash is held by screws at several locations



25.9b These screws (arrows) retain the side of the centre dash panel

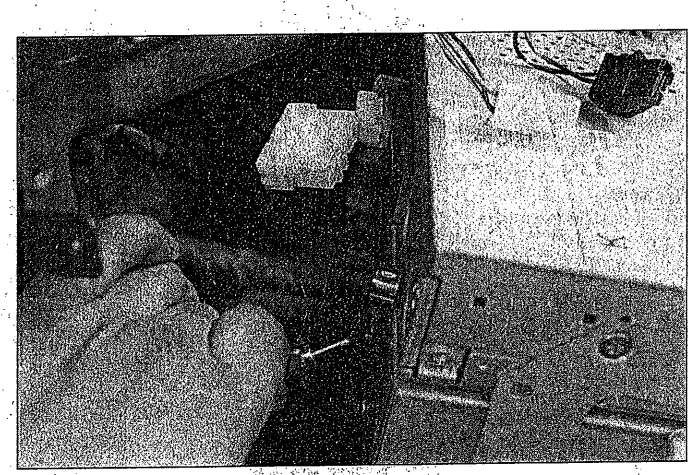


25.10 Open the glove box, remove the screws (arrows) and remove the door. Next remove the remaining screws and pull out the glove compartment itself. There are screws behind it that secure the dash



25.12 After the centre housing has been pulled back, disconnect the wiring for the various controls. Label each to simplify refitting

25.13a Remove the radio mounting screws . . .



25.13b . . . and disconnect the wiring from the radio

11 Pull the transfer case lever and the gear shift lever as far as possible to the rear.

12 Pull the middle dash assembly slightly rearward. Reach behind it and disconnect all remaining wiring harnesses **(see illustration)**. Pull it carefully from the vehicle.

13 Remove the radio screws **(see illustration)**. Pull it slightly rearward and disconnect the wiring from it **(see illustration)**. Withdraw the radio from the vehicle.

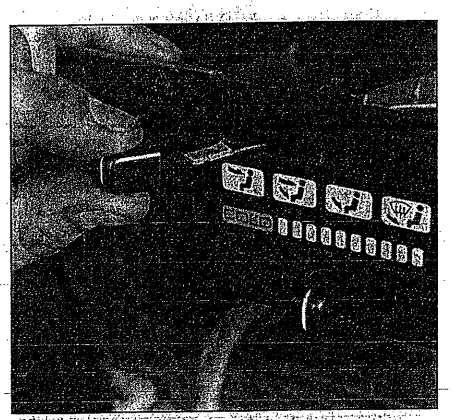
14 Remove the climate control trim panel **(see illustration)**. It will be necessary to release the securing clips as you do this.

15 Remove the covers from the dash screws **(see illustration)**. Remove all of the screws **(see illustrations)**.

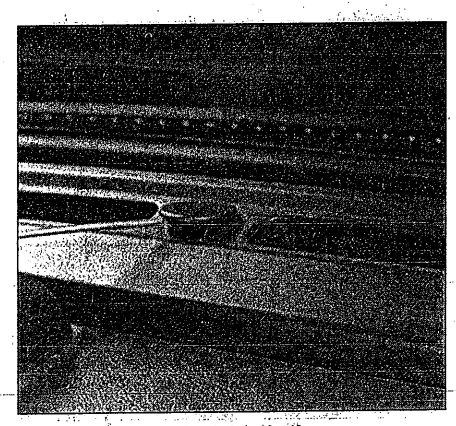
16 Check to make certain that all bolts, screws, wiring and cables have been removed from the dash assembly **(see illustration)**.

17 With an assistant to hold one side of the dash, carefully remove it from the vehicle **(see illustration)**.

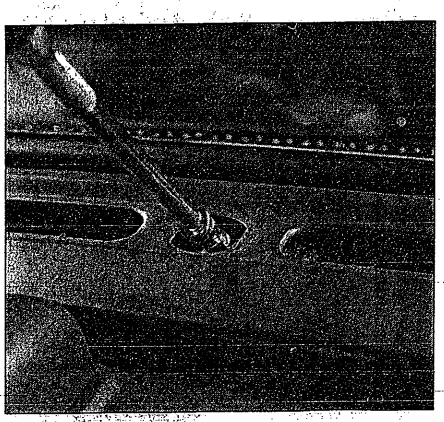
18 Refitting is the reverse of removal. **Note:** *Check the operation of all components as they are refitted. Do not wait until the entire assembly has been completed.*



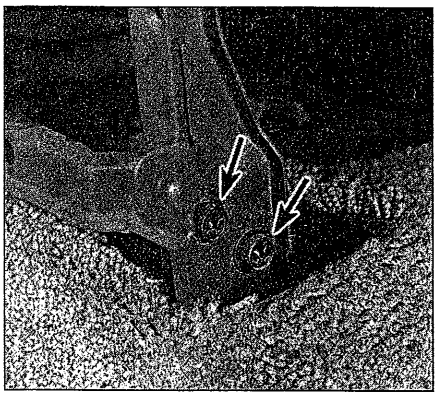
25.14 These knobs must be pulled off of the levers before the face plate can be removed from the heater control assembly



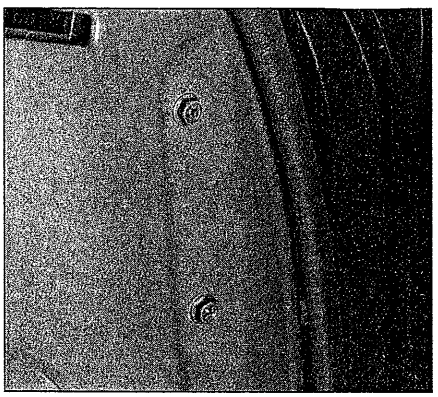
25.15a Several of the dash screws are concealed beneath plastic covers. Pop the covers off with a small screwdriver . . .



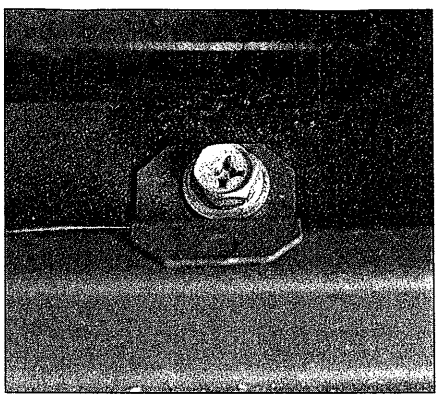
25.15b . . . then remove the screws



25.15c Remove these screws (arrows) to release the bottom of the dash assembly



25.15d Open both doors and remove these screws from the ends of the dash



25.15e Make sure that all fasteners have been removed from the dash. Some (like this one along the top edge) can be overlooked

26 Seats - removal and refitting

Front seat

Refer to illustrations 26.2a and 26.2b

1 Position the seat all the way forward and then all the way to the rear to access the front seat retaining bolts.

2 Remove the retaining bolts **(see illustrations)**.

3 Tilt the seat upward to access the bottom, then disconnect any electrical connectors and lift the seat from the vehicle.

4 Refitting is the reverse of removal.

Rear seat

5 Fold the seat forward, then remove the mounting bolts from the back of the rear seat.

6 Remove the front bolts.

7 Lift up on the lower edge of the seat back and remove it from the vehicle.

8 Refitting is the reverse of removal.

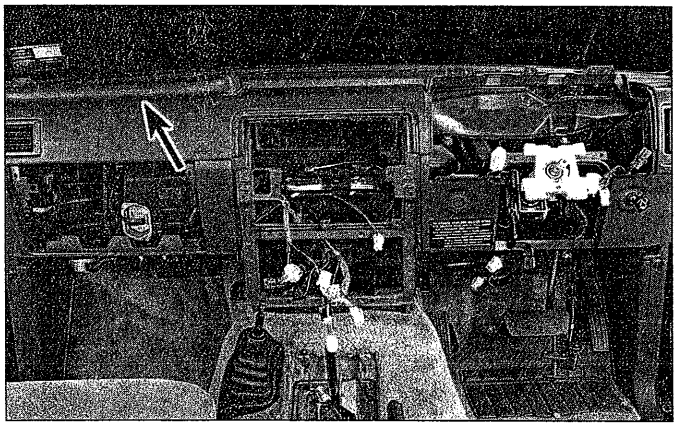
Cargo area seat

Refer to illustration 26.9

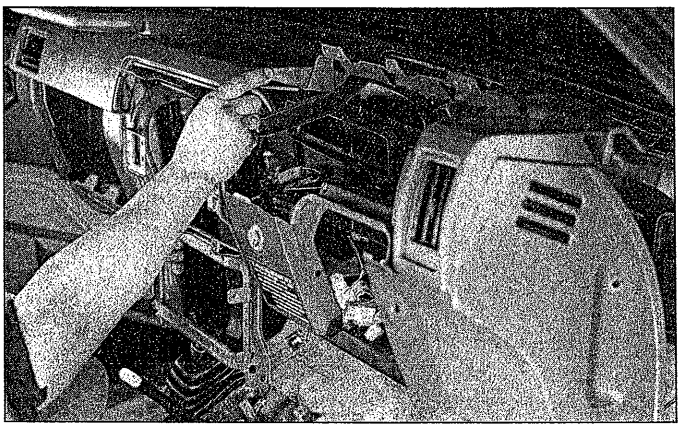
9 Fold the seat up and forward, then unbolt the hinge assembly from the floor **(see illustration)**.

10 Remove the seat.

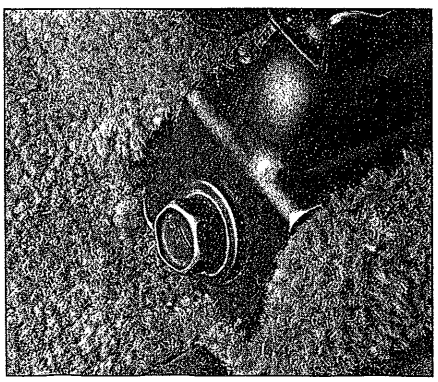
11 Refitting is the reverse of removal.



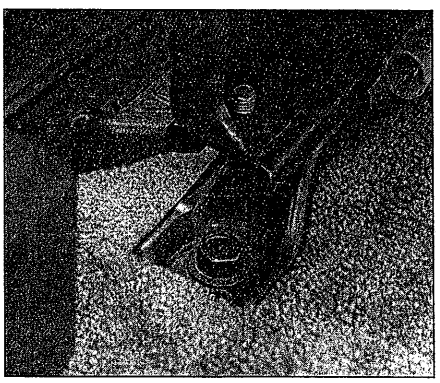
25.16 Get an assistant to help you pull the dash slowly towards the rear. It can be done without removing the combination switch if you are very careful. The grab bar (arrow) is a good gripping point on the passenger's side



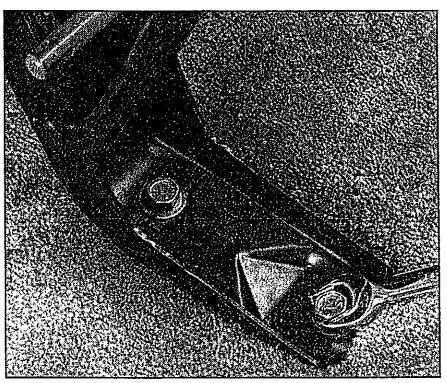
25.17 Make certain that nothing is caught on it as you guide it through the door opening



26.2a The bolts for the front . . .



26.2b . . . and rear of the front seat can be removed after sliding the seat from one extreme to the other



26.9 The cargo area seat is retained by a hinge assembly. Fold the seat forward and the remove the mounting bolts

Notes