

## 03-3165 Pistons, matching and dimensions



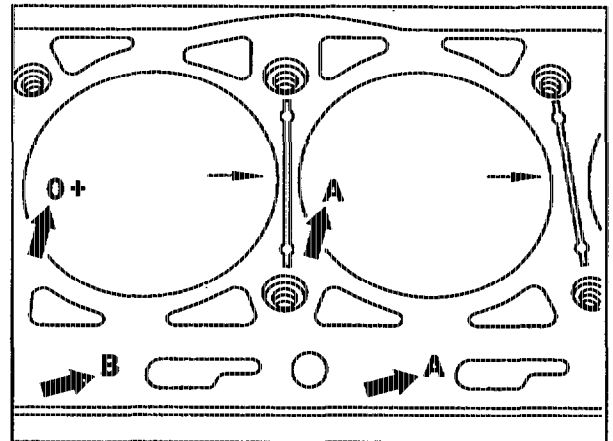
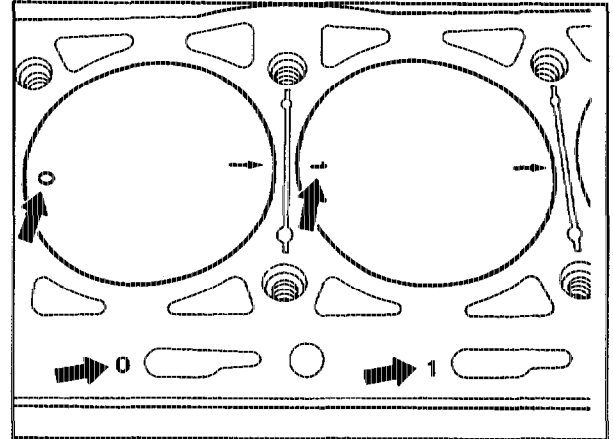
Cylinder identification and piston identifications must agree (see arrows).

### Notes

The group classification has been converted from numerals to letters and reduced to three stages.

The pistons with numerals may be installed in a crankcase with a letter grouping, but not vice versa (see table).

When performing repairs, all the cylinder bores should be honed to the dimensions of the existing pistons plus piston play, see "Measuring, honing and silicone-lapping cylinder bores" (01-1120).



### Numerical and letter grouping

Numerical piston identification	equals	Letter piston identification		Letter cylinder identification
0	→	A	→	A
0+ 1	→	B	→	B
1+ 2	→	C	→	C

**Test data**

Engine	119.96	119.97	119.98
Piston clearance	0.004–0.026	0.004–0.026	0.004–0.026
Difference in weight of pistons within an engine	8 g	8 g	8 g
Piston pin $\varnothing$	25.995–26.000	24.000	24.000
Piston pin clearance in piston	0.004–0.008	0.004–0.008	0.004–0.008

**Matching pistons to crankcase with numerical identification**

Engine 119.960/970/972/974	Class identification	Index	Piston $\varnothing$ <sup>1)</sup>	Cylinder $\varnothing$ <sup>2)</sup>
Standard size Std 96.5 $\varnothing$	0	52	96.483–96.493	96.498–96.503
	0+	53	96.488–96.498	96.503–96.508
	1	54	96.493–96.503	96.508–96.513
	1+	55	96.498–96.508	96.513–96.518
	2	56	96.503–96.513	96.518–96.523
1st repair size + 0.5	0		96.983–96.993	96.998–97.003
	1		96.993–97.003	97.008–97.013
	2		97.003–97.013	97.018–97.023
2nd repair size + 1.0	0		97.483–97.493	97.498–97.503
	1		97.493–97.503	97.508–97.513
	2		97.503–97.513	97.518–97.523

1) Group identification stamped on piston crown with color.

2) Group identification stamped at top next to cylinder bore.

### Matching pistons to crankcase with letter identification

Engine 119.980/982/970/972/974	Group identification	Index	Piston Ø <sup>3)</sup>	Cylinder Ø <sup>2)</sup>
Standard size Std 96.5 Ø	A	52	96.482–96.495	96.500–96.508
	B	54	96.491–96.504	96.508–96.516
	C	56	96.499–96.512	96.516–96.524
1st repair size + 0.5 <sup>2)</sup>	A		96.982–96.995	97.000–97.008
	B		96.991–97.004	97.008–97.016
	C		96.999–97.012	97.016–97.024
2nd repair size + 1.0 <sup>2)</sup>	A		97.482–97.495	97.000–97.508
	B		97.491–97.504	97.508–97.516
	C		97.499–97.512	97.516–97.524

2) Group identification stamped at top next to cylinder bore.

3) Group identification stamped on piston crown.

### Matching pistons to crankcase with numerical identification

Engine 119.971/975/981/985	Group identification	Index	Piston Ø <sup>1)</sup>	Cylinder Ø <sup>2)</sup>
Standard size Std 92.0 Ø	0	52	91.983–91.993	91.998–92.003
	0 +	53	91.988–91.998	92.003–92.008
	1	54	91.993–92.003	92.008–92.013
	1 +	55	91.998–92.008	92.013–92.018
	2	56	92.003–92.013	92.018–92.023
1st repair size + 0.5 <sup>2)</sup>	0		92.483–92.493	92.498–92.503
	1		92.493–92.503	92.508–92.513
	2		92.503–92.513	92.518–92.523
2nd repair size + 1.0 <sup>2)</sup>	0		92.983–92.993	92.998–93.003
	1		92.993–93.003	93.008–93.013
	2		93.003–93.013	93.018–93.023

1) Group identification stamped on piston crown with color.

2) Size stamped at top next to cylinder bore.

### Matching pistons to crankcase with letter identification

Engine 119.971/975/981/985	Group identification	Index	Piston Ø <sup>3)</sup>	Cylinder Ø <sup>2)</sup>
Standrd size Std 92.0 Ø	A	52	91.982–91.995	92.000–92.008
	B	54	91.991–92.004	92.008–92.016
	C	56	91.999–92.012	92.016–92.024
1st repair size + 0.5 <sup>2)</sup>	A		92.482–92.495	92.500–92.508
	B		92.491–92.504	92.508–92.516
	C		92.499–92.512	92.516–92.524
2nd repair size + 1.0 <sup>2)</sup>	A		92.982–92.995	93.000–93.008
	B		92.991–93.004	93.008–93.016
	C		92.999–93.012	93.016–93.024

2) Group identification stamped at top next to cylinder bore.

3) Group identification stamped on piston crown.