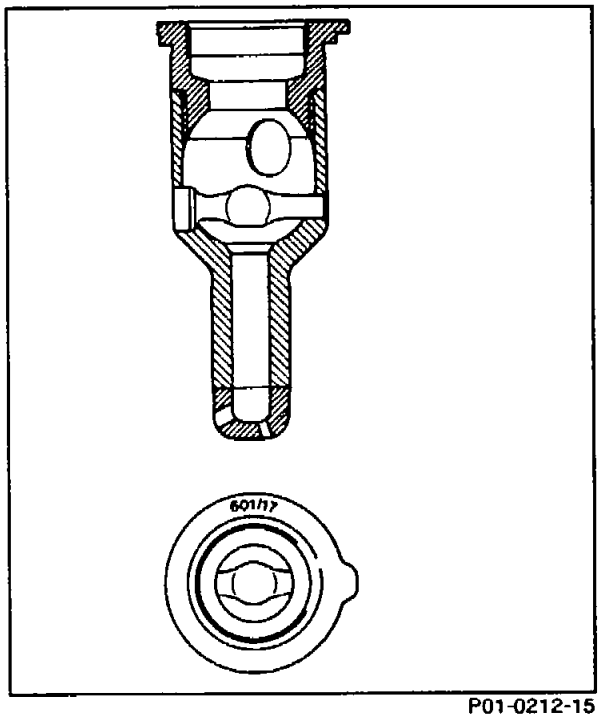
Precombustion chamber combustion bore pattern modified

As of 06/86 the combustion bore pattern of the precom-bustion chambers was modified to improve combustion on engines 601.91, 602.91 and 603.91.

Modified precombustion chambers are marked with the code number 601/17.

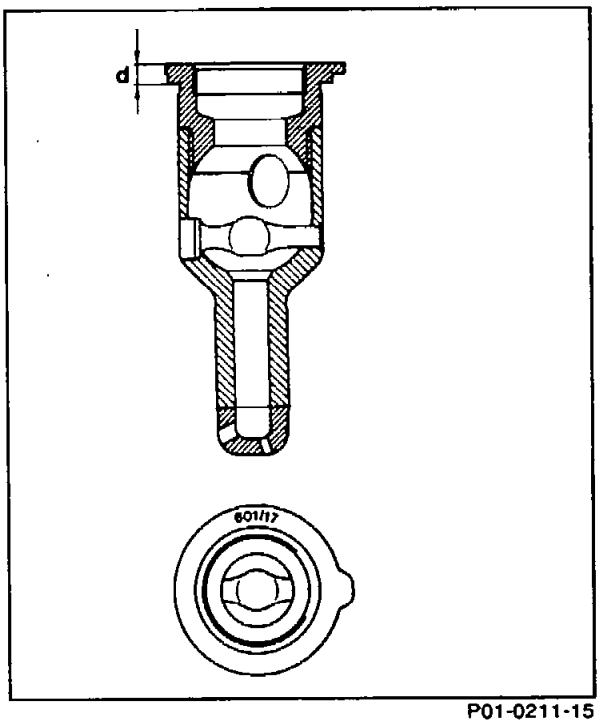


P01-0212-15

Collar height on upper section of precombustion chamber increased

As of 09/87 the collar height (d) on the upper section of the precombustion chamber on engines 601.91, 602.91, 603.91 and 603.96 was increased from 5 mm to 6 mm.

Engines 601.91 (CH) and 602.96 with angular injection are not affected by this modification.



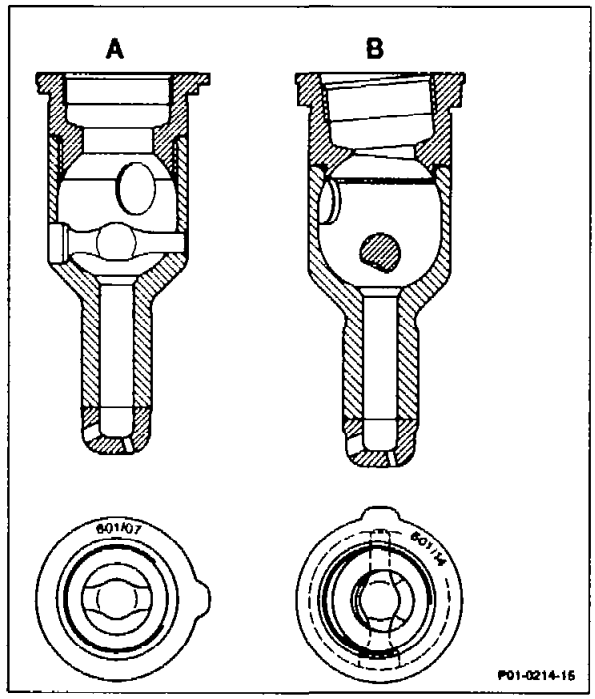
P01-0211-15

Precombustion chambers with angular injection

The shape and design of the precombustion chambers has been changed in the course of improving the emissions (exhaust gas recirculation).

Shape of prechambers

The installation bore was inclined 5° to the longitudinal axis of the precombustion chamber. This results in the injection nozzles injecting the fuel into the precombustion chamber at a slight angle rather than vertically.

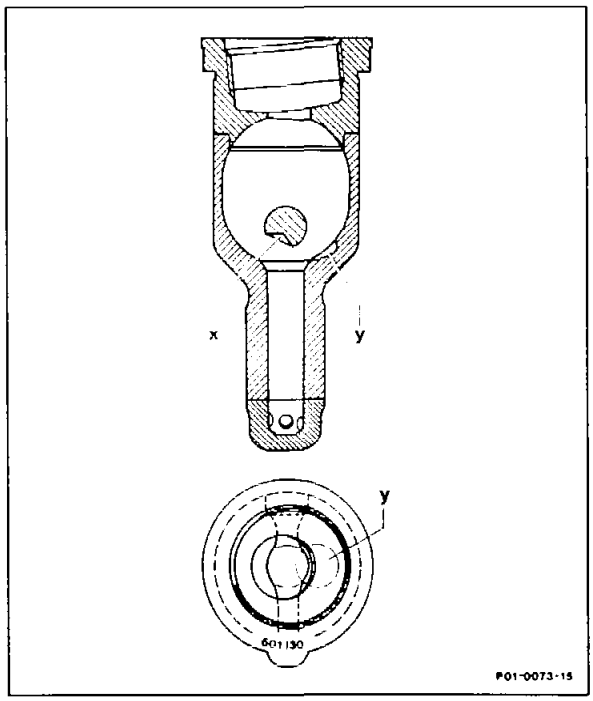


A Precombustion chamber with vertical injection
B Precombustion chamber with angular injection

Peculiarities of precombustion chambers

The insert pin is produced using a heat-resistant material (Incoloy) due to the higher thermal load. A cone (x) on the insert pin and a recess (y) at the bottom of the precombustion chamber serve to give the air/fuel mixture a better swirl.

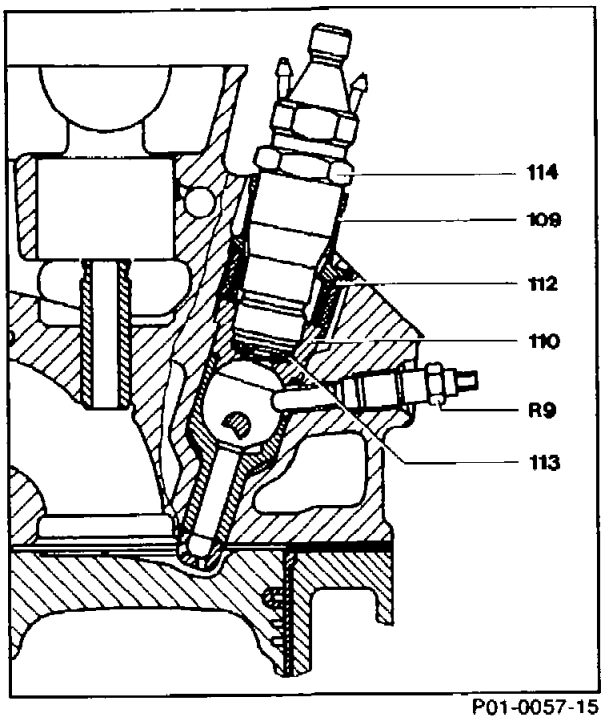
Moreover the volume of the precombustion chambers on engines 603.962 and 603.90 (USA) was increased from 10.34 cm^3 to 11.37 cm^3.



Installation of nozzle holder

For angular injection the nozzle holder (114) is inserted into the upper section of the pre-combustion chamber turned 180° in relation to the previous position. A threaded ring (112) with inner splines serves for installing the nozzle holder.

A sealing sleeve (109) is located in the gap between the threaded ring and nozzle holder to protect against contamination (discontinued as of 08/93)



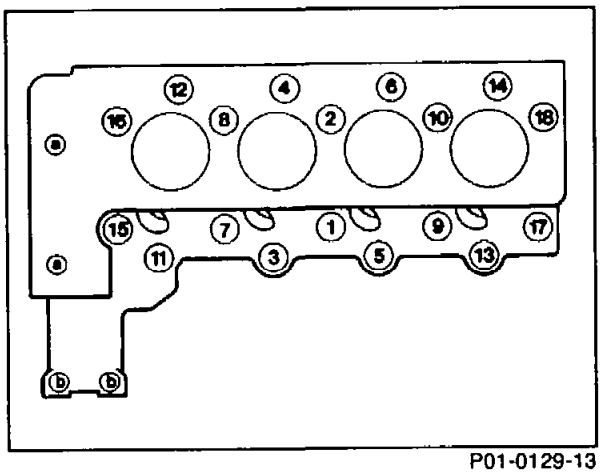
P01-0057-15

R9 Pencil-type glow plug
109 Sealing sleeve
110 Precombustion chamber
112 Threaded ring
113 Sealing plate
114 Nozzle holder

Threaded ring for holding nozzle holder

The threaded ring used for angular injection is equipped with inner splines.

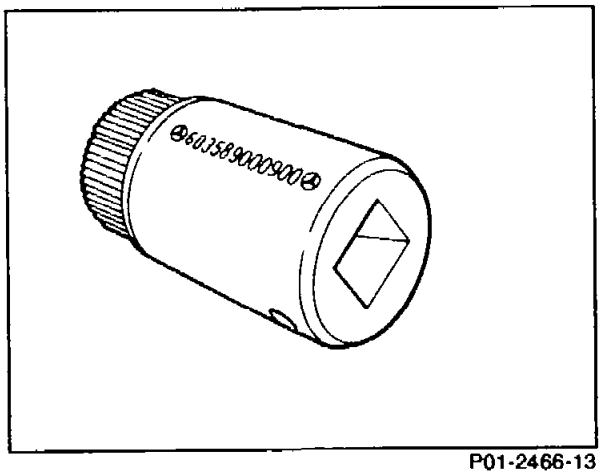
The groove for a pin wrench present on the threaded ring for vertical injection is no longer present.



P01-0129-13

A Threaded ring, vertical injection (threaded on inside)
B Threaded ring, angular injection (inner splines)

The splined wrench 603 589 00 09 00 is required for removal and installation of the threaded ring with inner splines.

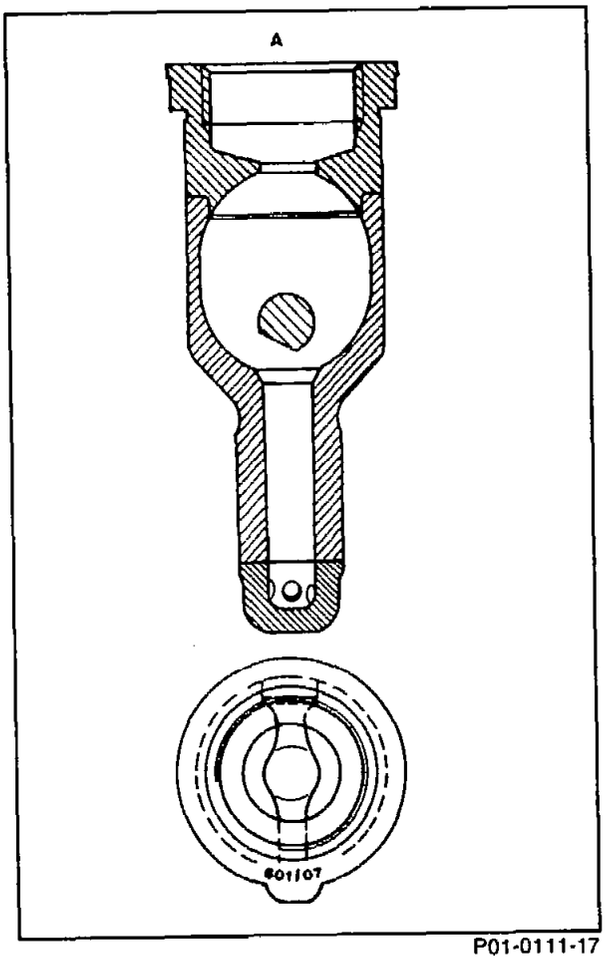


P01-2466-13

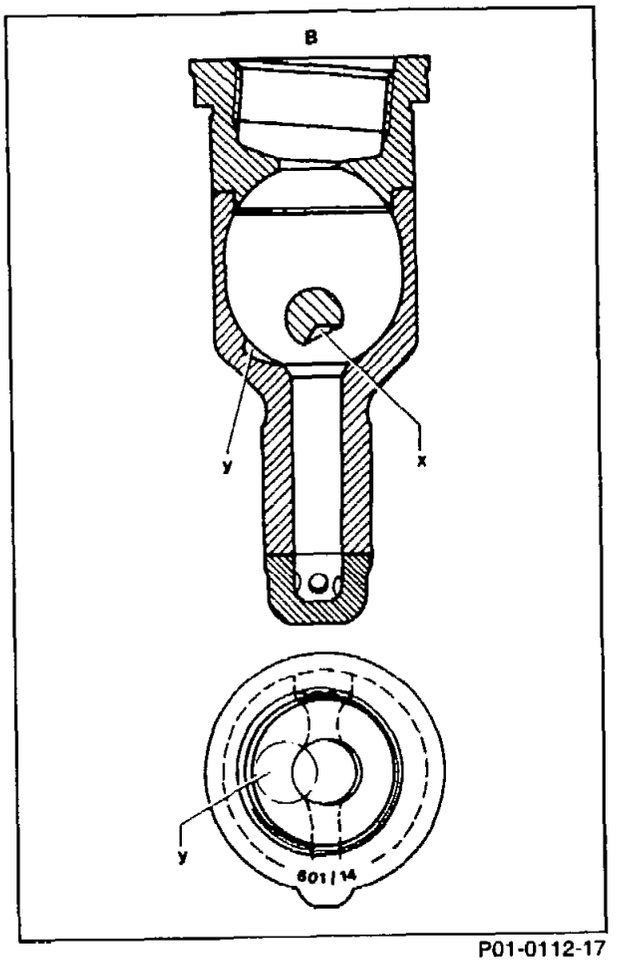
Precombustion chambers turned 180°

Due to other modifications to the nozzle holder combination in relation to the precombustion chamber longitudinal axis the former is inclined at an angle of 5° and installed in the upper section of the precombustion chamber turned 180°.

Differences in precombustion chambers



P01-0111-17

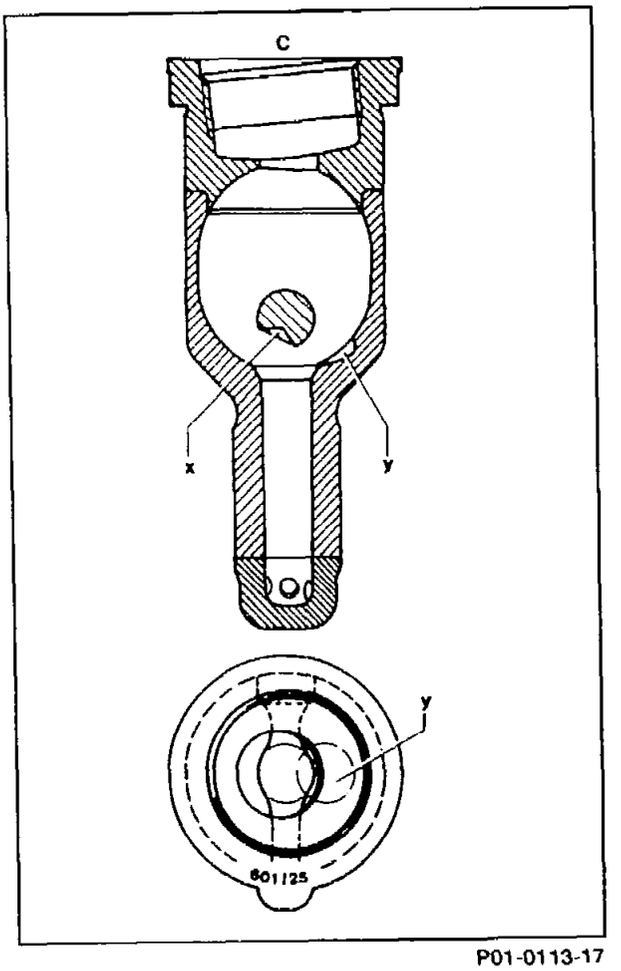


P01-0112-17

A Code 601/07 or 17/09 or 23

B Code 601/14/15 5° inclined (engine 601.91 as of 10/87 (CH))

C Code 601/25/26/30/36 5°inclined, turned 180° (all engines as of 06/88)



P01-0113-17

Survey, precombustion chambers

Engine	601.91 [1]) 602.91 [1]) 603.91 [1])	603.96 up to 9/88	601.91 (CH) [2]) as of 10/86 up to 8/88	602.961 up to 09/88	601.91 [2]) 602.91 [2]) 603.91 [2]) as of 09/88	602.961 as of 09/88 602.962 Standard 602.96 (A) as of 1989 603.96 (A) as of 09/88	603.962 [2]) 603.970 [2]) (USA) as of 09/88 603.971[3]) as of 09/92 as of 04/94 602.96/ 603.96[6]) 603.97[6])
Code	601/07 or 17	601/09 or 23	601/14	601/15	601/25 or 29[5])	601/26 601/36[4])	601/30 601/36[3])
Version	A	A	B	B	C	C	C
Combustion neck OD (mm)	14	15	14	15	14	15	15

1) Without exhaust gas recirculation
2) With exhaust gas recirculation as of 02/90
3) As of 02/92 (USA), ECE as of 01/93, certain burner bores countersunk 4°, prechamber volume increased to 11.37 cm^3
4) Engine 602.96 as of 05/92 with EGR, certain burner bores countersunk 4°
5) As of 03/92 with EGR
6) As of 04/94 all turbocharged engines, (standard prechamber of 11. 37 cm^3) prechamber volume and certain burner bores countersunk 4°