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shows you how

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

## 4 Cooling fan - removal and installation

### Mechanical fan (M42 four-cylinder and all six-cylinder engines)

#### Removal

**Note:**

A special 32 mm narrow open-ended wrench will be required to remove the fan and viscous coupling assembly.

- 1 Undo the retaining screws and remove the plastic cover from above the radiator.
- 2 On six-cylinder 3-Series models, disconnect the auxiliary cooling ducts from the shroud and remove them from the engine compartment (see illustration) .

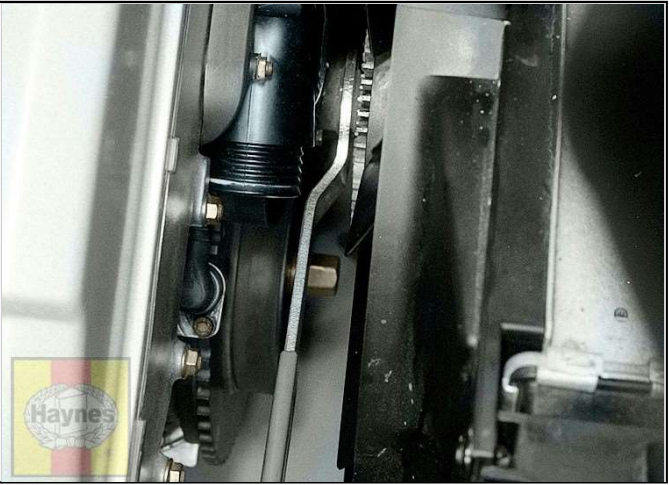
**4.2 On six-cylinder models unclip the alternator cooling duct and remove it from the engine compartment**



- 3 Release the fan shroud upper retaining clips by pulling out their center pins then lift the shroud upwards and out of position. **Note:** *It may be necessary to remove the fan to enable the shroud to be removed.*

- 4 Using the special open-ended wrench unscrew the fan clutch from the coolant pump and remove the cooling fan (see illustrations) . **Note:** *The fan clutch has a left-hand thread.*

#### 4.4a Loosen the cooling fan coupling using the special open-ended wrench . . .



#### 4.4b . . . and remove the cooling fan



5 If necessary, loosen and remove the retaining bolts and separate the cooling fan from the clutch noting which way around the fan is fitted.

## Installation

6 Where necessary, install the fan to the fan clutch and securely tighten its retaining bolts. Make sure the fan is fitted the correct way around. **Note:** *If the fan is installed facing the wrong way, the efficiency of the cooling system will be significantly reduced.*

7 Install the fan and shroud. Screw the fan onto the coolant pump and tighten it to the specified torque. Engage the fan shroud with the lugs on the radiator and secure it in position with the retaining clips.

8 Reconnect the auxiliary cooling ducts (where fitted) to the shroud then install the plastic cover to the hood crossmember and securely tighten its retaining screws.

## Electric fan (3-Series models with M44 engine and manual transmission; Z3 models with M44 engine)

## Removal

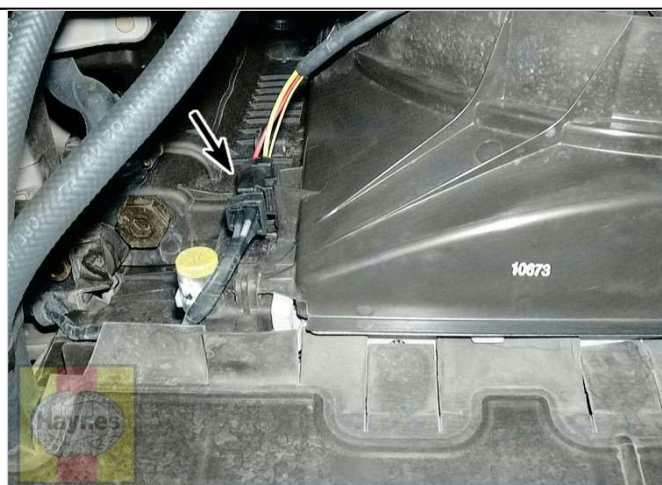
9 Remove the cover from the top of the radiator (see illustration) .

**4.9 To detach the cover from the radiator, remove these fasteners (arrows)**



10 Unplug the electrical connector from the fan switch at the bottom left corner of the radiator (see illustration) .

**4.10 Before removing the fan assembly, unplug the electrical connector (arrow)**



11 Remove the retaining screws from the left and right sides of the fan shroud (see illustration) .

**4.11 To detach the shroud from the radiator, remove the bolt (arrow) from each upper corner (right bolt shown)**





12 Lift the fan and shroud assembly out of the engine compartment.

## Installation

13 Installation is the reverse of removal. Make sure that the tabs on the fan housing are aligned with the retaining tabs on the radiator (see illustration) .

**4.13 When installing the fan shroud, make sure that the locator pin at each lower corner is fully seated into its corresponding alignment notch (arrow) (right locator pin and alignment notch shown)**



## Auxiliary cooling fan (all 3-Series models and six-cylinder Z3 models)

### Type 1 (3-Series models manufactured through September 1992)

14 Remove the seven fasteners from the front radiator air shroud and remove the shroud.

15 Remove the three fan assembly mounting screws.

16 Tilt the fan to the front and unplug the electrical connector.

17 Lift the fan up and remove it from the engine compartment.

18 Installation is the reverse of removal.

### Type 2 (3-Series models manufactured after September 1992; all six-cylinder Z3 models)

19 Remove the front bumper assembly (see [Chapter 11](#) ).

20 On 3-Series models, remove the front grille.

21 Unplug the electrical connector from the fan.

**22 Remove the four fan assembly mounting screws.**

**23 Remove the fan assembly through the bumper opening.**

**24 Installation is the reverse of removal.**

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