

03-317 Modifications to pistons

Piston pin bearings, engine 602

Piston pin bore provided with angular oil pockets (previously flat oil pockets) for improved lubrication.

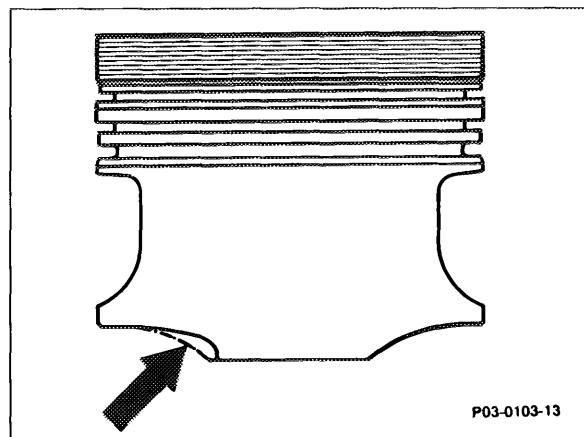
Production breakpoint: 08/85

Model	Engine	Engine end No.		Vehicle ident end No.	
		manual transmission	automatic transmission	A	F
201.126	602.911	003632	000648	*	141956

*not registered

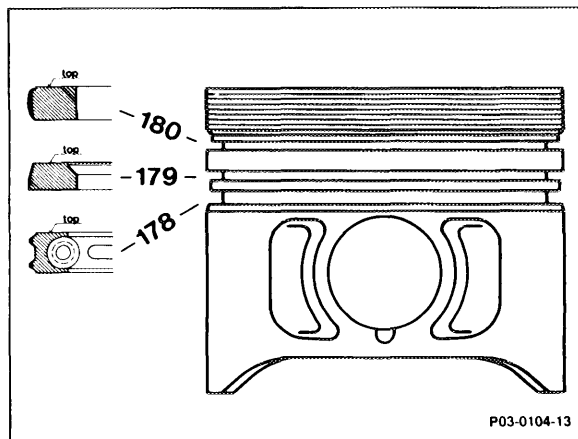
Engine 602.91

The piston skirt has been provided with a larger recess (arrow) for better clearance on engines with oil injection nozzles or exhaust gas recirculation..



Each piston is equipped with two compression rings and one oil scraper ring. The first piston ring groove is provided with a Niresit ring carrier.

- 178 Bevelled ring with expander, 3 mm thick, running surface chrome-plated
- 179 Taper face ring with inside bevel, 2 mm thick, running surface chrome-plated
- 180 Rectangular ring, 2 mm thick, running surface chrome-plated



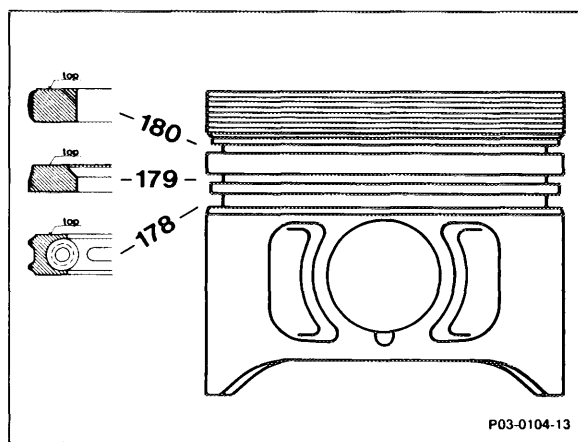
Engine 602.91 starting 09/89

The height of the ring groove for the rectangular ring (180) has been increased from 2.0 to 2.5 mm.

Piston code 16 (Mahle co.)

Piston code 17 (Alcan co.)

- 178 Bevelled ring with expander, 3 mm thick, running surface chrome-plated
- 179 Taper face ring with inside bevel, 2 mm thick, running surface chrome-plated
- 180 Rectangular ring, 2.5 mm thick, running surface chrome-plated



These pistons can also be installed in engines with cylinder sleeves.

Engine 602.91

Temporary installation of pistons from Alcan co., piston code 12, KS co., piston code 14

Production breakpoint 03/88

(Piston code 12, Alcan co.)

Model	Engine	Engine end No.		Vehicle ident end No.	
		manual transmission	automatic transmission	A	F
201.126	602.911	061160 to 061260	012853 to 012867	*	*

* not registered

Production breakpoint: 03/88

(Piston code 12, Alcan co.)

Model	Engine	Engine end No.		Vehicle ident end No.	
		manual transmission	automatic transmission	A	F
201.126	602.911	061529 to 061588	-	*	*

* not registered

Production breakpoint: 04 - 06/88

(Piston code 12, Alcan co.)

Model	Engine	Engine end No.		Vehicle ident end No.	
		manual transmission	automatic transmission	A	F
201.126	602.911	062470 to 065290	013059 to 013475	*	*

* not registered

Production breakpoint: 06/88

(Piston code 14, KS co.)

Model	Engine	Engine end No.		Vehicle ident end No.	
		manual transmission	automatic transmission	A	F
201.126	602.911	065291 to 065513	013476 to 013501	*	*

* not registered

Production breakpoint: 06/88

(Piston code 14, KS co.)

Model	Engine	Engine end No.		Vehicle ident end No.	
		manual transmission	automatic transmission	A	F
201.126	602.911	065635 to 065871	013516 to 013549	*	*

* not registered

Production breakpoint: 11/88

(Piston code 14, KS co.)

Model	Engine	Engine end No.		Vehicle ident end No.	
		manual transmission	automatic transmission	A	F
201.126	602.911	067047 to 070443	013749 to 014296	*	*

* not registered

Production breakpoint: 06/88

(Piston code 14, KS co.)

Model	Engine	Engine end No.		Vehicle ident end No.	
		manual transmission	automatic transmission	A	F
201.126	602.911	065635 to 065871	013516 to 013549	*	*

* not registered

Production breakpoint: 11/88

(Piston code 14, KS co.)

Model	Engine	Engine end No.		Vehicle ident end No.	
		manual transmission	automatic transmission	A	F
201.126	602.911	067047 to 070443	013749 to 014296	*	*

* not registered

Engines 602.961, 603.96/97 starting 12/87**(turbo)****Piston pins**

The size of the piston pin has been increased to reduce the surface pressure.

Engine 602.961, 603.96:

D1 = 28 mm

D2 = 13,5 mm

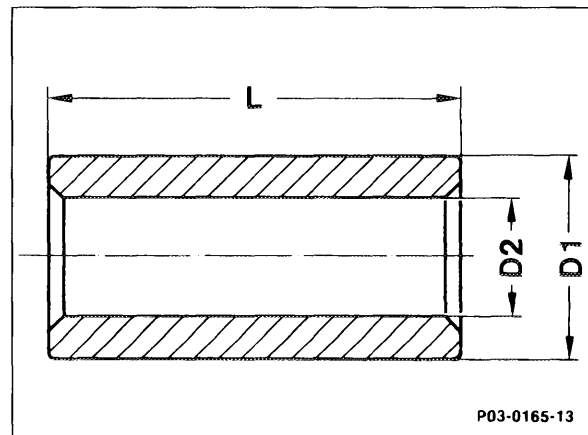
L = 70 mm

Engine 602.91:

D1 = 26 mm

D2 = 14 mm

L = 55 mm



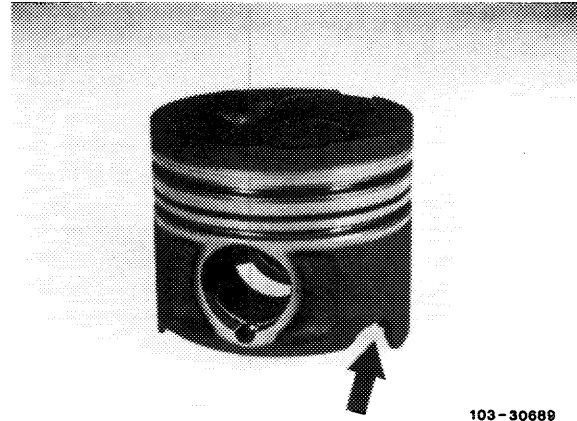
P03-0165-13

Pistons with angular channel

Due to the higher thermal load the pistons are cooled with oil via an annular channel in the piston crown. Moreover the piston pins are supplied with oil injected through the two bores (2.0 mm dia., arrows), ending in the annular channel.

The required oil is supplied via injection nozzles located in the crankcase on the right side.

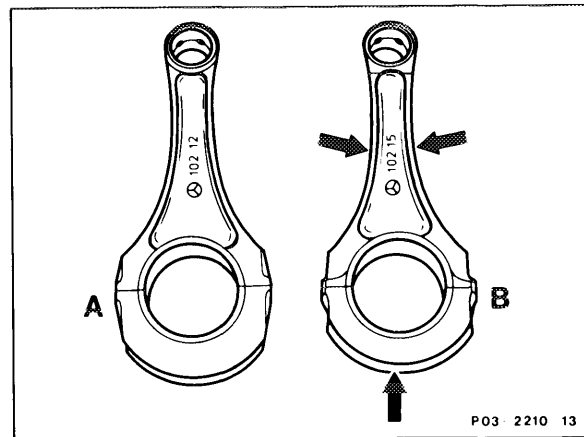
The annular channel is deleted on engine 603.970. Only the piston crown is supplied with oil.



103-30689

A recess is located on the piston skirt (arrow) for the oil injection nozzle.

The prechamber recess in the piston crown has a diameter of 18 mm (normally aspirated engine = 17 mm).



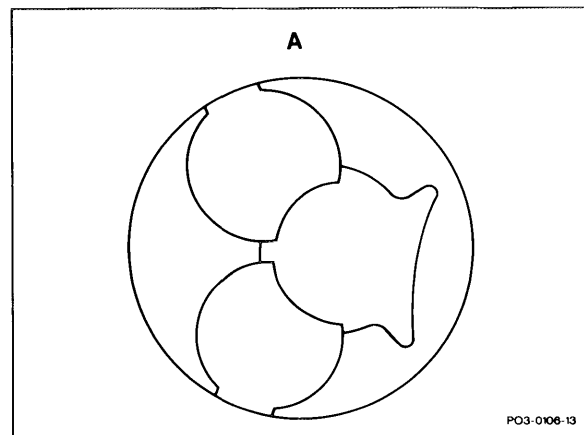
P03-2210-13

Piston crown

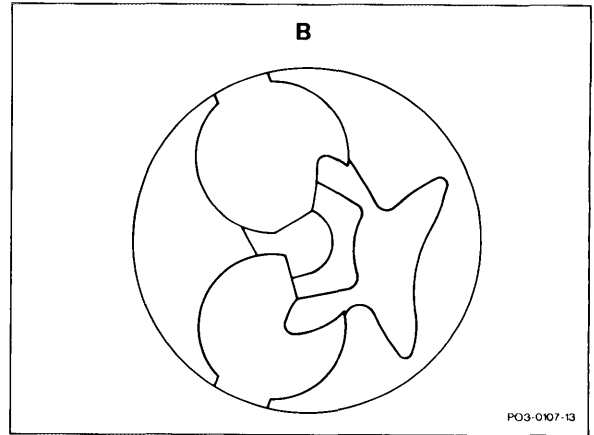
On engines 602.96 and 603.97 from the start of production and on engine 603.96 starting 08/88 'moose horn' recess pistons are installed (previously 'star' recessed pistons).

The piston crown is coated with aluminum oxide on both piston versions.

A. 'Moose horn' piston



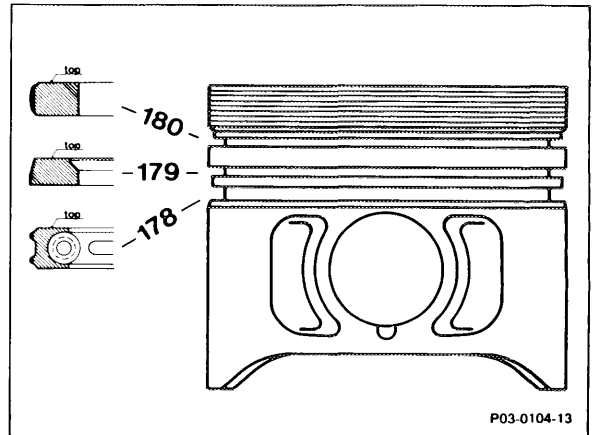
P03-0106-13



B. 'Star' recessed piston

These pistons each have two compression rings and one oil scraper ring. The piston skirt is graphitized.

Piston codes: 00 Engine 602.96
 13 Engine 603.96



- 178 Bevelled ring with expander, 3 mm thick, running surface chrome-plated
- 179 Taper face ring with inside bevel, 2 mm thick,
- 180 Rectangular ring with inside bevel, 2.5 mm thick, running surface molybdenum-coated