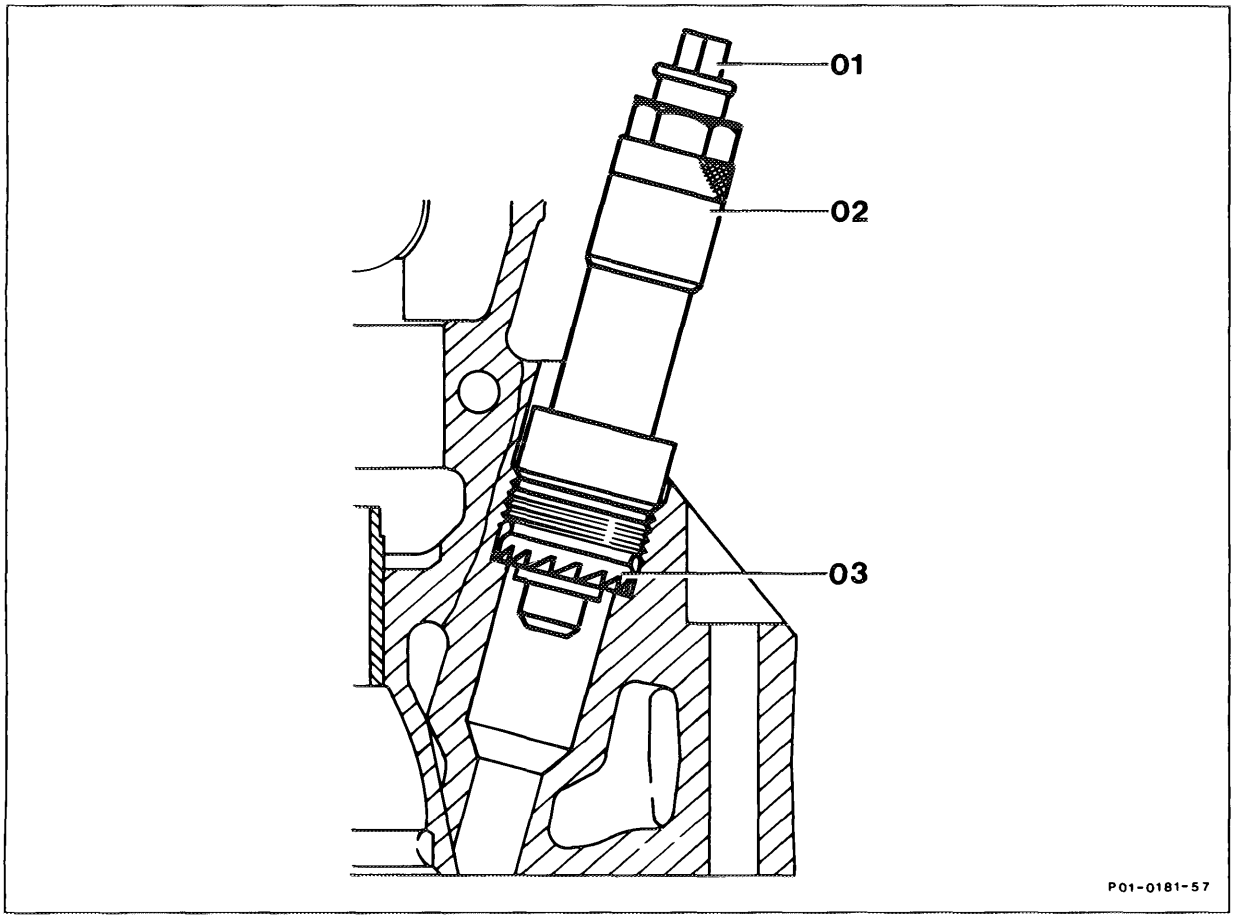
01-410 Refinishing prechamber sealing surface

Preliminary operations:
Nozzle holder removed (01-417).
Prechamber removed (01-417).



Prechamber mounting bores	plug or seal off toward combustion chamber (item 2).
Countersinking tool 601 589 00 66 00 (01, 02, 03)	bolt into precombustion chamber mounting bore to be refinished down to stop (items 3 – 4).
Interval "X"	measure between top of shaft (01) and top of sleeve (02) (item 5). **Note** When the cylinder head is installed, measuring interval "X" replaces measuring the projection dimension "C".

Prechamber sealing surface	refinish, use countersinking tool 601 589 00 66 00 with tap wrench, turn clockwise approx. 5 revolutions while exerting slight pressure (item 6). **Caution!** Do not lift countersinking tool while refinishing.
Interval "X"	measure again (item 7). **Note** The difference between the 1st and 2nd measurements corresponds to the material removed and therefore the thickness of the required spacer ring.
Countersinking tool	unscrew and clean chips out of mounting bore (item 8).
Engine	turn over with starter to throw out any chips which may have got into the combustion chamber (item 9).
Spacer ring	select according to difference in measurements and install (item 10). **Note** See table for thicknesses of available spacer rings.
Refinished precombustion chamber	mark with punch in area of mounting bore (item 11).

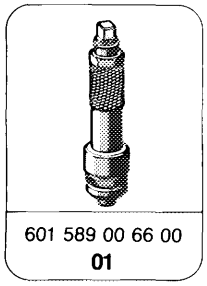
Data

Precombustion chamber projection dimension "C"	7.6 – 8.1 mm

Parts

Designation		Part no.
Spacer ring	0.3 mm	601 017 04 60
	0.6 mm	601 017 02 60
	1.0 mm	601 017 03 60

Special tool

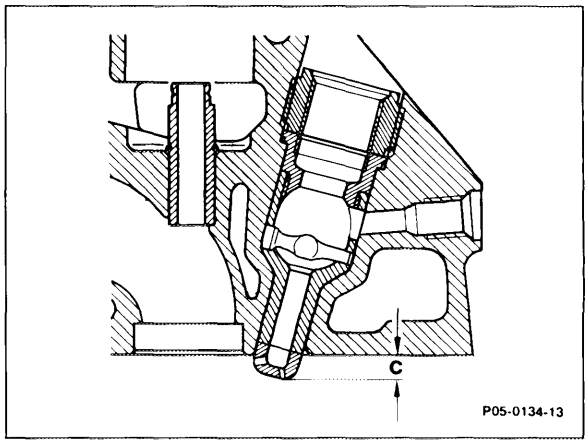


601 589 00 66 00
01

Refinishing

Note

Refinish prechamber sealing surface when damaged or leaking. The first refinishing operation on the prechamber sealing surface can be performed with the cylinder head removed or installed. If the sealing surfaces have already been refinished once before, this can be recognized by the markings (punch marks) in the area of the prechamber mounting bores or on the spacers installed. In this case it is necessary to remove the cylinder head to refinish again. The prechamber projection dimension "C" (7.6 – 8.1 mm) can only be measured precisely with the cylinder head removed. Maintenance of this projection dimension ensures that the necessary distance between the prechamber and piston crown is present when the piston is in the TDC position.



Cylinder head removed:

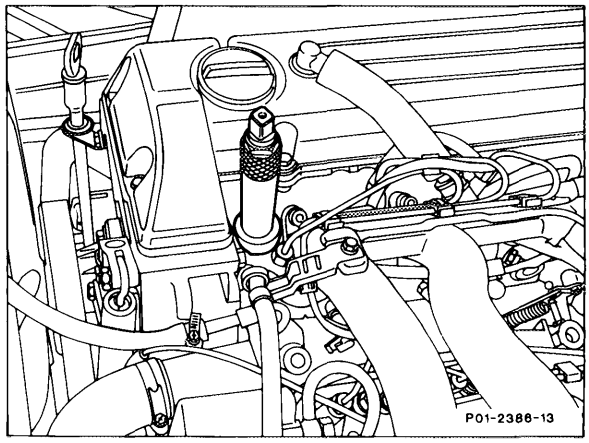
1 When the cylinder head is removed the scope of work for refinishing is the same except for items 5 and 7. Instead of items 5 and 7 measure the projection dimension (c).

Cylinder head installed:

2 Plug or seal off prechamber mounting bores toward combustion chamber (e.g. with rag), so that chips cannot get into the combustion chamber.

3 Remove protective sleeve from countersinking tool 601 589 00 66 00.

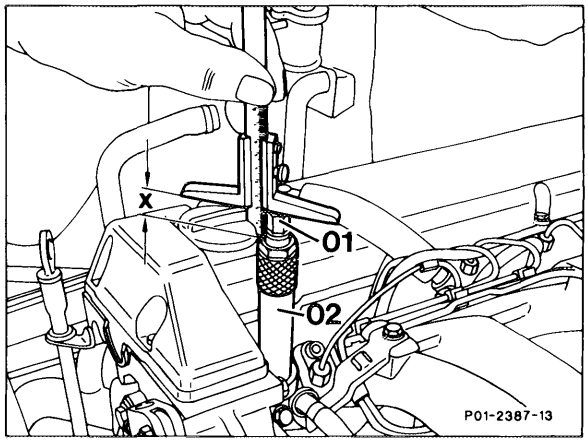
4 Install countersinking tool 601 589 00 66 00 into the prechamber mounting bore to be refinished down to the stop.



5 Measure interval "X" between top of shaft (01) and top of sleeve (02) and note value.

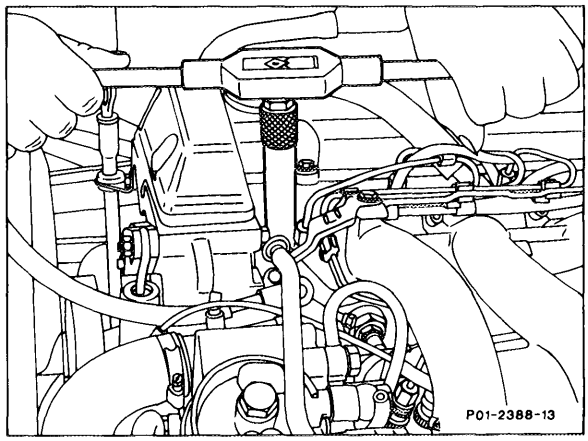
Note

When the cylinder head is installed, measuring the interval "X" replaces measuring the projection dimension "C".



6 Attach tap wrench to countersinking tool 601 589 00 66 00 and turn countersinking tool clockwise approx. 5 rotations while exerting light pressure.

Caution!
Do not lift countersinking tool while refinishing.



7 Measure dimension "X" again. The difference between the first and second measurements corresponds to the material removed.

Determine thickness of spacer ring:

Example:
Calculate material removed

Dimension before refinishing	=	25.7 mm
Dimension after refinishing	=	25.5 mm
Material removed	=	0.2 mm

Note
In this example the thickness of the spacer ring to be installed is 0.3 mm. Select the spacer ring so that it is at least 0.1 mm thicker and max. 0.3 mm thicker than the amount of material removed.

8 Remove countersinking tool 601 589 00 66 00 and remove chips.

Note
If sealing surface is not completely flat, install countersinking tool again and refinish sealing surface again. Then repeat measurement, items 5 and 7.

9 Remove rag from precombustion chamber bore and turn over engine with starter to throw out any chips which may have got into the combustion chamber.

10 Insert proper spacer ring.

11 Mark cylinder head with punch mark above each prechamber seat refinished (arrows).

12 Install in reverse order.