

**Haynes**
shows you how

BMW 3-Series and Z4 (99-05) Includes 2006 325ci/330ci Coupe and Convertible models Haynes Online Manual.

16 Windshield wiper motor and linkage - removal and installation

Caution:

These vehicles are equipped with the Central Body Electronic (ZKE-V) system. Each individual system is linked to a centralized control module that allows efficient and accurate troubleshooting. This control module governs the windshield wipers and washers, the central locking and anti-theft system, the power windows, the interior lights, the alarm system and the electronic consumer sleep mode. In the event of a malfunction with this system, have the vehicle diagnosed by a dealer service department or other qualified automotive repair facility, as special test equipment is required.

Removal

Front windshield wiper motor

- 1 Remove the wiper arms as described in the previous Section.
- 2 Open the hood.
- 3 Remove the heater air inlet housing as follows (see illustrations) :

16.3a Lift the rubber strip and remove the two fasteners



16.3b Remove the two screws and remove the inlet ducting



- A. Rotate the three fasteners 90-degrees counterclockwise and remove the in-cabin air filter cover from the rear of the engine compartment (see [Chapter 1](#)). Pull the filter forward and remove it.
- B. Remove the four retaining clips and thread the cable out of the ducting.
- C. Unscrew the four screws and pull the filter housing forwards and remove it.
- D. Pull up the rubber strip, rotate the two fasteners counterclockwise, and move the dividing panel in the left-hand corner of the engine compartment forward a little.
- E. Remove the two screws and remove the inlet ducting upwards and out of the engine compartment.

4 Carefully pull the scuttle panel trim up, releasing it from the retaining clips.

5 Release the two retaining clips, remove the screw and remove the front cover from the heater (see [Chapter 3](#) if necessary).

6 Disconnect the wiper motor wiring connector.

7 Remove the screw securing the linkage assembly to the underside of the scuttle panel (see illustration) .

16.7 Remove the screw securing the wiper linkage



8 Unscrew the large nuts from the wiper spindles and remove the washers.

9 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.

16.9 Maneuver the linkage from the firewall



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

16.10 Remove the three bolts and remove the wiper motor



Rear windshield wiper motor

11 Open the tailgate, and carefully pry the luggage compartment light unit from the tailgate trim panel. Disconnect the wiring connector as the unit is removed.

12 Pry up the small piece of trim at the top of the panel **(see illustration 5.47)** .

13 Remove the two retaining screws at the upper edge, and carefully release the trim panel retaining clips **(see illustration 5.48)** . Lift the panel from place.

14 Unclip the trim around the tailgate latch striker **(see illustration)** .

16.14 Unclip the trim around the latch striker



15 Remove the panel insert from the inner trim panel. Note how the insert engages with the trim panel (see illustrations).

16.15a Remove the trim insert from the inner panel



16.15b The trim insert lugs must engage correctly with the holes in the inner panel

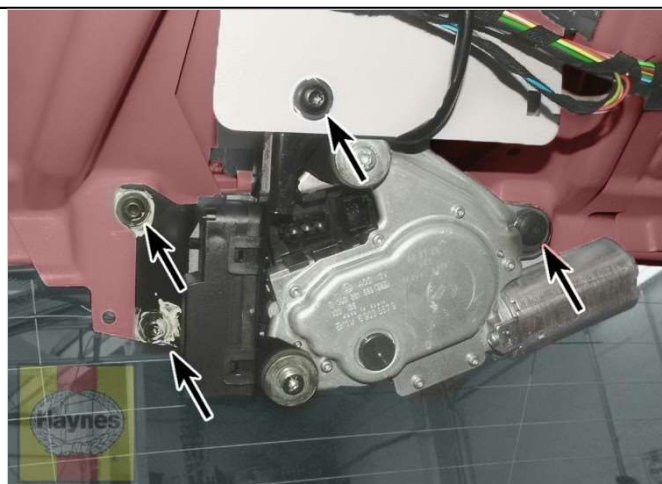
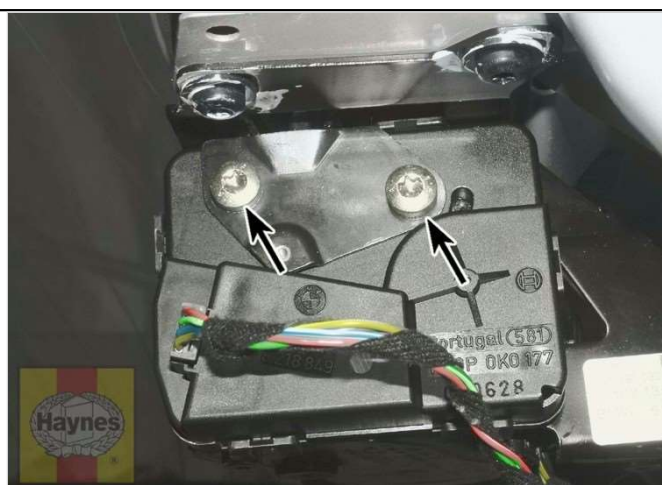


16 Remove the seven screws, release the four retaining clips, and remove the tailgate inner trim panel (see illustration) .

16.16 Release the screws (1) and clips (2)

17 Disconnect the wiper motor wiring connectors.

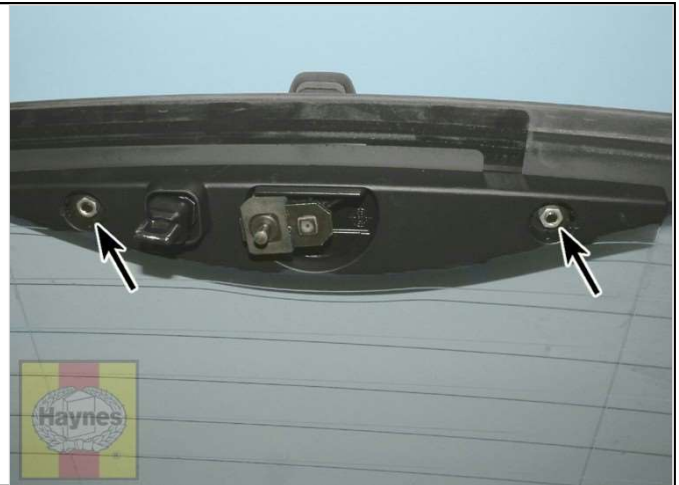
18 Make alignment marks where the motor and bracket touch the tailgate, to aid installation. Remove the four screws, and remove the wiper motor. If required, the window latch can be separated from the wiper motor by removing the two retaining screws (see illustrations) .

16.18a Rear wiper motor screws**16.18b Remove the screws and remove the window latch from the wiper motor****Rear wiper arm spindle and housing**

19 Remove the rear wiper arm as described in the previous Section.

20 Open the tailgate, pry out the two plastic caps, and remove the two nuts securing the plastic cover over the spindle (see illustration) . Remove the cover.

16.20 Pry out the plastic caps and remove the two nuts



21 On the outside of the windshield, loosen and remove the wiper arm spindle nut. Recover any washers (see illustration) .

16.21 Loosen and remove the wiper spindle nut



22 On the inside of the windshield, remove the retaining nut and maneuver the housing and spindle from position (see illustration) . No further disassembly is recommended.

16.22 Remove the nut and remove the housing complete with spindle



Installation

23 Installation is the reverse of removal. On completion install the wiper arms as described in [Section 15](#) .

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