

1993 Volvo 940

Submodel: | Engine Type: L4 | Liters: 2.3

Fuel Delivery: FI | Fuel: GAS

1. Disconnect the negative battery cable.
2. Remove the front panel with the cigarette lighter and diagnostic connector (if equipped), then unplug the connectors.
3. Remove the two retaining bolts under the panel.
4. Open the armrest and remove the two retaining screws under the small access cover.
5. Unplug the console harness connections under the ashtray.
6. Remove the access cover under the parking brake handle.
7. Slowly and carefully remove the console.

To install:

8. Carefully place the console into place.
9. Install the four retaining screws.
10. Plug in the wiring harnesses under the ashtray.
11. Install the front cover.
12. Install the access cover under the armrest.
13. Install the cover under the parking brake handle.
14. Connect the negative battery cable.

Fig. 1: Remove the front console retaining screws



Fig. 2: Separate the cigarette lighter lamp . . .



Fig. 3: . . . and detach the lighter element plug . . .



Fig. 4: . . . then slide out the diagnostic connector and remove the panel



Fig. 5: Lift up the armrest and remove the access cover for the rear retaining screws



Fig. 6: Remove the two rear retaining screws



Fig. 7: Location of the console wiring harness connections



Fig. 8: Unplug the connectors and ensure that they are free of obstructions for console removal



Fig. 9: Lift off the cover beneath the parking brake handle



Fig. 10: Carefully lift the console up and remove



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[200 Series, 700 Series and Coupe](#)

[WITH MANUAL WINDOWS](#)

1. Disconnect the negative battery cable.
2. Remove the door panel and the moisture barrier.
3. If the glass is to be replaced or removed, remove the safety catches from the pins on the 2 lower arms and lift out the glass. The regulator can be removed without removing the glass, but the glass must be supported within the door.
4. To remove the regulator, remove the safety clips from the pins on the 2 lower arms.
5. Remove the five bolts holding the regulator to the door and remove the regulator.

To install:

6. Position the regulator into place and tighten the 5 retaining bolts.
7. Attach the door glass and install the safety pins on the lower arms.
8. Install the window crank handle onto the regulator shaft, and ensure the windows moves smoothly without binding. If the window is binding while moving up or down, and assuming that the regulator and glass are installed correctly, you might need to lubricate the run channels. There are specific lubricants for windows, however a good lubricating fluid or silicone spray lubricant will do the job.
9. Remove the crank handle, and install the moisture barrier and door panel.
10. Connect the negative battery cable.

Fig. 1: Location of the safety catches

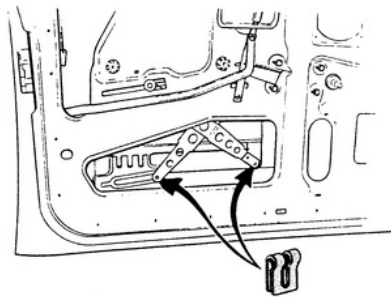
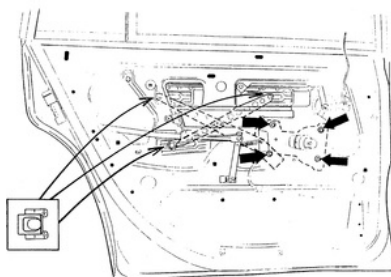


Fig. 2: Location of the retaining bolts and clips



[WITH ELECTRIC WINDOWS](#)

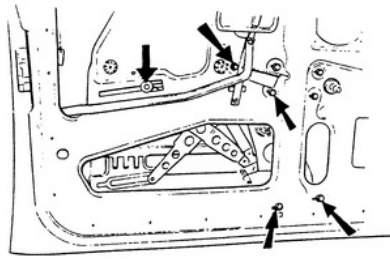
1. Disconnect the negative battery cable.
2. Remove the door panel and the moisture barrier.
3. If the glass is to be replaced or removed, remove the safety catches from the pins on the 2 lower arms and lift out the glass. The regulator can be removed without removing the glass, but the glass must be supported within the door.
4. Disconnect the wiring for the motor.
5. Remove the bolts holding the regulator and remove the regulator from the door.

To install:

6. When reinstalling, tighten the mounting screws just enough to hold position and no more. Attach the glass to the regulator with the safety clips and make sure they are properly seated.
7. The 4 frontmost mounting bolts can be loosened to eliminate binding. Loosen the screws and operate the window up and down. As the regulator seeks its best position, tighten the bolts to hold it in place. It should take 5 seconds for the window to open fully.

8. Raise the window to its stopped position. Loosen the stop (at the forward edge of the regulator) and raise the window as far as it will go. Readjust the stop to mesh with the gears and tighten it in place.
9. Operate the window and ensure it moves smoothly without binding. If the window is binding while moving up or down, and assuming that the regulator and glass are installed correctly, you might need to lubricate the run channels. There are specific lubricants for windows, however a good lubricating fluid or silicone spray lubricant will do the job.
10. Install the moisture barrier and the door pad.
11. Connect the negative battery cable.

Fig. 3: Location of the power window regulator retaining bolts



Except 200 Series, 700 Series and Coupe

1. Disconnect the negative battery cable.
 2. Ensure window is in the fully **UP** position.
 3. Remove the door panel and the moisture barrier.
 4. Support the window so that it does not fall down inside the door. A block of wood under the window wedged in the door will work; however, there are special tools available such as two large suction cups attached to a heavy gauge wire.
 5. Remove the window motor.
 6. Remove the 3 retaining screws in the inner handle bracket.
 7. Remove the 8 regulator mounting bolts.
 8. Remove the window regulator.
- To install:**
9. Position the regulator and tighten the 8 retaining bolts.
 10. Install the 3 retaining screws in the inner handle bracket.
 11. Install the window motor.
 12. Install the locking clips for the rail slides. Remove the support for the window.
 13. Connect the negative battery cable.
 14. Operate the window and ensure it moves smoothly without binding. If the window is binding while moving up or down, and assuming that the regulator and glass are installed correctly, you might need to lubricate the run channels. There are specific lubricants for this, however a good lubricating fluid or silicone spray lubricant will do the job.
 15. Install the moisture barrier and the door pad.

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1. Disconnect the negative battery cable.
2. Remove the inner door panel and the moisture barrier.

NOTE: For vehicles with manual locks, the lock cylinder is held within the door by a clip which slides across the back of the cylinder, or by two retaining bolts and a bracket, depending on the model.

NOTE: On vehicles with electric locks, the left door lock has a collar surrounding it. This electrical fitting causes all the doors to lock when the key is used in the driver's door. The retainer on this switch may be opened by prying up the plastic catch; the switch may then be removed from the lock cylinder.

3. Remove the clip or the retaining bolts.
4. Disconnect the lock rod(s) from the lock cylinder.
5. Remove the lock.

To install:

6. Connect the lock rod(s) to the lock cylinder.
7. Place the lock cylinder into place in the door and attach the clip or the retaining bolts and bracket.
8. Ensure that the lock cylinder engages the latch mechanism properly.
9. If the vehicle has electric locks, make sure the switch collar is in its correct position and the clip is secure.
10. Reinstall the moisture barrier and the inner door panel.
11. Connect the negative battery cable.

Fig. 1: Front door lock components

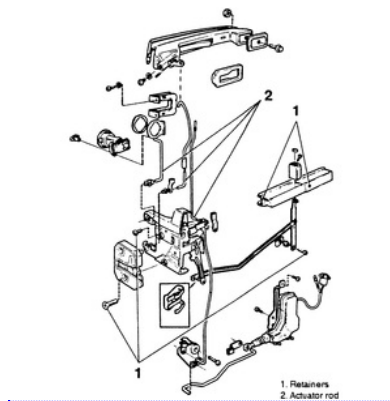
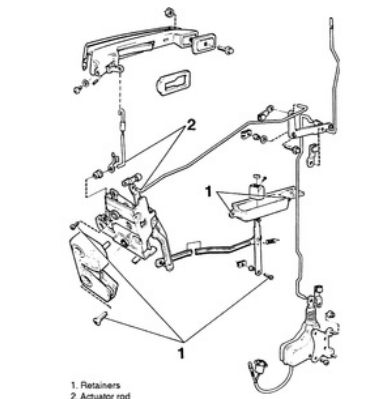


Fig. 2: Rear door lock components



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The following procedure applies to both the front and rear door panels.

1. Disconnect the negative battery cable.
2. Remove all necessary retaining screws and clips; some are hidden by small access covers.
3. On some models, it may be necessary to remove the door pocket. Remove it by turning the 3 studs 90 degrees and lifting off the pocket.
4. On some models, it is necessary to remove the armrest. The screws may be concealed behind plastic covers.
5. Remove the plastic housing around the inner latch release (door handle).
6. If equipped with manual windows, remove the window crank handle. Do this by lifting up the small trim strip at the base of the window. Remove the concealed screw and the handle may be pulled free.
7. Remove the door speaker mounting screws and pull the speaker out of the door, then unplug the connector and remove the speaker.
8. Unscrew the lock button from the shaft.
9. The door panel is removed by gently prying the edge away from the door. Use a broad, flat tool inserted between the panel and the metal of the door. The idea is to separate the clips without damage so they may be reused.
10. Proceed around the door until all the clips are released.

NOTE: If the door panel is tight or stuck in one spot, be careful and do not pull hard. First ensure that you have all necessary retaining hardware removed.

11. Remove the door panel by lifting up to free the lip at the window edge. Be prepared to disconnect any wiring encountered within the door (courtesy lights, speakers, etc.) during removal.

NOTE: Inside the door is a plastic moisture barrier. It may be removed for access to the door parts, but it must not be ripped or torn. Should it become damaged, either replace it or repair it with waterproof tape. It must be reinstalled intact after any door repairs.

To install

12. Before reinstalling the door panel, check every clip to insure that they are properly located and not damaged. Replace any that are unusable.
13. Position the door panel onto the top of the door and seat the lip at the window rail. It may require gentle tapping to seat properly.
14. Making sure each clip aligns with its hole, proceed around the door and tap each clip into place.
15. Install all the retaining hardware and access covers.
16. Plug in the speaker and tighten the retaining bolts.
17. Install the lock button, release handle and window crank handle (if removed).
18. Install the trim around the door release handle.
19. If removed, install the armrest and the door pocket.
20. Connect the negative battery cable.

Fig. 1: Door panels can look intimidating, but are often quite easy when care is taken



Fig. 2: Remove the release handle from the lever



Fig. 3: Applying tape to the end of your screwdriver can help reduce the chance of scratching or damaging the panels



Fig. 4: Remove the speaker grille by gently prying it off

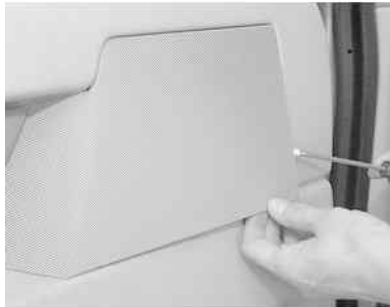


Fig. 5: Remove the trim panel above the armrest by gently prying it off . . .



Fig. 6: . . . to release the three retaining clips on the back of the panel



Fig. 7: Unfasten the retaining screws which are revealed after trim panel removal



Fig. 8: Remove the retaining screws from the bottom of the door panel; there are usually 5 screws



Fig. 9: Carefully and gently lift the door panel off of the door



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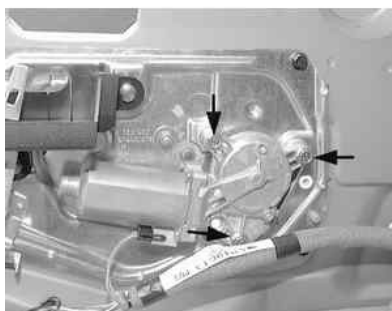
Fuel Delivery: FI | Fuel: GAS

1. Disconnect the negative battery cable.
2. Remove the door panel.
3. Remove any necessary trim to access the motor assembly.
4. Unplug the electrical connectors.
5. Remove the motor retaining bolts.
6. Remove the motor from the regulator.

To install:

7. Install the regulator into position, make sure the aligning pin is correctly positioned.
8. Tighten the motor retaining bolts.
9. Plug in the electrical connectors.
10. Install any removed trim from the door.
11. Install the door panel.
12. Connect the negative battery cable.

Fig. 1: Remove the three motor retaining bolts



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1. Remove the dome light panel.
2. Remove the two mirror mount attaching bolts and remove the rear view mirror and mount assembly.
3. Remove the mirror to mount retaining bolt and remove the mirror from the mount.

To install:

4. Position the mirror on the mount and tighten the retaining bolt.
5. Position the mirror and mount assembly onto the roof and tighten the attaching bolts.
6. Install the dome light panel.

Fig. 1: Unfasten the two retaining screws and remove the mirror with the mount



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1. Disconnect the negative battery cable.
2. Remove the windshield wiper arms and cowl panel.
3. Remove the outer dashboard retaining bolts.
4. Remove the steering wheel.

CAUTION

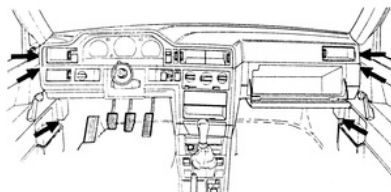
Some models covered by this manual are equipped with a Supplemental Restraint System (SRS), which uses an air bag. Whenever working near any SRS components, such as the impact sensors, air bag module, steering column or instrument panel, disable the SRS, as described in Section 6.

5. Remove the knee bolster panel under the steering column.
6. Remove the steering column covers.
7. Remove any applicable steering column electrical connectors.
8. Remove the steering column retaining bolts and lower the column to the floor.
9. Remove the side demister vents.
10. Detach the dash speaker grilles and remove the speakers.
11. Remove the panel vents.
12. Remove the glove box.
13. Remove the heater control panel.
14. Remove the radio.
15. Remove the center console.
16. Unfasten the dashboard mounting screws.
17. Remove the dashboard from the vehicle.

To install:

18. Position the dashboard into place and tighten the mounting screws.
19. Install the center console.
20. Install the radio, heater control panel, glove box, and vents.
21. Raise the steering column and tighten the retaining bolts.
22. Plug the column electrical connectors in and install the column covers.
23. Install the knee bolster panel.
24. Install the steering wheel.
25. Tighten the outer dashboard retaining bolts.
26. Install the cowl panel and the wiper arms.
27. Connect the negative battery cable.

Fig. 1: Location of the instrument panel mounting screws



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1. Disconnect the negative battery cable.
2. Remove the seat from the vehicle following the procedure outlined previously.
3. Turn the seat upside down and remove the 4 screws holding the motor to its bracket.
4. Lift out the motor and remove the drive cable from the motor. Use care not to kink or crease the cable.
5. Disconnect the wiring to the motor. Remove the pins from the connector case, if required. To remove the fore-and-aft motor, remove the middle connector from the control unit. Open the connector and remove the wiring at the terminals.

To install:

6. Properly route the harness and attach the connector to the seat motor.
7. Install the motor and tighten the retaining bolts and final check the wiring. Make sure it is out of the way of any moving parts.
8. Reinstall the seat in the vehicle, connect the wiring harnesses.
9. Connect the negative battery cable.
10. Check the operation of the seat.

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Manual Seats

The front seat and its rails may be unbolted from the floor of the vehicle. Many vehicles have heated seats; it will be necessary to disconnect the wiring harness for this system before removing the seat.

It is necessary to remove the seat belt anchor from the side of the seat. Remove the screw in the rear of the side pocket, lift the pocket out of the way and remove the seat belt bolt.

After all the retaining bolts are removed, the front seat is removed by sliding the seat to the rear of its track and lifting upwards to free the seat from the catches.

The rear seat cushion is removed by pressing down directly over the retaining clips (freeing the hook from the loop) and lifting the cushion clear. The rear seat backrest is held by catches which hold the upper bar in place. These catches can be released with a screwdriver; don't bend them anymore than needed or reassembly will be very difficult.

When reassembling the rear seat, always install the backrest first. Make sure that every clip engages properly and is firmly closed.

Power Front Seats

1. Disconnect the negative battery cable.
2. Remove the plastic rail covers as necessary and remove the front bolts holding the seat tracks to the vehicle. Loosen but do not remove the bolts at the rear of the tracks.
3. Gently elevate the front of the seat; identify and label the wiring running to the seat components. Disconnect the seat wiring connectors.

WARNING

Do not disconnect any wiring for other components. Many other units may be found under the seat — leave them connected at all times.

4. Remove the rear mounting bolts and lift the seat clear of the vehicle. It will be heavy — a helper inside the vehicle can ease removal.
5. Either support the seat on crates or a clean workbench or place the seat on a clean blanket to protect it.

To install:

6. Position the seat onto the floor and attach the wiring harnesses.
7. Align the mounting holes and tighten the seat mounting bolts.
8. Install the rail covers.
9. Connect the negative battery cable.

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1. Disconnect the negative battery cable.
2. On 4-door models:
 - A. Open the trunk lid and remove the clips in the lower right corner of the trunk lid trim.
 - B. Bend the trim back carefully to expose the lock cylinder.
3. On wagon models:
 - A. Remove the liftgate trim panel.
 - B. Remove any necessary trim to access the lock cylinder.
4. Disconnect the lock rod(s) from the lock cylinder.
5. Remove the retaining bolt for the bracket on the lock cylinder.
6. Remove the retaining clip from the lock cylinder.
7. Remove the lock.

To install:

8. Place the lock cylinder into place and attach the clip.
9. Install the bracket and tighten the retaining bolt.
10. Attach the lock rod to the lock cylinder.
11. Ensure the lock cylinder engages the latch mechanism properly.
12. Install any trim removed.
13. Connect the negative battery cable.

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If your windshield, or other fixed window, is cracked or chipped, you may decide to replace it with a new one yourself. However, there are two main reasons why replacement windshields and other window glass should be installed only by a professional automotive glass technician: safety and cost.

The most important reason a professional should install automotive glass is for safety. The glass in the vehicle, especially the windshield, is designed with safety in mind in case of a collision. The windshield is specially manufactured from two panes of specially-tempered glass with a thin layer of transparent plastic between them. This construction allows the glass to "give" in the event that a part of your body hits the windshield during the collision, and prevents the glass from shattering, which could cause lacerations, blinding and other harm to passengers of the vehicle. The other fixed windows are designed to be tempered so that if they break during a collision, they shatter in such a way that there are no large pointed glass pieces. The professional automotive glass technician knows how to install the glass in a vehicle so that it will function optimally during a collision. Without the proper experience, knowledge and tools, installing a piece of automotive glass yourself could lead to additional harm if an accident should ever occur.

Cost is also a factor when deciding to install automotive glass yourself. Performing this could cost you much more than a professional may charge for the same job. Since the windshield is designed to break under stress, an often life saving characteristic, windshields tend to break VERY easily when an inexperienced person attempts to install one. Do-it-yourselfers buying two, three or even four windshields from a salvage yard because they have broken them during installation are common stories. Also, since the automotive glass is designed to prevent the outside elements from entering your vehicle, improper installation can lead to water and air leaks. Annoying whining noises at highway speeds from air leaks or inside body panel rusting from water leaks can add to your stress level and subtract from your wallet. After buying two or three windshields, installing them and ending up with a leak that produces a noise while driving and water damage during rainstorms, the cost of having a professional do it correctly the first time may be much more alluring. We, therefore, advise that you have a professional automotive glass technician service any broken glass on your vehicle.

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NOTE: Check with your state and local authorities on the laws for state safety inspection. Some states or municipalities may not allow chip repair as a viable option for correcting stone damage to your windshield.

Although severely cracked or damaged windshields must be replaced, there is something that you can do to prolong or even prevent the need for replacement of a chipped windshield. There are many companies which offer windshield chip repair products, such as Loctite's® Bullseyewindshield repair kit. These kits usually consist of a syringe, pedestal and a sealing adhesive. The syringe is mounted on the pedestal and is used to create a vacuum which pulls the plastic layer against the glass. This helps make the chip transparent. The adhesive is then injected which seals the chip and helps to prevent further stress cracks from developing. Refer to the sequence of photos to get a general idea of what windshield chip repair involves.

NOTE: Always follow the specific manufacturer's instructions.

Fig. 1: Small chips on your windshield can be fixed with an aftermarket repair kit, such as the one from Loctite(



Fig. 2: To repair a chip, clean the windshield with glass cleaner and dry it completely



Fig. 3: Remove the center from the adhesive disc and peel off the backing from one side of the disc . . .



Fig. 4: . . . then press it on the windshield so that the chip is centered in the hole

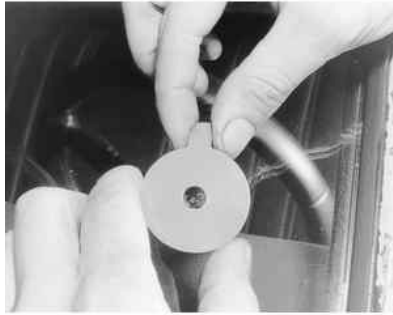


Fig. 5: Be sure that the tab points upward on the windshield

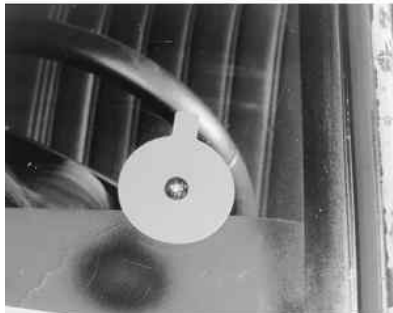


Fig. 6: Peel the backing off the exposed side of the adhesive disc . . .



Fig. 7: . . . then position the plastic pedestal on the adhesive disc, ensuring that the tabs are aligned

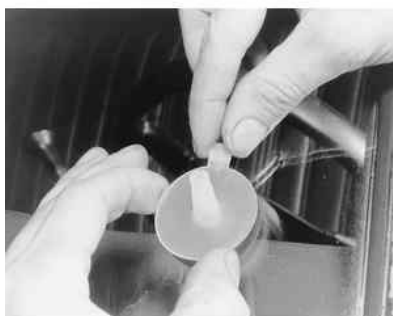


Fig. 8: Press the pedestal firmly on the adhesive disc to create an adequate seal . . .

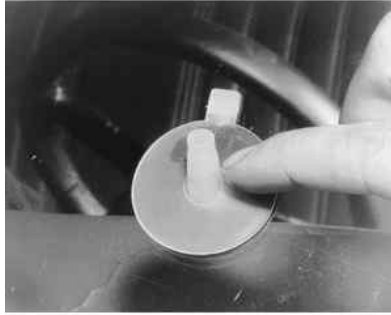


Fig. 9: . . . then install the applicator syringe nipple in the pedestal's hole



Fig. 10: Hold the syringe with one hand while pulling the plunger back with the other hand



Fig. 11: After applying the solution, allow the entire assembly to sit until it has set completely



Fig. 12: After the solution has set, remove the syringe from the pedestal . . .



Fig. 13: . . . then peel the pedestal off of the adhesive disc . .



Fig. 14: . . . and peel the adhesive disc off of the windshield

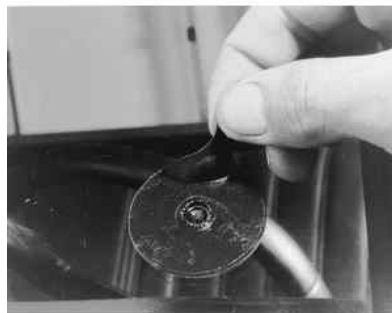


Fig. 15: The chip will still be slightly visible, but it should be filled with the hardened solution

