



Haynes
shows you how

[BMW 3-Series 320i & 320xi \(12-14\), 325i, 325xi, 330i & 330xi \(06\) & 328i & 328xi \(07-14\) Haynes Online Manual](#)

9 Valvetronic components - removal and installation

Eccentric shaft

Removal

- 1 Remove the intake valve intermediate levers (see [Section 8](#) , Steps 1 through 19).
- 2 Rotate the eccentric shaft with a wrench on the slotted section until its lobes are in the minimum lift position.
- 3 Remove the retaining bolts and remove the shaft bearing caps. Lay the caps out on a clean surface in order. It is essential they are reinstalled to their original positions. Discard the bolts; new ones must be installed.
- 4 Carefully maneuver the eccentric shaft from position.
- 5 If required, carefully pull apart the bearing cages and remove the bearings from the shaft, then remove the shells from the bearing caps. Lay the caps/bearings out on a clean surface in order. Its essential they are reinstalled to their original positions.

Caution:

Only spread the bearing cages just enough to remove them from the shaft - they are easily broken.

Installation

- 7 If removed, install the bearing shells into their original positions in the bearing caps. The inner shell must be installed with the pointed end facing downwards, and the outer shell with the pointed end upwards.
- 8 If removed, install the magnetic sensor wheel to the shaft and tighten the bolt securely.
- 9 If removed, install the bearings to their original positions on the eccentric shaft.
- 10 Lubricate the bearing surfaces with clean engine oil, then install the eccentric shaft in the minimum lift position.

11 Install the bearing caps and tighten the new retaining bolts to the torque listed in [this Chapter's Specifications](#).

12 Install the intermediate levers (see [Section 8](#)).

Servo motor

Removal

13 Disconnect the wiring plug from the positioning motor.

14 Remove the valve cover (see [Section 4](#)).

15 Using an Allen wrench, rotate the end of the positioning motor shaft clockwise until the tension on the eccentric shaft has been relieved.

16 Remove the motor mounting bolts and the motor - note one of the mounting bolts is located under the motor. Discard the bolts - new ones must be installed.

Installation

17 Position the motor in the aperture in the valve cover, then rotate the motor shaft counterclockwise with an Allen wrench and draw the motor into position against the flange. Install the new bolts and tighten them to the torque listed in [this Chapter's Specifications](#).

18 The remainder of installation is the reverse of removal.

Position sensor

19 Remove the valve cover (see [Section 4](#)).

20 Disconnect the sensor electrical connector.

21 Loosen the sensor retaining bolts. Note that the bolts are integral with the sensor - do not attempt to loosen them from the sensor. If fully unscrewed, the bolts *will* fall out.

22 Remove the sensor.

23 Installation is the reverse of removal.