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

4 Valve cover - removal and installation

Removal

Note:

New gaskets and/or seals may be required on installation - see text.

1 Open the hood, then raise the hood to its fully open position (see [Chapter 11](#)).

2 Where necessary, to allow sufficient clearance for the valve cover to be removed, remove the heater/ventilation intake air ducting from the rear of the engine compartment as follows.

- A. Lift the grille from the top of the ducting (on certain Coupe models, it will be necessary to remove the windshield wiper arms, then remove the plastic securing screws and lift off the complete scuttle grille assembly).
- B. Working through the top of the ducting, remove the screws securing the cable ducting to the air ducting and move the cable ducting clear.
- C. Unscrew the nuts and/or screw(s) securing the air ducting to the firewall (where applicable, bend back the heat shielding for access).
- D. Remove the air ducting by pulling upwards.
- E. Move the previously removed cable ducting clear of the valve cover.

3 Remove the engine oil filler cap.

4 Remove the plastic covers from the fuel rail and the top of the valve cover. To remove the covers, pry out the cover plates and unscrew the two securing nuts. To remove the cover from the cylinder head, lift and pull the cover forwards, then manipulate the cover over the oil filler neck (see illustrations) .

4.4a Prying a securing nut cover plate from the fuel rail cover



4.4b Unscrewing a cylinder head plastic cover securing nut



4.4c Removing the cylinder head plastic cover



5 Unbolt the ground lead from the left-hand corner of the upper timing chain cover, and where applicable, unbolt the ground strap from the rear of the valve cover (see illustration) .

4.5 Disconnect the ground lead from the upper timing chain cover



6 Remove the two nuts securing the engine wiring ducting to the fuel rail, then pull the ducting up to release the wiring plugs from the fuel injectors (see illustration) .

4.6 Pulling the wiring ducting from the fuel injectors



7 Unclip the wiring connectors from the ignition coils. Recover the rubber seals if they are loose (see illustration) .

4.7 Disconnecting a coil wiring plug



8 Release the wiring from the clips on the valve cover, then move the complete ducting/wiring assembly to one side, clear of the valve cover.

9 Unscrew the ignition coil securing nuts, then carefully pull the coils, complete with connectors, from the spark plugs (see illustration) . Note the locations of the ground leads and the coil wiring brackets.

4.9 Removing an ignition coil



10 Release the securing clip and disconnect the breather hose from the side of the valve cover (see illustration)

4.10 Disconnecting the breather hose from the valve cover



11 Unscrew the securing bolts and the two studs (which also secure the coil ground leads) and lift off the valve cover. Note the locations of all washers, seals and gaskets, and recover any which are loose (see illustration) .

4.11 Lifting off the valve cover



Installation

12 Commence installation by checking the condition of all seals and gaskets. Replace any which are deteriorated or damaged.

13 Clean the gasket/sealing faces of the cylinder head and the valve cover, then lay the main (outer) gasket and the two spark plug hole (center) gaskets in position on the cylinder head (see illustration) .

4.13 Lay the gaskets in position on the cylinder head



14 Lay the valve cover in position, taking care not to disturb the gaskets. Check that the tabs on the rear of the main gasket are correctly positioned in the cut-outs in the rear of the cylinder head.

15 Install the valve cover bolts and studs, ensuring that the seals are positioned as noted during removal, then tighten the bolts progressively to the specified torque.

16 Further installation is a reversal of the removal procedure, bearing in mind the following points.

A. Check that the ignition coil ground leads are correctly positioned as noted before removal.

B. Tighten the coil securing nuts to the specified torque.

C. Check that the rubber seals are in place when reconnecting the spark plug wire plugs to the coils.

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