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shows you how

**BMW 3-Series (92-98) & Z3 (96-98) Haynes Online Manual**

## 16 Windshield wiper motor and linkage - removal and installation

### 3-Series models

#### Removal

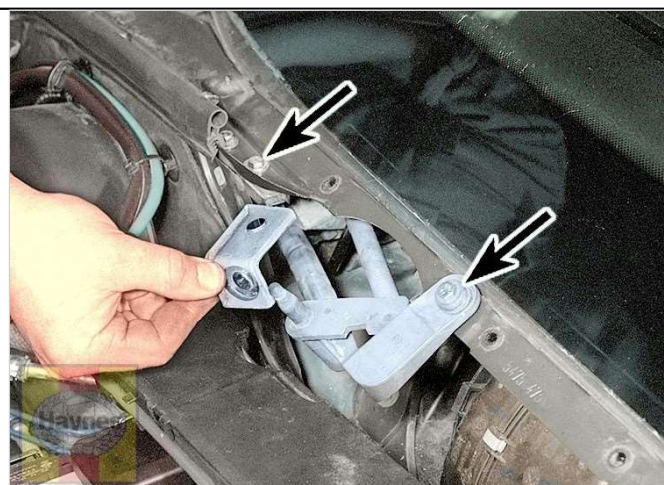
- 1 Disconnect the battery negative terminal. **Caution:** *If the stereo in your vehicle is equipped with an anti-theft system, make sure you have the correct activation code before disconnecting the battery.*
- 2 Remove the wiper arms (see [Section 15](#) ).
- 3 Raise the hood to the vertical position (see [Chapter 11](#) ).
- 4 Remove the rubber seal from the top of the heating/ventilation system inlet.
- 5 Remove the retaining clips securing the wiper motor cover panel in position.
- 6 Remove the release the grille from the top of the inlet and remove the cover panel(s) (as applicable) from the vehicle.
- 7 Remove the retaining screws and free the wiring harness duct from the inlet duct.
- 8 Loosen and remove the retaining screws and retaining plate and remove the inlet duct from the firewall. **Note:** *On 6-cylinder engines it may be necessary to remove the injector and spark plug covers from the engine to enable the inlet to be removed.*
- 9 Unscrew the large nut(s) from the wiper spindle(s) and remove the washer(s) (as applicable) (see illustration) .

**16.9 Unscrew the nut (arrow) from the wiper motor spindle and lift off the washer**



10 Loosen and remove the retaining bolts and remove the wiper motor support bracket (see illustration) . Recover the spacer and mounting rubbers from the motor.

**16.10 Unscrew the mounting bolts (upper two arrows) and remove the wiper motor support bracket**



11 Release the retaining clip and disconnect the wiring connector from the motor.

12 Maneuver the motor and linkage assembly out of position (see illustration) . Recover the rubber grommets from the spindles, inspect them for signs of damage or deterioration, and replace if necessary.

**16.12 Removing the wiper motor assembly from the vehicle**



13 If necessary, mark the relative positions of the motor shaft and crank then release the wiper linkage from the motor balljoint (see illustration) . Unscrew the retaining nut and free the crank from the motor spindle. Unscrew the motor retaining bolts and separate the motor and linkage (see illustrations) .

**16.13a Unclip the wiper linkage from the balljoint . . .**



**16.13b . . . then remove the retaining nut and remove the crank from the motor spindle**



**16.13c Remove the three retaining bolts and separate the motor and wiper linkage**



## Installation



**14** Installation is the reverse of removal, noting the following points.

- A. If removed, tighten the motor retaining bolts and crank arm nut to the specified torque.
- B. Ensure that the spindle grommets are correctly installed and maneuver the motor into position. Install the support bracket and tighten both the bracket bolts and spindle nuts to the specified torque.
- C. On completion install the wiper arms (see [Section 15](#)).

## Z3 models

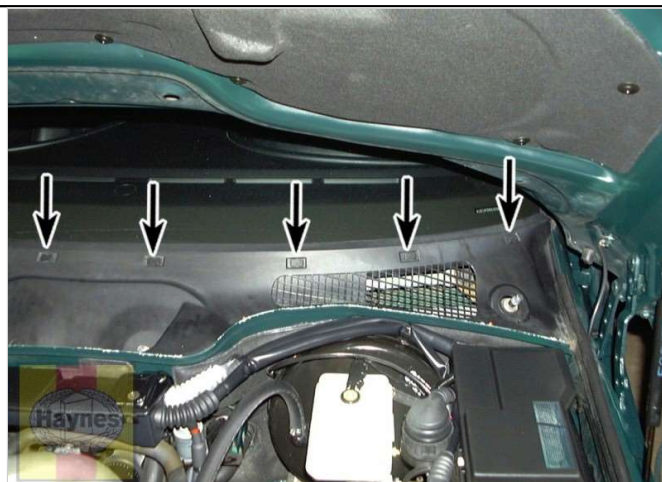
**15** Peel off the left, right and front rubber seals around the protective grille (see illustration) .

**16.15 Peel off the three rubber seals around the protective grille**



**16** Remove the retaining clips around the edge of the ventilation intake air grille and remove the grille (see illustrations) .

**16.16a Pry off the eight retaining clips (arrows) around the edge of the ventilation intake air grille . . .**



**16.16b . . . with a small screwdriver and remove the grille**



**17 Remove the left and right wiper assembly mounting bolts (see illustration) .**

**16.17 To detach the wiper assembly, remove the left and right mounting bolts (arrows)**



**18 To disengage the upper locking guide, pull the wiper assembly toward the right side of the vehicle. To remove the wiper assembly, pull it forward.**

**19 Unplug the electrical connector from the wiper motor. Remove the windshield wiper motor and linkage.**

**20 To disassemble the windshield wiper motor and linkage, refer to Step 13.**

**21 Installation is the reverse of removal. Refer to the notes in Step 14.**

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