

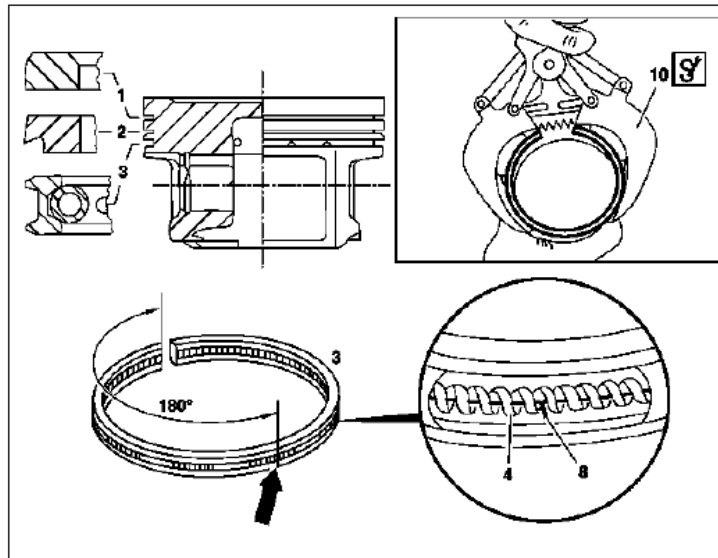
Fig. 6: Identifying Retaining Strap (000 589 04 14 00)

Courtesy of MERCEDES-BENZ OF NORTH AMERICA.

REMOVING/INSTALLING PISTON RINGS - AR03.10-P-7311TI

ENGINE 642 in MODEL 211

- 1 Plain compression ring
- 2 Taper-faced hook scraper ring
- 3 Roof bevel ring (oil scraper ring)
- 4 Coil spring
- 8 Hooked spring
- 10  Pliers

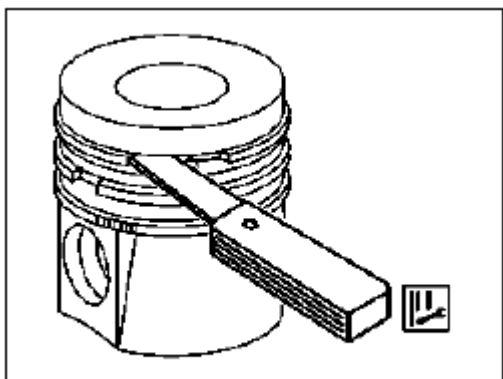


P03.10-0210-08

Fig. 7: Removing/Installing Piston Rings

Courtesy of MERCEDES-BENZ OF NORTH AMERICA.

Measure side clearance

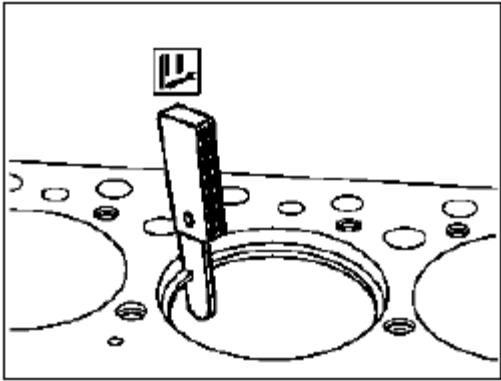


P03.10-2040-01

Fig. 8: Measuring Side Clearance

Courtesy of MERCEDES-BENZ OF NORTH AMERICA.

Measure end gap



S03.10-3006-01

Fig. 9: Measuring End Gap

Courtesy of MERCEDES-BENZ OF NORTH AMERICA.

	Remove/Install		
1	Remove pistons		AR03.10-P-7021TI
2	Determine end clearance of piston rings	Feeler gauge Piston ring vertical clearance	*WH58.30-Z-1004-12A *BE03.10-P-1003-02B
3	Remove piston rings from piston	Installation: Pay attention to the installation position of the piston rings. The emblem "Top" or the name of the manufacturer must point towards the piston crown. Installation: Insert the hook spring (8) with the garter spring (4) offset 180° (arrow) to the ring gap of the bevel-edged ring (oil scraper ring) (3). Insert the plain compression ring (1) and the taper-faced hook scraper ring (2) with the ring gaps offset by 120°. Pliers	Fig. 10
4	Determine end gap of piston rings	Installation: Insert respective piston ring into the unused area of the cylinder contact surface. Feeler gauge Piston ring end gap	*WH58.30-Z-1004-12A *BE03.10-P-1004-02B
5	Install in the reverse order		

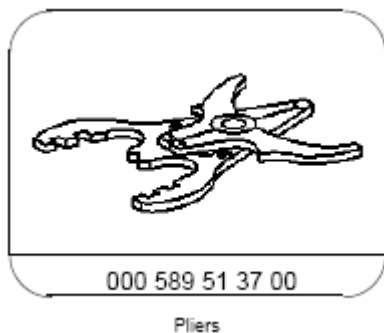
TEST VALUES FOR PISTONS

Number	Designation	Engine 642
BE03.10-P-1003-	Piston ring vertical clearance	Groove 1 mm 0.12...0.16

2009 Mercedes-Benz E320

2008-09 ENGINE Crank Assembly - E320_CDI

02B		groove 2	mm	0.065...0.110
		Groove 3	mm	0.03...0.07
BE03.10-P-1004-02B	Piston ring end gap	Groove 1	mm	0.40...0.55
		groove 2	mm	0.25...0.50
		Groove 3	mm	0.20... 0.40



Pliers

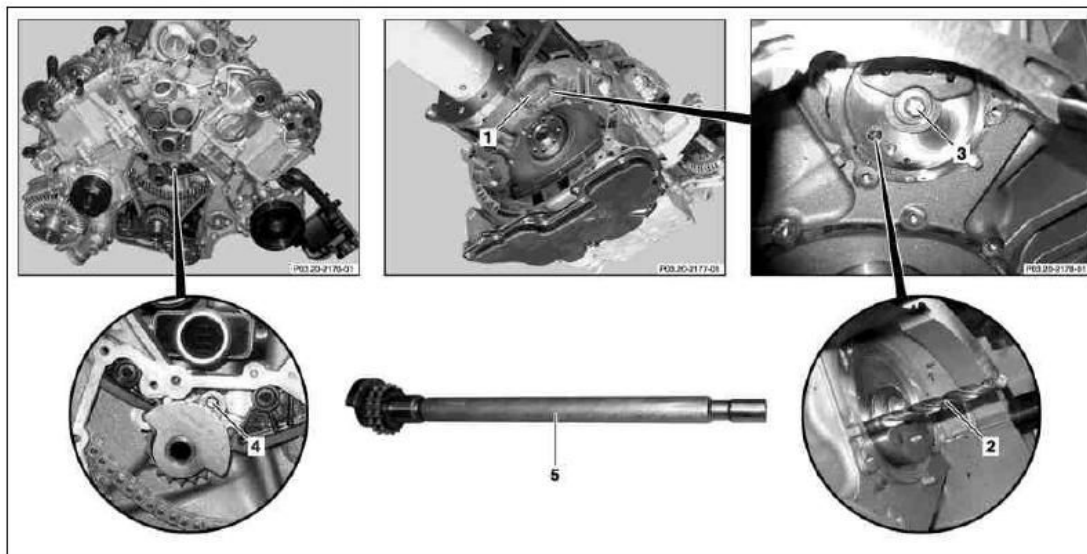
Fig. 10: Identifying Pliers (000 589 51 37 00)
Courtesy of MERCEDES-BENZ OF NORTH AMERICA.

COMMERCIALLY AVAILABLE TOOLS

Number	Designation
WH58.30-Z-1004-12A	Feeler gauge

REMOVE/INSTALL BALANCE SHAFT - AR03.20-P-1000TI

ENGINE 642 in MODEL 211



P03.20-2179-09

1 Cap
2 Drill bit

3 Bolt
4 Bolt

5 Balance shaft