



Haynes
shows you how

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

13 Oil pump - removal, inspection and installation

Removal

- 1 The oil pump is integral with the timing chain housing.
- 2 Remove the crankshaft vibration damper/pulley and pulley hub (see [Section 5](#)).
- 3 Remove the timing chain housing (see [Section 9](#)).

Inspection

- 4 Unscrew the oil pump cover from the rear of the timing chain housing to expose the oil pump rotors (see illustrations) .

13.4a Unscrew the securing bolts . . .



13.4b . . . and remove the oil pump cover

5 Check the rotors for identification marks, and if necessary mark the rotors to ensure that they are installed in their original positions (mark the top faces of both rotors to ensure that they are installed the correct way up). Remove the rotors from the housing (see illustrations) .

13.5a Remove the inner . . .**13.5b . . . and outer rotors from the oil pump**

6 Clean the housing and the rotors thoroughly, then install the rotors to the housing, ensuring that they are positioned as noted before removal.

7 Using feeler gauges, measure the clearance between the oil pump body and the outer rotor. Using the feeler gauges and a straight edge, measure the clearance (endplay) between each of the rotors and the oil pump cover mating face (see illustration) .

13.7 Measuring the clearance between the oil pump body and the outer rotor



8 If the clearances are not as given in the Specifications, consult a BMW dealer regarding the availability of spare parts. The rotors should always be renewed as a matched pair. It may be necessary to replace the complete rotor/housing assembly as a unit.

9 If the clearances are within the tolerances given, remove the rotors, then pour a little engine oil into the housing. Install the rotors and turn them to lubricate all the contact surfaces.

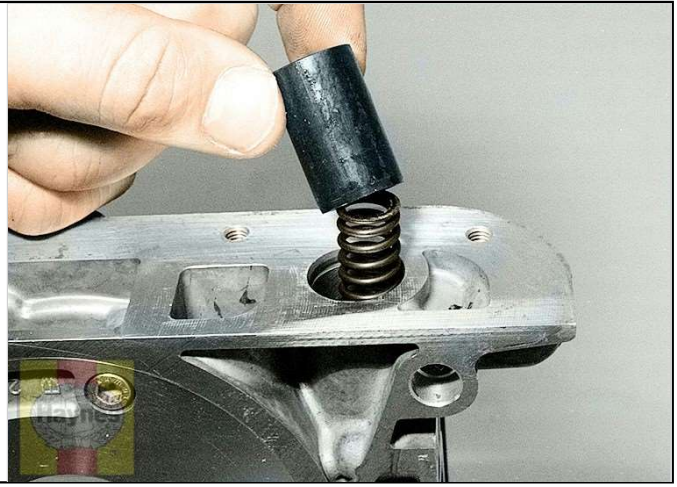
10 Install the oil pump cover plate, and tighten the securing bolts to the specified torque.

11 To check the oil pressure relief valve, extract the snap-ring and remove the sleeve, spring and piston. Check that the free-length of the spring is as given in the Specifications (see illustrations) .

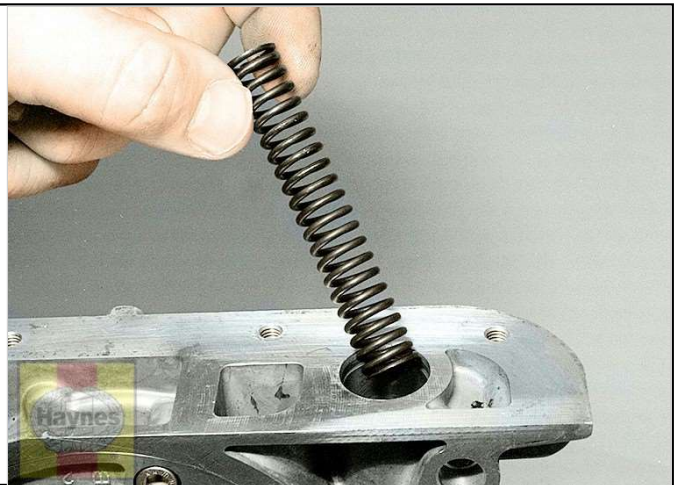
13.11a Remove the pressure relief valve snap-ring . . .



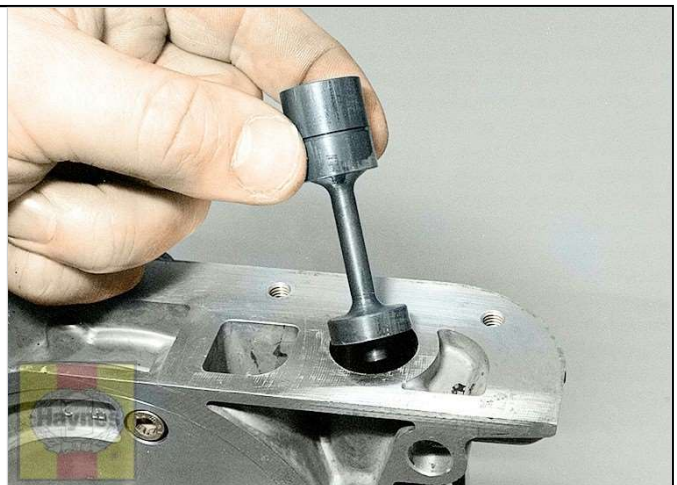
13.11b . . . and remove the sleeve . . .



13.11c . . . spring . . .



13.11d . . . and piston



13.11e Check the length of the pressure relief valve spring

All dimensions in mm



12 Reassemble the pressure relief valve using a reversal of the dismantling procedure.

Installation

13 Install the timing chain housing (see [Section 9](#)).

14 Install the crankshaft vibration dam-per/pulley and pulley hub (see [Section 5](#)).

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