



Haynes
shows you how

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

12 Oil pump and drive chain - removal and installation

Oil pump

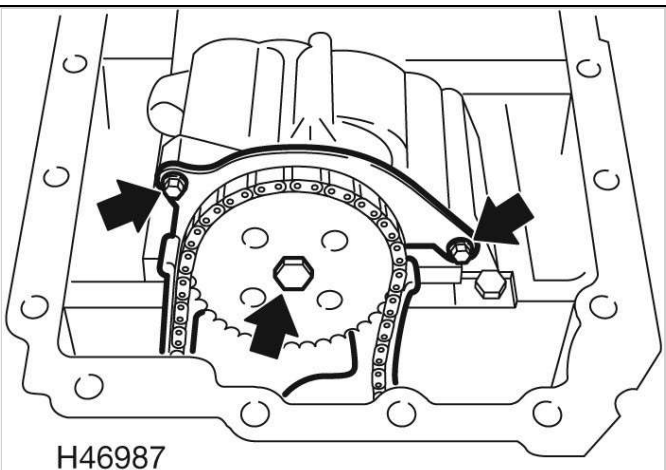
Note:

No separate parts are available for the pump. If defective, the complete pump must be replaced.

Removal

- 1 Remove the oil pan and oil pick-up tube (see [Section 11](#)).
- 2 Remove the bolt securing the sprocket to the oil pump shaft, but leave the sprocket engaged in the drive chain.
- 3 Pull the sprocket and chain from the oil pump shaft.
- 4 Remove the mounting bolts securing the drive chain module to the pump (see illustration) .

12.4 Oil pump sprocket bolt and drive chain module bolts



- 5 Remove the retaining bolts and the oil pump. **Note:** *Make a drawing or photo to indicate the location of the various-length bolts. Discard the bolts - new ones must be installed.*

Installation

6 Installation is the reverse of removal, noting the following points:

- A. Replace all aluminum bolts.
- B. Tighten all fasteners to their specified torque where given.

Oil pump drive chain

Removal

7 Remove the drivebelt (see [Chapter 1](#)).

8 Remove the bolt and remove the drivebelt tensioner.

9 The vacuum pump sealing cover must now be removed. BMW specifies the use of several special tools (No 11 9 200, 11 4 362, 11 4 361 and 11 4 364) to remove and install the cover (see illustration) . However, with care it is possible to pry the cover out using a screwdriver, and install a new cover without the use of special tools.

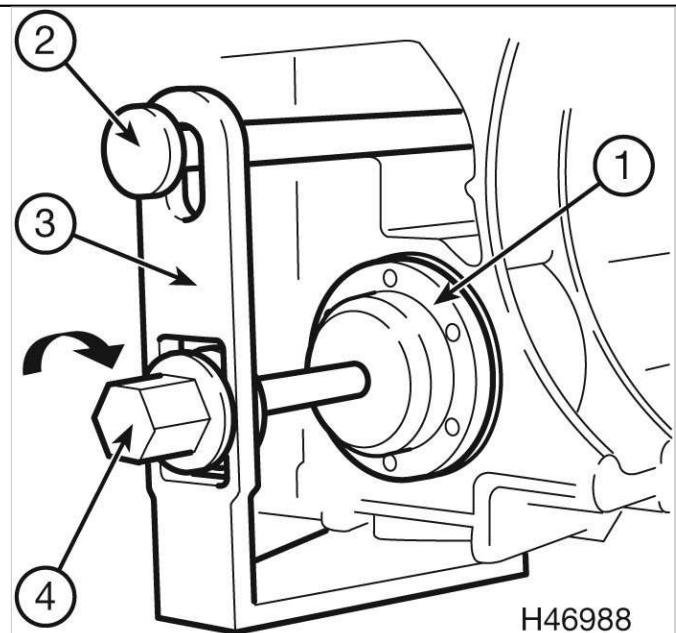
12.9 Pump sealing cover removal details

1 BMW tool No 11 9 200 - attached to the sealing cover using self-tapping screws

2 BMW tool No 11 4 362

3 BMW tool No 11 4 361

4 BMW tool No 11 4 364 - rotate clockwise to extract sealing cover



10 Rotate the crankshaft pulley bolt clockwise until the 3 holes in the vacuum pump drive sprocket align with the pump mounting bolts.

11 The pump sprocket must now be secured in position prior to removing the retaining bolt. BMW specifies the use of tools No 11 4 362 and 11 0 290 (see illustration) .

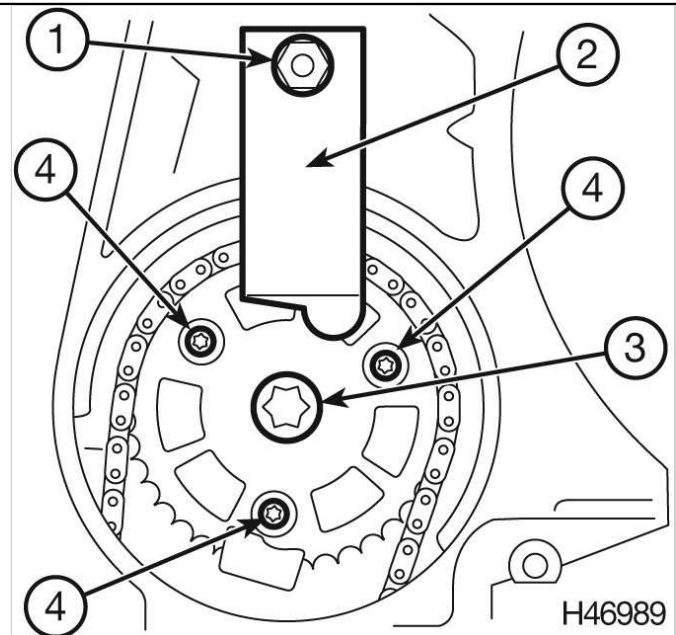
12.11 Vacuum pump mounting details

1 BMW tool No 11 4 362

2 BMW tool No 11 0 290

3 Sprocket retaining bolt

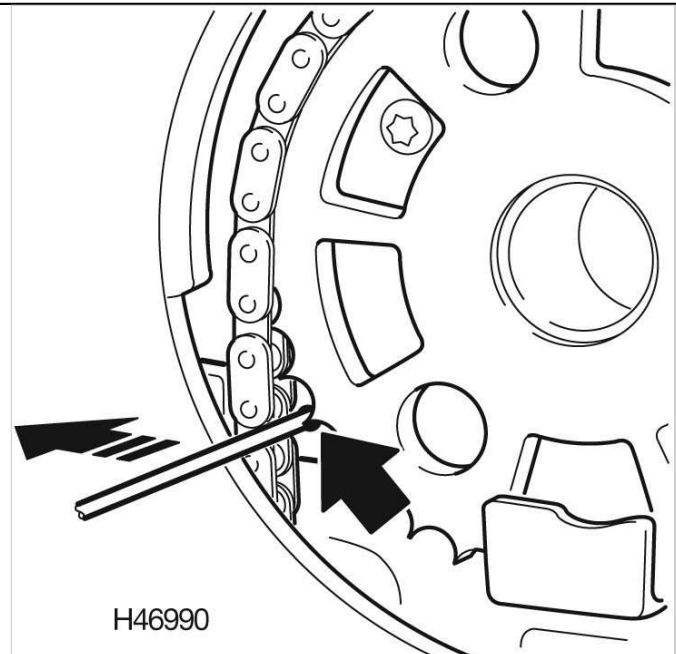
4 Pump mounting bolts



12 Remove the vacuum pump sprocket retaining bolt.

13 Use a screwdriver to push the drive chain tensioner to the right-hand side, and lock it in this position with a suitable rod or drill bit (see illustration) .

12.13 Push the chain tensioner to the right-hand side and insert a 0.15 inch (4.0 mm) drill bit or rod



14 Pull the drive sprocket and chain from the vacuum pump shaft.

15 Remove the vibration damper (see [Section 5](#)).

16 Unscrew the bolt securing the sprocket to the oil pump shaft, but leave the sprocket engaged in the drive chain.

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

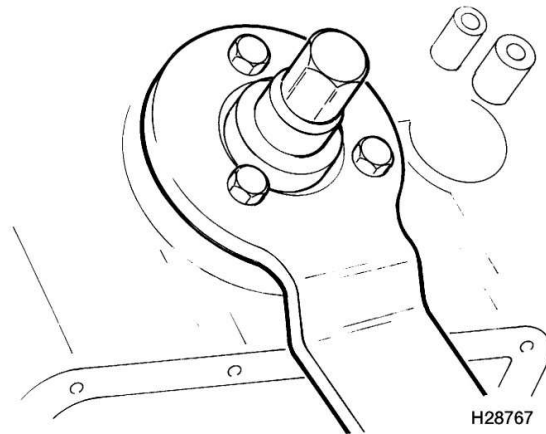
18 Remove the bolts securing the drive chain module to the pump (see illustration 12.4) .

19 Secure the engine at TDC on No 1 cylinder (see [Section 3](#)).

20 The crankshaft pulley hub must now be released. This hub traps the crankshaft timing chain sprocket against the crankshaft shoulder. Consequently, once the hub bolt is loosened, the sprocket is free to rotate. Ensure the flywheel/driveplate and camshaft locking tools are in place. **Warning:** *The crankshaft pulley hub securing bolt is very tight. A tool will be required to counterhold the hub as the bolt is removed. Do not attempt the job using inferior or poorly-improvised tools, as injury or damage may result.*

21 Make up a tool to hold the pulley hub. A suitable tool can be fabricated using two lengths of steel bar, joined by a large pivot bolt. Bolt the holding tool to the pulley hub using the pulley-to-hub bolts. Alternatively use special tool 11 9 280 available from BMW dealers or automotive tool specialists (see illustration) .

12.21 BMW tool used to prevent crankshaft rotation as the hub bolt is loosened



22 Using a socket and a long swing-bar, loosen the pulley hub bolt. Note that the bolt is very tight. Unscrew the pulley hub bolt. Discard the bolt; a new one must be used on replacement.

23 Withdraw the hub from the end of the crankshaft. If the hub is tight, use a puller to draw it off.

24 Remove the plug from the timing chain cover, and unscrew the bolt securing the oil pump drive chain module to the cylinder block. Discard the bolt; a new one must be installed.

Installation

25 Installation is the reverse of removal, noting the following points:

- A. Replace all aluminum bolts.
- B. Tighten all fasteners to their specified torque where given.