

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

9 Piston/connecting rod assembly - removal

- 1 On four-cylinder engines, remove the <u>cylinder head</u> and <u>oil pan</u> (see <u>Chapter 2A</u>).
- 2 On six-cylinder engines, remove the cylinder head, oil pan and oil pump (see Chapter 2B).
- 3 Where applicable, unbolt the oil baffle from the bottom of the cylinder block (see illustration) .

9.3 Unbolt the oil baffle plate from the cylinder block - six-cylinder engine



4 If there is a pronounced wear ridge at the top of any bore, it may be necessary to remove it with a scraper or ridge reamer, to avoid piston damage during removal. Such a ridge indicates excessive wear of the cylinder bore.

5 Check the connecting rods and <u>bearing caps</u> for identification marks. Both rods and caps should be marked with the cylinder number on the <u>exhaust manifold</u> side of the engine. Note that No. 1 cylinder is at the <u>timing chain</u> end of the engine. If no marks are present, using a hammer and center-punch, paint or similar, mark each connecting rod and connecting <u>rod bearing</u> cap with its respective cylinder number on the flat machined surface provided - ensure that the marks are made on the exhaust manifold side of the connecting rods (see illustration).

9.5 Connecting rod bearing cap marks



6 Turn the <u>crankshaft</u> to bring pistons 1 and 4 (four-cylinder engine), or 1 and 6 (six-cylinder engine), as applicable, to BDC (bottom <u>dead center</u>).

7 Unscrew the bolts from No. 1 piston <u>connecting rod</u> bearing cap. Take off the cap, and recover the bottom half bearing shell (see illustration) . If the bearing shells are to be re-used, tape the cap and the shell together.

9.7 Removing a connecting rod bearing cap



8 Using a hammer handle, push the piston up through the bore, and remove it from the top of the <u>cylinder block</u>. Recover the bearing shell, and tape it to the <u>connecting rod</u> for safe-keeping.

9 Loosely install the <u>connecting rod cap</u> to the connecting rod, and secure with the bolts - this will help to keep the components in their correct order.

10 Remove No. 4 piston assembly (four-cylinder engine), or No. 6 piston assembly (six-cylinder engine), as applicable, in the same way.

11 Turn the crankshaft as necessary to bring the remaining pistons to BDC, and remove them in the same way.

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