



**Haynes**  
shows you how

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

## 13 Oil pump and drive chain - removal, inspection and installation

### Oil pump

**Note:**

A new pick-up pipe O-ring, a new relief valve spring cap O-ring and a new relief valve snap-ring will be required on installation.

### Removal and installation

**Note:**

Models built before January 2000 are equipped with an integral (one-piece) oil pump and baffle plate assembly. Models built after January 2000 are equipped with a separate oil pump and baffle plate.

1 Remove the oil pan (see [Section 12](#)).

2 Unscrew the nut securing the sprocket to the oil pump shaft (see illustration) . **Note:** *The nut has left-hand threads . Turn it clockwise to loosen it.*

**13.2 Unscrew the oil pump sprocket retaining nut - it has a left-hand thread**

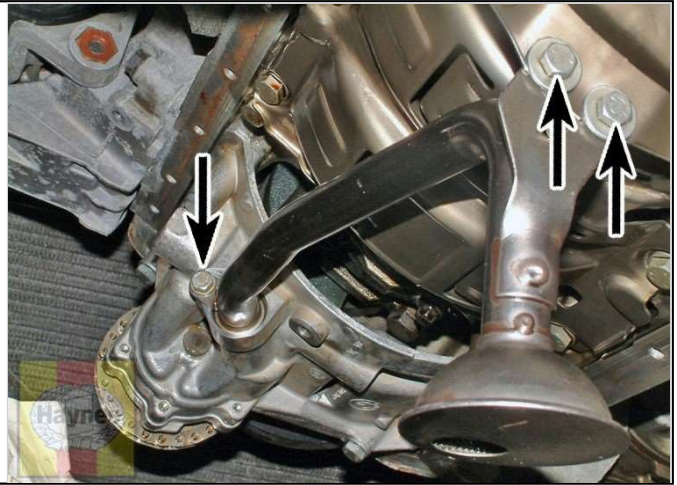


3 Pull the sprocket and chain from the oil pump shaft.

4 On models where the pump is integral with the oil pan baffle plate, remove the bolts and remove the plate complete with the pump and pick-up tube.

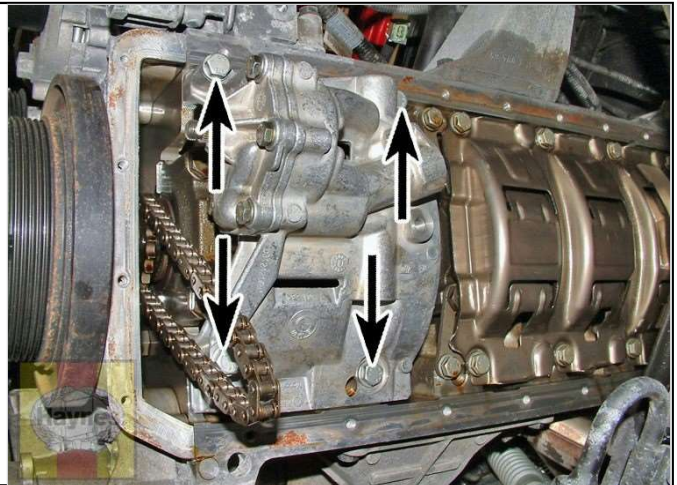
5 On models where the pump is separate from the baffle plate, remove the two bolts securing the pick-up pipe to the baffle plate, and the bolt securing the pipe to the pump (see illustration) . Remove the pipe.

### 13.5 Unscrew the oil pick-up pipe bolts



6 Remove the four bolts and remove the oil pump (see illustration) .

### 13.6 Oil pump mounting bolts



## Inspection

7 Unbolt the cover from the front of the pump (see illustration) .

### 13.7 Oil pump cover bolts



8 Withdraw the driveshaft/rotor and the outer rotor from the pump body.

9 Check the pump body, rotors and cover for any signs of scoring, wear or cracks. If any wear or damage is evident, install new rotors or replace the complete pump, depending on the extent of the damage. Note that it is wise to replace the complete pump as a unit.

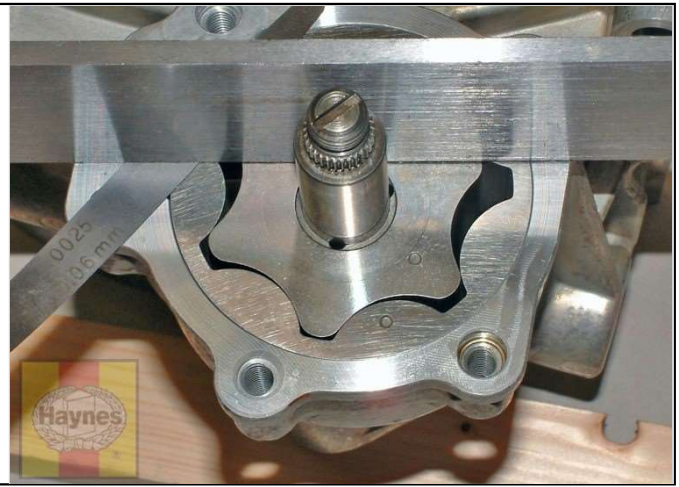
10 Reinstall the rotors to the pump body, then using feeler gauges, measure the clearance between the outer rotor and the pump body. Using the feeler gauges and a straight-edge, measure the clearance (endplay) between each of the rotors and the oil pump cover mating face (see illustrations) . Compare the measurements with the values given in the Specifications, and if necessary, replace any worn components, or replace the complete pump as a unit.

### 13.10a Measure the clearance between the outer oil pump rotor and the pump body . . .





### 13.10b . . . and the rotor endplay



11 To remove the pressure relief valve components, press the valve into its housing slightly, using a metal tool, then extract the snap-ring from the top of the housing using snap-ring pliers (see illustration) . **Warning:** *The relief valve has a strong spring. Take care when removing the snap-ring.*

### 13.11 Extract the snap-ring using special pliers

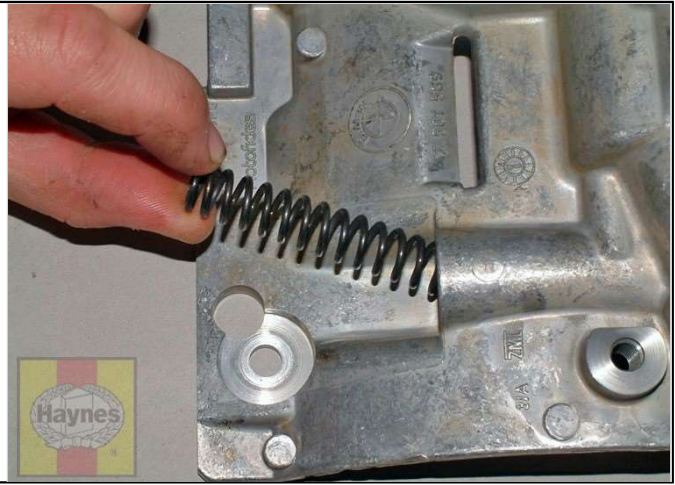


12 Withdraw the spring cap, spring and piston from the relief valve housing (see illustrations) .

### 13.12a Withdraw the oil pressure relief valve spring cap . . .



### 13.12b . . . spring . . .



### 13.12c . . . and piston



13 Install a new Q-ring seal to the top of the relief valve spring cap, then reinstall the components to the housing using a reversal of the removal procedure. Take care not to damage the surface of the spring cap during installation, and secure the components using a new Q-ring.

14 Reinstall the rotors to the pump body, then reinstall the cover to the pump. Ensure that the locating dowels are in position in the pump cover. Reinstall and tighten the cover bolts to the torque listed in [this Chapter's Specifications](#).

15 The remainder of installation is a reversal of removal, noting the following points:

- A. Where applicable, replace the oil pick-up tube O-ring seal.
- B. Tighten the oil pump sprocket retaining nut (left-hand thread) to the torque listed in [this Chapter's Specifications](#).

## Oil pump drive chain

### Removal

16 Remove the primary timing chain (see [Section 7](#)).

17 Remove the oil pump drive chain from the crankshaft sprocket.

## Inspection

18 Proceed as described for the secondary timing chain in [Section 7](#) .

## Installation

19 Reinstall the chain to the crankshaft sprocket, then reinstall the primary timing chain as described in [Section 7](#) .

© 2024 Haynes Manuals, Inc. Contact us