PISTONS, RINGS & CYLINDER LINERS

Pistons and connecting rods - remove

1. Suitably identify each piston assembly with its respective cylinder liner.
2. Remove big-end bearings.
3. Using assistance, position cylinder block on its side.

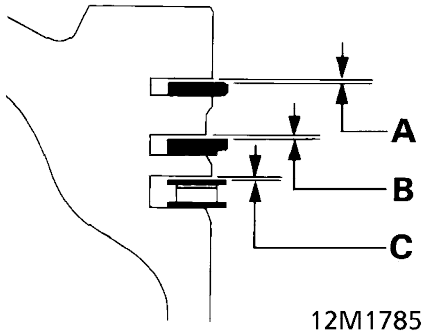
CAUTION: Ensure that feet of cylinder liner retainer clamps 18G 1736 do not protrude over cylinder bores.

4. Remove ridge of carbon from top of each cylinder liner bore.
5. Push pistons to top of their bores.
6. Carefully push out each piston assembly taking care that big-ends do not contact surface of cylinder liners.
7. Refit caps on to connecting rods, lightly tighten dowel bolts.

CAUTION: Removal of pistons will necessitate removal and re-sealing of cylinder liners.

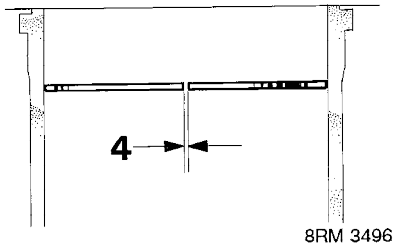
Piston rings - checking

1. Using an expander, remove and discard old piston rings.
2. Use squared off end of broken piston ring and clean ring grooves.
3. Check new ring to groove clearance:



K8 and K16 - 1.1 and 1.4
Top compression ring - **A** = 0.04 to 0.08 mm
2nd compression ring - **B** = 0.03 to 0.062 mm
Oil control rails - **C** = 0.044 to 0.55 mm

K16 - 1.6 and 1.8
Top compression ring - **A** = 0.040 to 0.072 mm
2nd compression ring - **B** = 0.030 to 0.062 mm
Oil control rails -**C** = 0.010 to 0.180 mm



4. Check new ring fitted gap 20 mm from top of cylinder liner bore:

CAUTION: Ensure rings are kept square to liner bore and that they are suitably identified to the bore in which they are checked and fitted to the piston for that bore.

K8 and K16 - 1.1 and 1.4:
Top compression ring - = 0.17 to 0.37 mm
2nd compression ring - = 0.37 to 0.57 mm
Oil control rails = 0.15 to 0.40 mm

K16 - 1.6 and 1.8:
Top compression ring - = 0.20 to 0.35 mm
2nd compression ring - = 0.28 to 0.48 mm
Oil control rails = 0.15 to 0.40 mm

Pistons - inspection

1. Check pistons for distortion and cracks.
2. Measure and record piston diameter at right angle to gudgeon pin and 8 mm from bottom of skirt.
3. Check piston diameter with figures given.
4. Measure and record piston diameter in line with gudgeon pin hole and 8 mm from bottom of skirt.
5. Check piston ovality with figures given.
6. Repeat above procedures for remaining pistons.

K8 and K16 - 1.1 and 1.4:
Grade A = 74.940 to 74.955 mm
Grade B = 74.956 to 74.970 mm
Maximum ovality = 0.3 mm

K16 - 1.6 and 1.8:
Grade A = 79.975 to 79.990 mm
Grade B = 79.991 to 80.005 mm
Maximum ovality = 0.3 mm
Service pistons are grade A and B

NOTE: Piston grades A or B are stamped on crown of piston.