

## 1992 Volvo 940

Submodel: | Engine Type: L4 | Liters: 2.3

Fuel Delivery: FI | Fuel: GAS

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The small blades for the headlight wipers found on some models are removed in the same fashion as the windshield wiper blades. Pull the wiper away from the light, lift the pivot cover, remove the nut, then remove the blade and arm. It is necessary to disconnect the washer tube from the blade assembly when removing the arm.

During installation, place the wiper blade below the park stop on the light. Tighten the retaining nut and reposition the blade above the stop. The blade should rest firmly on the stop. Don't forget to reattach the washer line.

Fig. 1: Lift the pivot cover to access the retaining nut . . .

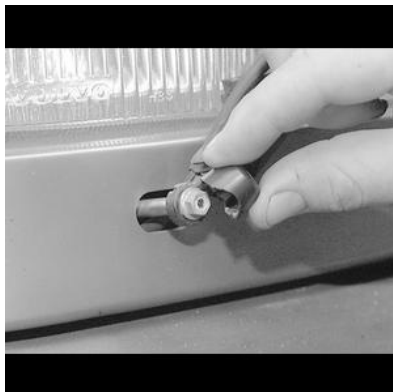


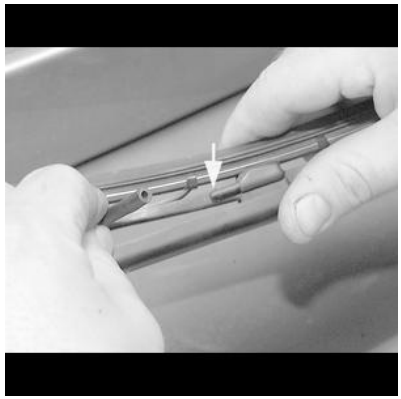
Fig. 2: . . . then remove the nut



Fig. 3: Lift the arm off of the pivot shaft and . . .



Fig. 4: . . . detach the washer tube from the blade



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### 700 Series

1. Disconnect the negative battery cable.
2. Remove the wiper arm.
3. Detach the wiring connector and the ground wire (2 separate connectors) for the motor. Connectors for both the left and right motors may be located near the left fender.
4. Loosen the nut on the motor shaft, slide off the plastic tubing and remove the motor.

#### To install:

5. Make sure the motor is in the park position before installation.
6. Install the motor and connect the plastic tubing.
7. Tighten the nut on the motor shaft.
8. Attach the wiring connectors. Insure a secure fit for all wiring connectors.
9. Install the wiper arm.
10. Connect the negative battery cable.

### Except 700 Series

1. Disconnect the negative battery cable.
2. Remove the wiper arm.
3. Remove the trim under the headlamp.
4. Remove the motor retaining bolts.
5. Unplug the electrical connector(s).
6. Carefully remove the motor from the vehicle.

#### To install:

**NOTE: Make sure the motor is in the park position before installation.**

7. Place the motor into position and plug the electrical connector(s) in.
8. Tighten the motor retaining bolts.
9. Install the trim under the headlamp.
10. Reinstall the wiper arm.
11. Connect the negative battery cable.

Fig. 1: The trim under the headlamp is held by two clips; carefully pull outward to release the clips



Fig. 2: The motor is retaining by two bolts

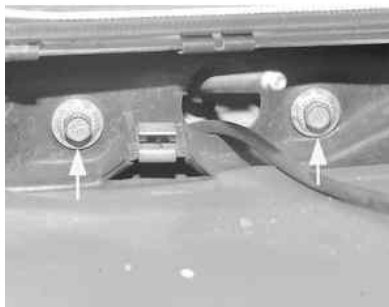


Fig. 3: Unplug the electrical connector(s)



Fig. 4: Carefully lift the motor out of the engine compartment



Fig. 5: The motor shaft is extremely long, and is best removed by pulling the motor upward, then out



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### Front

1. Disconnect the negative battery cable.
2. Remove the windshield washer bottle filler pipe.
3. Lift the washer motor out of the washer bottle using needlenose pliers.
4. Undo the wiring connector and the hose from the motor.
5. Remove the washer motor.

#### **To install:**

6. Install the hose and wiring connector on the washer motor.  
**NOTE: It is a good idea to wet or lubricate the end of the motor and filler pipe which extends into the washer bottle to aid in their installation, and to help avoid pushing the rubber grommet into the bottle.**
7. Install the motor into the opening in the washer bottle, being careful not to disturb the rubber grommet.
8. Install the filler pipe into the washer bottle.
9. Fill the washer bottle with the appropriate mixture of solvent.
10. Connect the negative battery cable.
11. Check the operation of the washer motor.

### Rear (Wagons)

1. Disconnect the negative battery cable.
2. From underneath the vehicle, remove the washer motor from its bracket.
3. Pull the pump downward to access the wiring connector and hose.
4. Detach the wiring connector and hose.

#### **To install:**

5. Install the washer pump into the bracket.
6. Attach the wiring connector and hose.
7. Fill the washer bottle with the appropriate mixture of solvent.
8. Connect the negative battery cable.
9. Check the operation of the washer motor.

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1. Carefully pry up/lift the plastic or metal cover at the base of the wiper arm.
2. Unscrew and remove the retaining nut.
3. Matchmark the arm and pivot for realignment upon installation.
4. Gently lift the blade and arm from the glass and remove the arm from the pivot.

### To install:

5. Place the arm over the pivot and tighten the retaining nut to 10–13 ft. lbs. (14–18 Nm). Do not overtighten, or the splines will be damaged. Make sure the wiper blade will be in the correct position on the glass before tightening the nut.
6. Install the cover.

**NOTE:** For wiper blade (element) replacement, refer to Section 1.

Fig. 1: Remove the wiper arm retaining nut



Fig. 2: Matchmark the wiper arm to the pivot, and gently lift off the arm



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### [Front](#)

#### [COUPE, 240 AND 700 SERIES](#)

1. Disconnect the negative battery cable.
2. Remove the passenger side underdash panel (beneath the glove box).
3. Remove the defroster hoses and remove the glove box.
4. Remove the shaft nut from the motor which attaches the linkage.
5. Remove the wiper linkage.
6. Disconnect the wiper motor assembly and lift it out through the glove box opening.

##### To install:

7. Install the wiper motor and tighten the retaining bolts.
8. Install the wiper linkage.
9. Tighten the shaft nut on the motor.
10. Attach the defroster hoses and install the glove box.
11. Install the panel under the dashboard.
12. Connect the negative battery cable.

#### [EXCEPT COUPE, 240 AND 700 SERIES](#)

1. Disconnect the negative battery cable.
2. Remove the wiper arms.
3. Lift the hood to its uppermost position by pushing the catch on the hood hinges.
4. Release the washer hoses from the clips along the edge of the cowl.
5. Remove the cowl retaining bolts. Older vehicles may use plastic clips instead of bolts to hold the cowl in place.
6. Remove the clamps securing the vent hoses.
7. Lift the cowl up to gain access to the hoses and remove them.
8. Remove the cowl by pulling it forward and then rotating the front edge upward.
9. Unplug the electrical connectors.
10. Remove the bolts which hold the linkage assembly.
11. Remove the linkage and motor assembly from the vehicle.
12. Remove the spindle nut on the motor.
13. Remove the 3 motor attaching bolts.
14. Lift the motor free of the linkage.

##### To install:

**NOTE: When reassembling, make sure the wipers are in the park position.**

15. Install the motor and tighten the attaching bolts.
16. Install the motor on the linkage and tighten the spindle nut.
17. Install the linkage and motor assembly in the vehicle and tighten the retaining bolts.

**NOTE: After the motor is secure on the linkage and the linkage is mounted on the vehicle, visually check for any possible interference between the moving parts and the wiring.**

18. Attach the connectors to the motor.
19. Lower the cowl down, but not all the way, and attach the vent hoses. Install the clamps on the hoses.
20. Install the cowl and make sure the cowl is properly seated before installing the bolts.
21. Install the washer hoses in their clips.
22. Install the wiper arms.
23. Connect the negative battery cable.

Fig. 1: The bolts retaining the cowl typically have size T25 Torx® heads



Fig. 2: Unfasten the retaining bolts with the proper size bit



Fig. 3: Remove the clamps that secure the vent hoses



Fig. 4: Lift up the cowl slightly and remove the hoses



Fig. 5: Remove the cowl panel



Fig. 6: Unplug the electrical connectors





Fig. 7: Unfasten the linkage and motor assembly retaining bolts



Fig. 8: Lift the assembly from the vehicle after the retaining bolts are removed



Fig. 9: Remove the spindle nut



Fig. 10: Lift the linkage from the motor shaft after the nut is removed

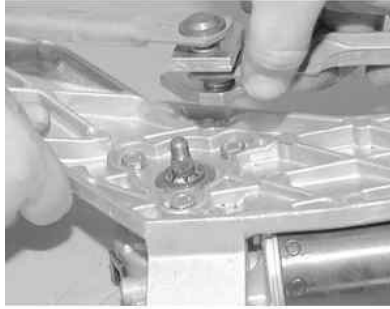
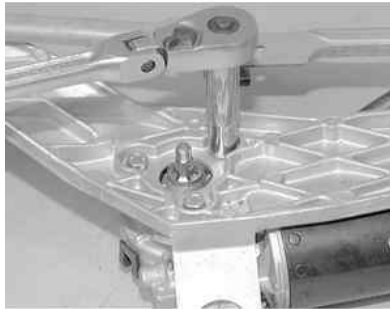


Fig. 11: Remove the motor retaining bolts (typically 3)



## Rear (Wagons)

### 240 SERIES

1. Disconnect the negative battery cable.
2. Remove the upholstered finish panel on the inside of the liftgate.
3. Remove the bolts for the wiper motor protection plate.
4. Disconnect the ball-and-socket wiper arm link at the motor.
5. Fold the protection plate aside and lift out the wiper motor.
6. Mark the wires and disconnect them at the motor.

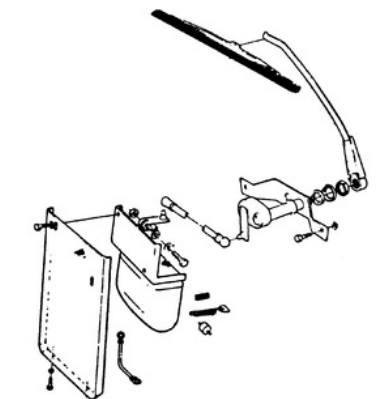
**NOTE: The brushes in the motor are replaceable. If brush replacement is required, remove the motor cover, unhook the brush springs and remove the brushes from the holders. Be careful not to damage the brush holders. Install the new brushes and attach the springs, then attach the cover.**

#### **To install:**

**NOTE: Make certain that the motor is in the park position before installing.**

7. Connect the wiring to the motor, then install the motor and protection plate.
8. Reattach the connecting link to the motor and install the retaining screws for the protection plate.
9. Install the trim panel on the inside of the liftgate.
10. Connect the negative battery cable.

Fig. 12: Exploded view of the rear wiper assembly on a 240 wagon



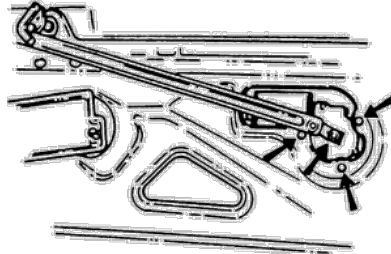
### 700 AND 900 SERIES, S90/V90 MODELS

1. Disconnect negative battery cable.
2. Remove the inner trim pad on the liftgate.
3. Loosen and remove the center nut on the motor and remove the linkage from the motor.
4. Unfasten the bolts holding the motor and remove the motor. Disconnect the wiring from the motor.

**To install:**

5. When reassembling, make certain that the motor is in the park position.
6. Attach the wiring and mount the motor to the liftgate.
7. Attach the linkage to the motor and tighten the center nut.
8. Replace the trim pad.
9. Connect the negative battery cable.

Fig. 13: Location of the rear wiper motor retaining bolts — 700 series model shown



#### 850 AND S70/C70/V70 SERIES

**NOTE:** Refit the radio interference suppression unit if one is present.

1. Disconnect the negative battery cable.
2. Loosen the wiper arm nut a few turns.
3. Remove the wiper arm by holding the nut with locking pliers and pulling the arm off. Remove the nut.
4. Remove the liftgate panel.
5. Remove the wiper motor assembly nuts and detach the electrical connectors.
6. Lift the assembly out.
7. Remove the nut from the wiper motor shaft.
8. Remove the wiper linkage from the motor.
9. Remove the wiper motor.

**To install:**

10. Install the new wiper motor.
11. Install the wiper linkage and tighten the shaft nut.
12. Install the wiper assembly and attach the electrical connectors. Fasten it with the attaching nuts and tighten them to 7.5 ft. lbs. (10 Nm).
13. Install the liftgate panel.
14. Connect the negative battery cable.
15. Run the motor and allow it to stop by itself when the switch is turned **OFF**.
16. Install the wiper arm and nut hand-tight.
17. Adjust the position of the arm so that it is parallel to the bottom of the rear window.
18. Tighten the nut to 12 ft. lbs. (16 Nm).