



Haynes
shows you how

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

4 Valve cover - removal and installation

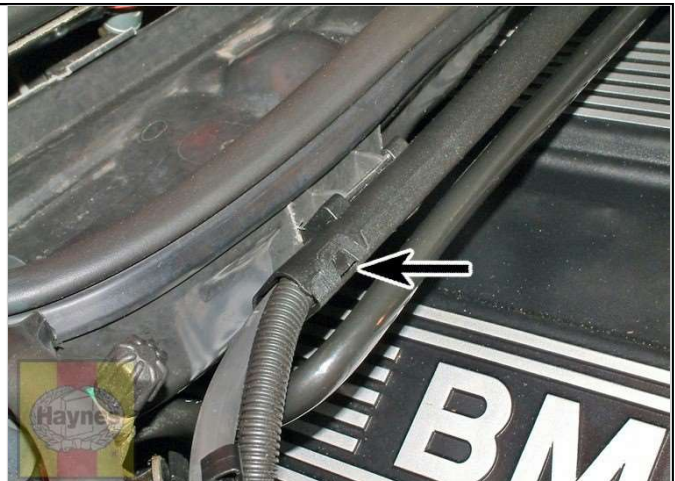
Note:

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

Removal

- 1 Disconnect the cable from the negative terminal of the battery (see [Chapter 5, Section 1](#)).
- 2 To allow sufficient clearance for the valve cover to be removed, remove the heater/ventilation intake air duct from the rear of the engine compartment (see illustrations) .

4.2a Unclip the cable ducts



4.2b Remove the two Torx screws and remove the intake ducts

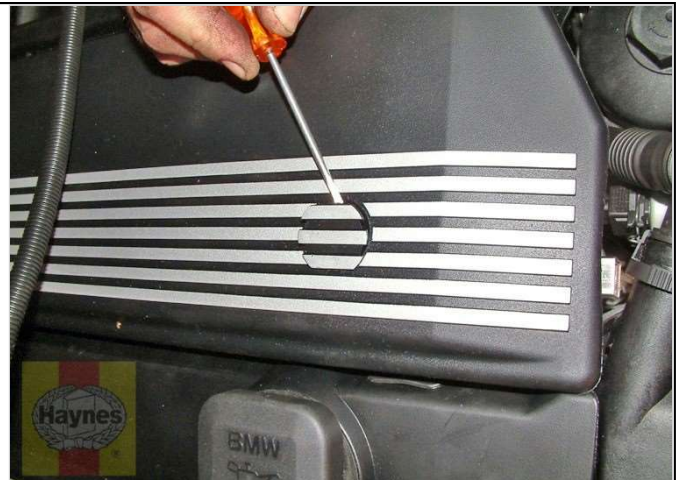


- A. Remove the in-cabin filter cover from the rear of the engine compartment (see [Chapter 1](#)). Pull the filter forward and remove it.
- B. Remove the four retaining clips and thread the cable out of the harness.
- C. Remove the screws and pull the filter housing forward to remove it.
- D. Pull up 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 screws and remove the intake ducting upwards and out of the engine compartment.

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 plastic covers, pry out the cover caps and unscrew the two retaining 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 illustration) .

4.4a Some models are equipped with caps that can be removed to access the cover bolts

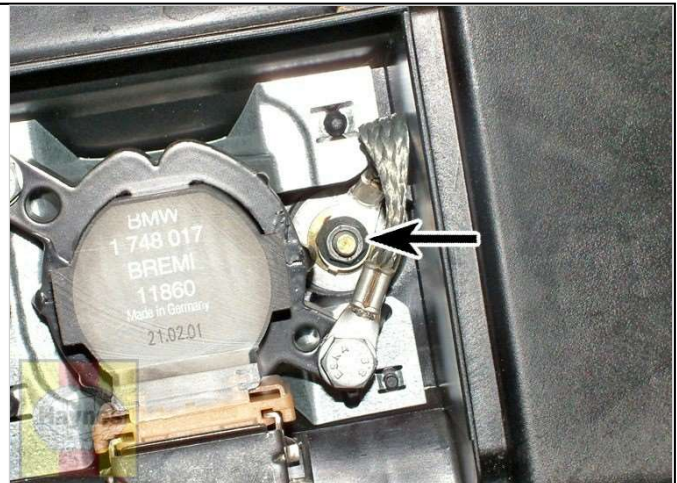


4.4b Other models are equipped with clips that snap fit onto the engine components

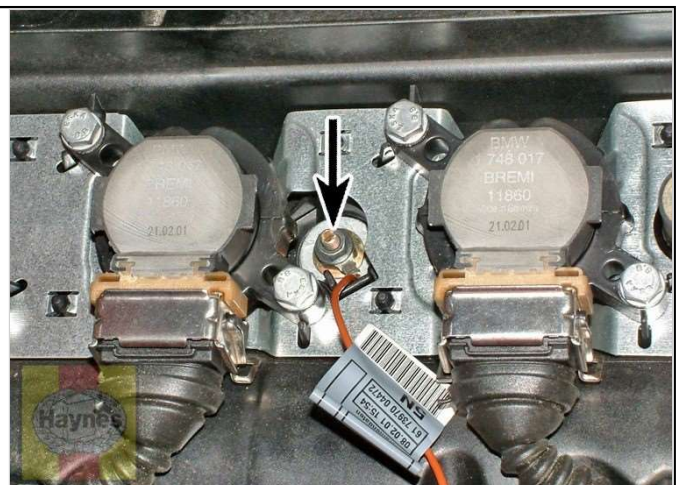


5 Unbolt the ground strap from the valve cover adjacent to the Number 1 spark plug hole and, where applicable, unbolt the ground leads from the center and rear of the valve cover (see illustrations) .

4.5a Unbolt the ground strap from next to the No 1 spark plug hole . . .

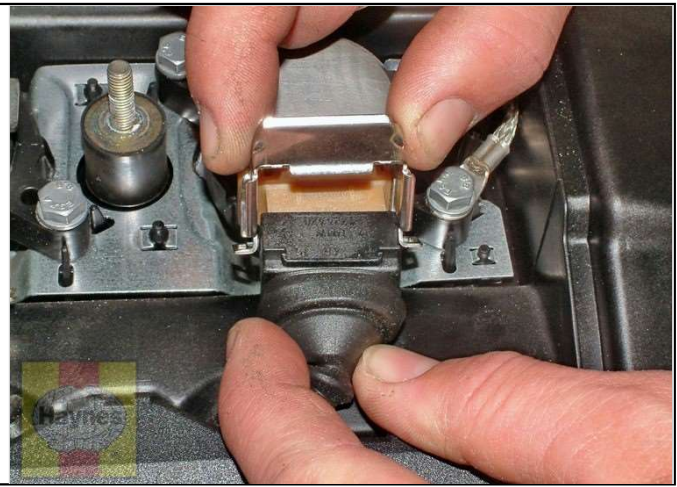


4.5b . . . and the center of the cylinder head



6 Disconnect the electrical connectors from the ignition coils (see illustration) .

4.6 Slide up the locking elements and disconnect the coil plugs



7 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.

8 Unscrew the ignition coil bolts, then carefully pull the coils from the spark plugs (see illustration) . Note the locations of the ground leads and the coil wiring brackets.

4.8 Remove the ignition coil bolts and pull the coils up from the spark plugs



9 Release the retaining clip and disconnect the PCV breather hose from the side of the valve cover (see illustration) .

4.9 Disconnect the breather hose from the valve cover



10 Unclip the oxygen sensor harness connectors from the right-side of the valve cover and lay them to one side.

11 Unscrew the retaining bolts/nuts (including the ones in the center of the cover) and lift off the valve cover. Note the locations of all washers, seals and gaskets, and recover any which are loose.

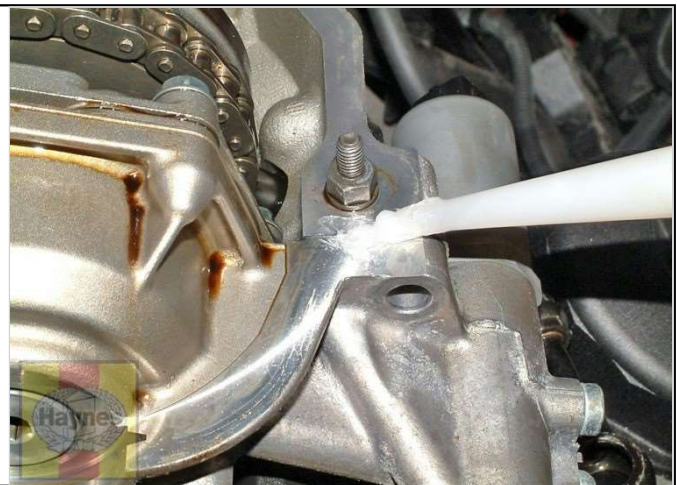
Installation

12 Before installation, check 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 apply a bead of RTV sealant to the area where the VANOS unit meets the cylinder head, and the corners of the semi-circular cut-out sections at the rear of the cylinder head and VANOS

unit. Lay the main (outer) gasket and the spark plug hole (center) gaskets in position on the valve cover (see illustrations) .

4.13a Apply sealant to the areas where the VANOS unit contacts the cylinder head . . .



4.13b . . . and the semi-circular cut-out sections



4.13c Ensure the gaskets are in position



14 Set 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 Reinstall the valve cover screws/nuts, ensuring that the seals are positioned as noted during removal, then tighten the bolts progressively to the torque listed in this Chapter's Specifications.

16 Further installation is the reverse 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 ignition coil retaining nuts/screws to the torque listed in this Chapter's Specifications.
- C. Check that the rubber seals are in place when reconnecting the ignition wires to the coils.