Haynes shows you how

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

3 Radiator - removal, inspection and installation

Note:
Some models are equipped with a specialized radiator designed to consume ground level ozone. Do not replace the radiator with a radiator not equipped with this special coating.

Removal

1 Disconnect the cable from the negative terminal of the battery (see Chapter 5, Section 1).

2 Drain the cooling system (see Chapter 1).

3 Remove the air filter housing (see Chapter 4).

4 On automatic transmission models, remove the cooling fan and viscous coupling (see Section 5). On manual transmission models remove the electric cooling fan (see Section 6). **Note:** *On automatic transmission models; there is no need to remove the electric cooling fan on the front (bumper) side of the radiator.*

5 Pry out the locking wire clips and disconnect the upper coolant hose union from the radiator and expansion tank **(see illustration 2.3b)** .

6 Pry out the locking wire clip and disconnect the hose from the expansion tank **(see illustration)** .

3.6 Disconnect the hose from the expansion tank

7 Pry out the locking wire clip and disconnect the lower hose from the expansion tank **(see illustration)** .

3.7 Pry out the locking wire clip and disconnect the lower hose from the expansion tank

8 Reach underneath the expansion tank and disconnect the wiring from the coolant level sensor. Pull out the retaining clip from the base of the expansion tank **(see illustration)** .

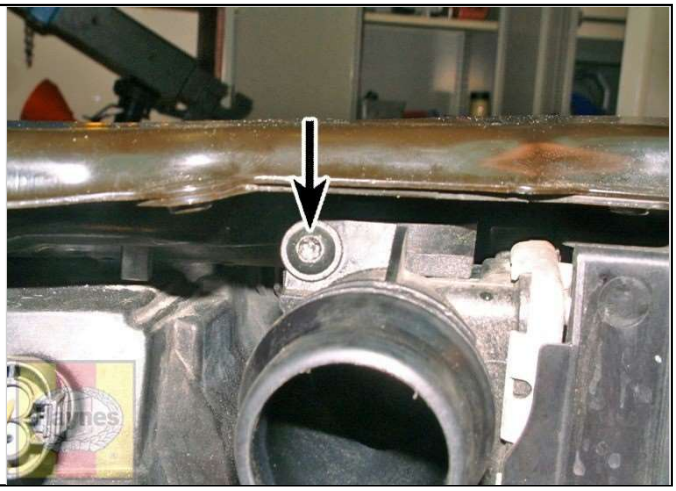
3.8 Disconnect the level sensor wiring connector, and pull out the expansion tank retaining clip

9 Pull the expansion tank away from the radiator and lift it up off the brackets located at the bottom of the radiator and remove it.

10 Disconnect the transmission fluid cooler lines from the external transmission cooler, if equipped (see Chapter 7B).

11 Depending no model, remove the Torx screw at the upper right corner of the radiator, the plastic rivet at the upper left corner, and/or the plastic bolts at the top of the radiator, then lift the radiator upwards and out of the engine compartment **(see illustrations)** .

3.11a The radiator on some models is secured by a Torx screw located in the upper right-hand corner of the radiator . . .



3.11b . . . and a plastic expansion rivet in the left-hand corner

3.11c The radiator on other models is secured by two plastic bolts at the top of the radiator support

Inspection

12 If the radiator has been removed due to suspected blockage, reverse flush it as described in Chapter 1 .

13 Clean dirt and debris from the radiator fins, using an air line (in which case, wear eye protection) or a soft brush. Be careful, as the fins are easily damaged, and are sharp.

14 If necessary, a radiator specialist can perform a flow test on the radiator, to establish whether an internal blockage exists.

15 A leaking radiator must be referred to a specialist for permanent repair. Do not attempt to weld or solder a leaking radiator, as damage may result.

16 Inspect the radiator lower rubber mounts for signs of damage or deterioration and replace if necessary.

Installation

17 Installation is the reverse of removal, noting the following points.

A. Ensure that the lower mount bushings are correctly located in the body, then lower the radiator into position, engage it with the mounts and secure it in position with the retaining bolts/clip (see illustration).

B. Ensure that the fan cowl is correctly located with the lugs on the radiator and secure it in position with the clips.

C. Reconnect the hoses and ensure the retaining clips engage securely.

D. Check the condition of the O-ring seals in the end of the radiator fittings. Replace any that are defective.

E. On completion, reconnect the battery (see Chapter 5, Section 1) and refill the cooling system (see Chapter 1).

3.17 The radiator must sit in the V in the mounting