

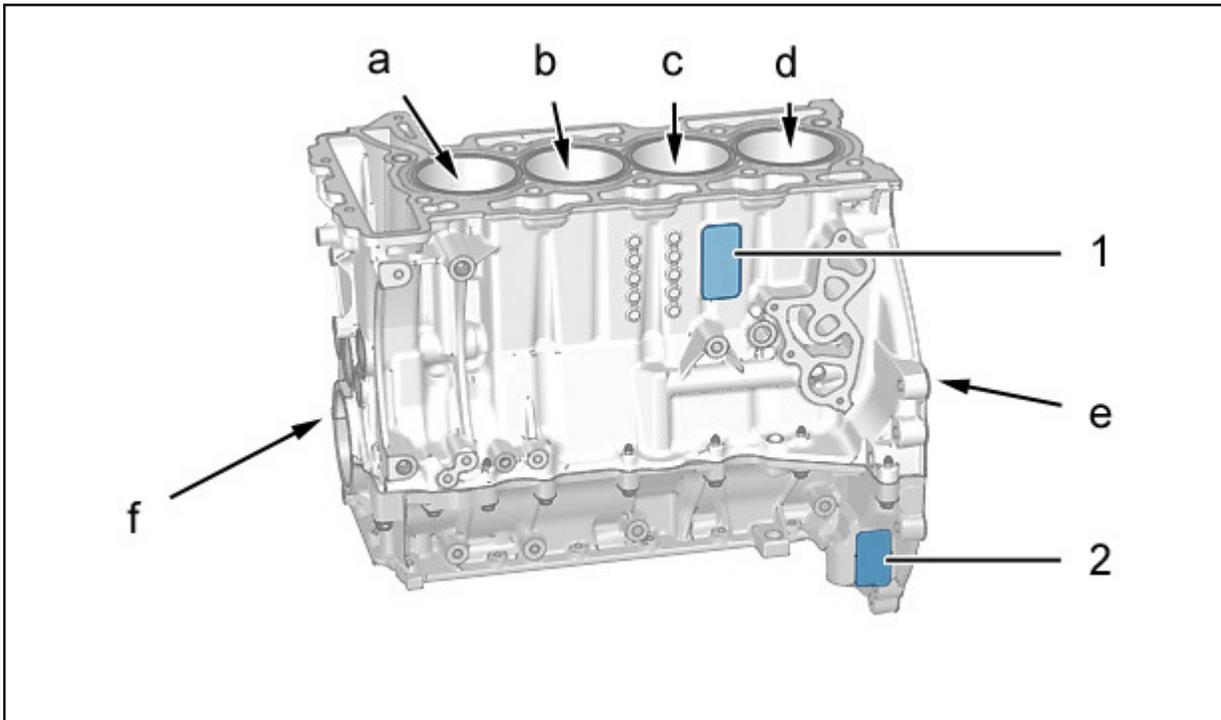
IDENTIFICATION - DATA : UNDER ENGINE - EP ENGINE (INDIRECT INJECTION)**1. Cylinder block assembly**

Figure : B1CB036D

| Identification : Cylinders | | | | |
|----------------------------|-----|-----|-----|-----|
| Components | "a" | "b" | "c" | "d" |
| PSA | N°4 | N°3 | N°2 | N°1 |

"e" Flywheel side.

"f" Timing gear side.

| | |
|--|---------------------|
| Flatness of the cylinder block (close to the cylinder head) | 0,025 mm |
| Diameter of the cylinders | 77 (0 ; + 0,016) mm |
| Liner protrusion | 0 ± 0,3 mm |

The cylinder block is non-repairable.

1.1. Cylinder block

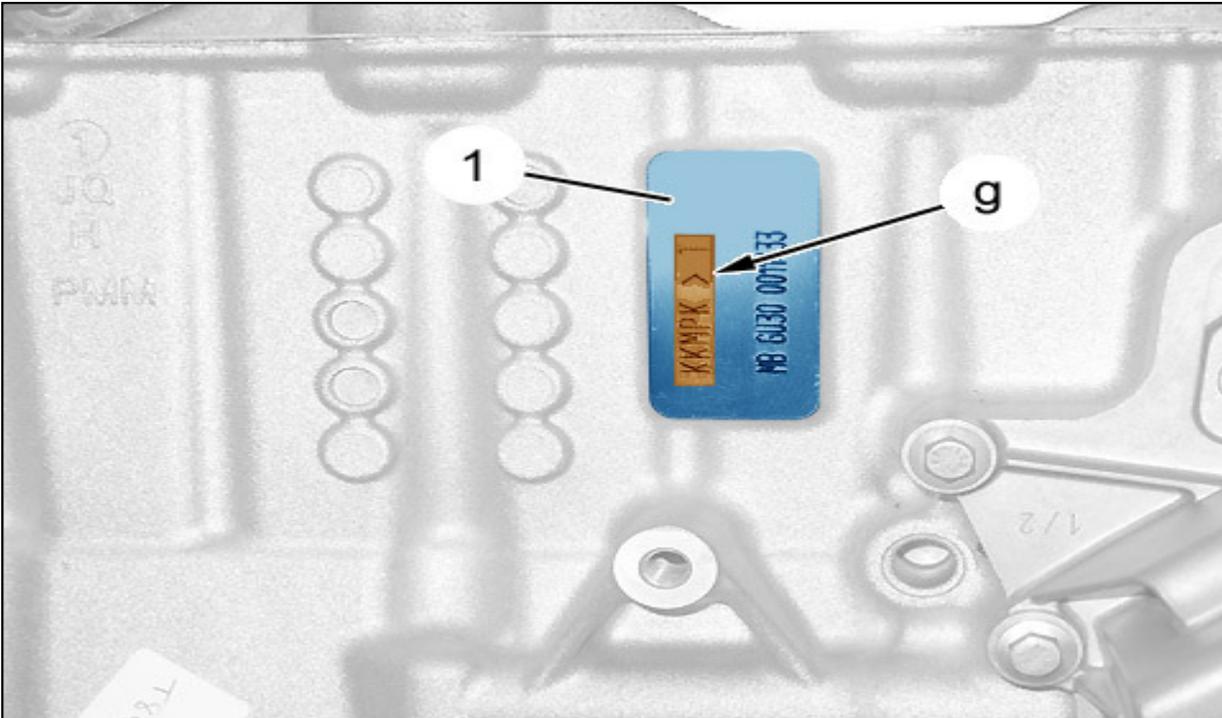


Figure : B1CB037D

The diameter values for the crankshaft main bearings are referenced on the machined surface (1) of the cylinder block (at "g") (Direction of reading from the flywheel towards the timing).

| Components | Bearing n° |
|------------|------------|
| K | 5 |
| P | 4 |
| M | 3 |
| K | 2 |
| K | 1 |

N.B. : Bearing n°1 flywheel end (Cylinder no 1).

1.2. Crankshaft main bearing cap casing

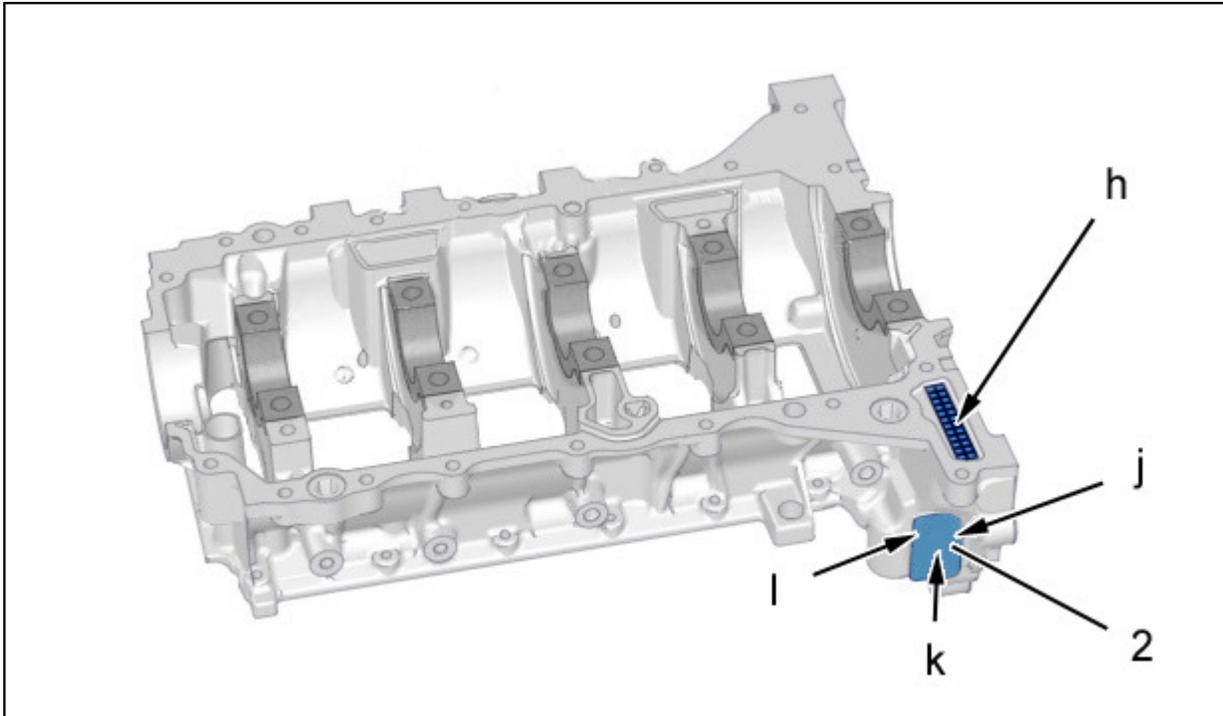


Figure : B1CB038D

The engine serial numbers are referenced on the machined surface (2) of the crankshaft bearing cap casing (at "j", "k", "l").

"h" Area of marking (Machined surface).

"j" Manufacturer identification + Legislation type .

"k" Identification marking .

"l" Serial number.

1.3. Diameters of the crankshaft main bearings

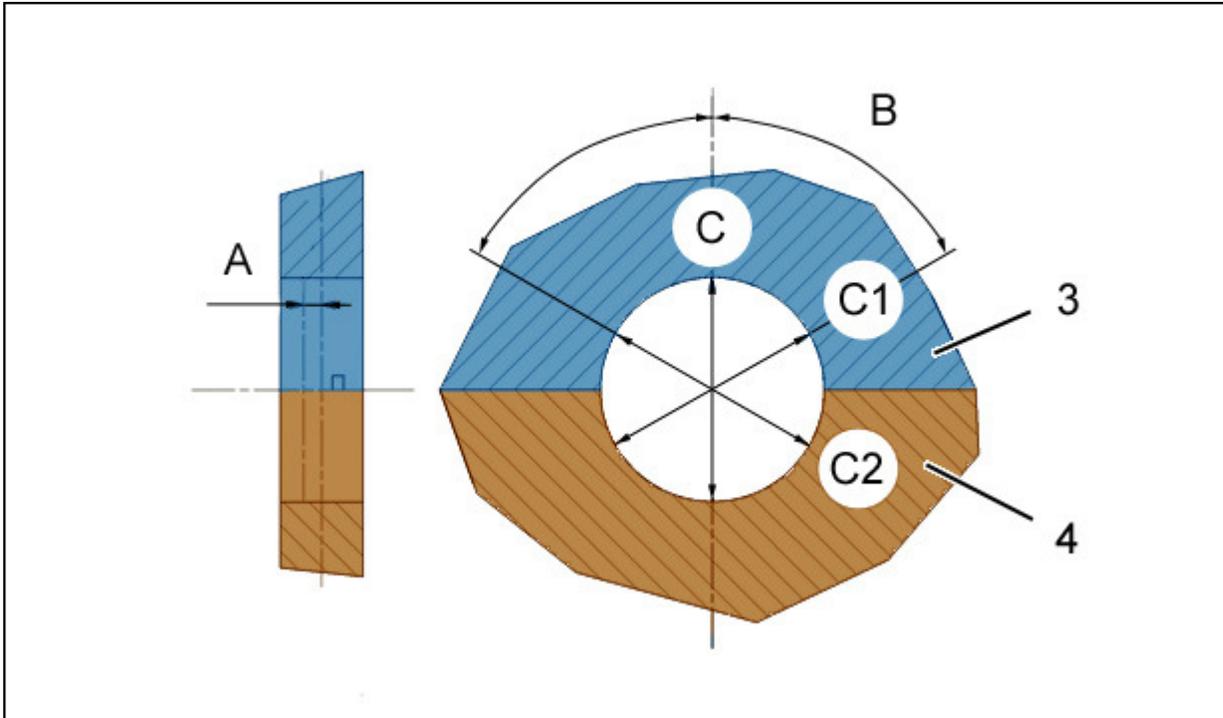


Figure : B1CB039D

- (3) Cylinder block .
 (4) Bearing cap housing.

| Components | Measurement | Values |
|-----------------|---|---|
| "A" | Measurement zone for the diameter of the cylinder block | 0 to 4 mm |
| "B" | Angle between each measurement | 60° |
| "C", "C1", "C2" | Nominal diameter of the crankshaft | 48,655 (0 ; + 0,019) mm |
| - | Calculation of the diameter of the crankshaft bearing | $(\varnothing C + \varnothing C1 + \varnothing C2) / 3$ |

2. Crankshaft

| | | |
|--------------------------------|------------------------|------------------------|
| Crankshaft lateral play | 0,07 mm minimum | 0,32 mm maximum |
| Axial play | 0,0016 mm maximum | |

The cast-iron crankshaft is non-repairable.

2.1. References on crankshaft

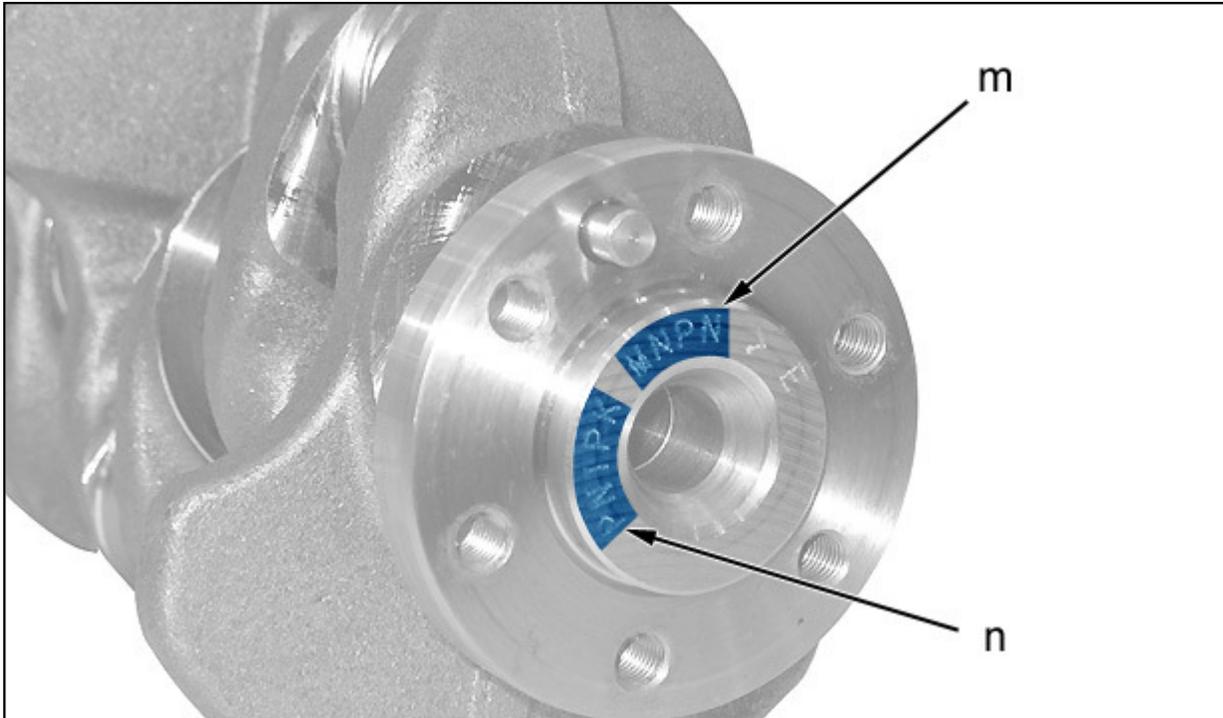


Figure : B1CB03AD

The diameter values for the main journals and crank pins are referenced on the crankshaft (at "m", "n") (Flywheel side).

"m" Record of the value of the main journals (Machined surface) - Alphabetical characters.

"n" Record of the value of the crank pins (Machined surface) - Alphabetical characters.

N.B. : Direction of reading from the flywheel towards the timing.

| Components "n" | Main journal bearing n° |
|----------------|-------------------------|
| K | 5 |
| P | 4 |
| I | 3 |
| N | 2 |
| P | 1 |

N.B. : Bearing n°1 flywheel end (Cylinder no 1).

| Components "m" | Crank pin bearing n° |
|----------------|----------------------|
| N | 4 |
| P | 3 |
| N | 2 |
| M | 1 |

N.B. : Bearing n°1 flywheel end (Cylinder no 1).

2.2. Crankshaft measurements

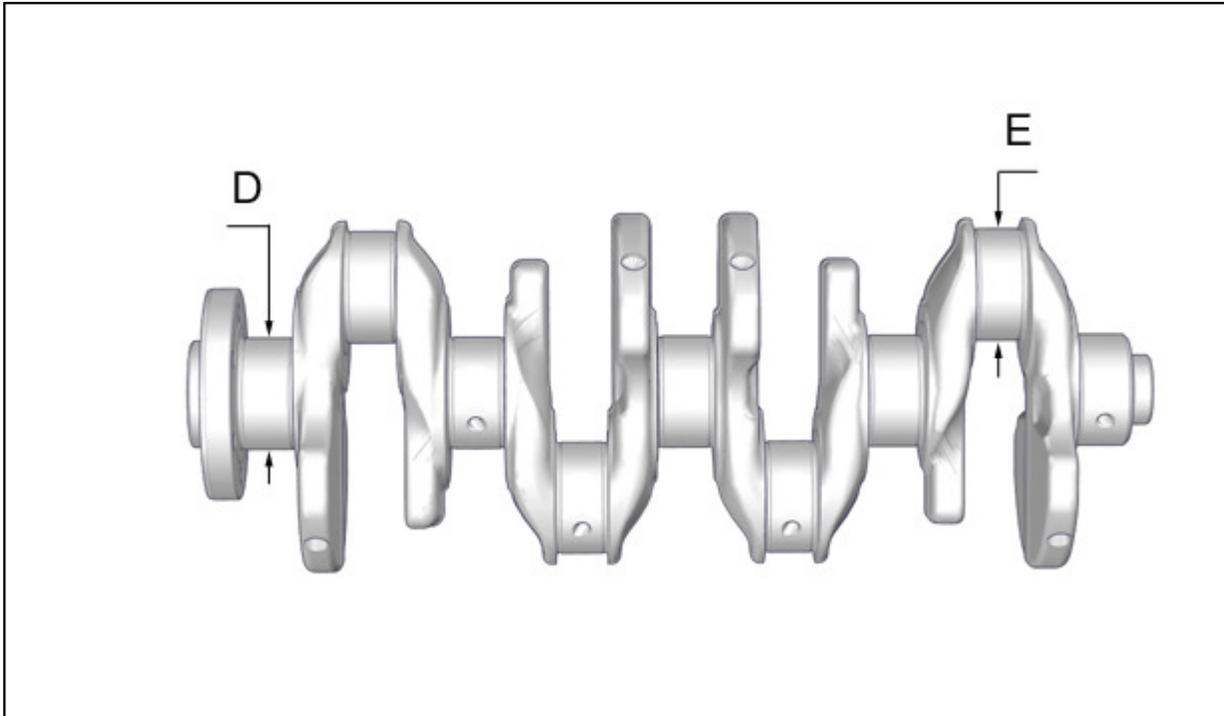


Figure : B1CB03BD

| engine | EP3 | EP6 |
|--|-----------------------------|-----------------------------|
| "D" Nominal diameter of the main journal | Ø 45 (0 ; - 0,016) mm | Ø 45 (0 ; - 0,016) mm |
| "E" Nominal diameter of the crank pin | Ø 40 (- 0,009 ; - 0,025) mm | Ø 45 (- 0,009 ; - 0,025) mm |

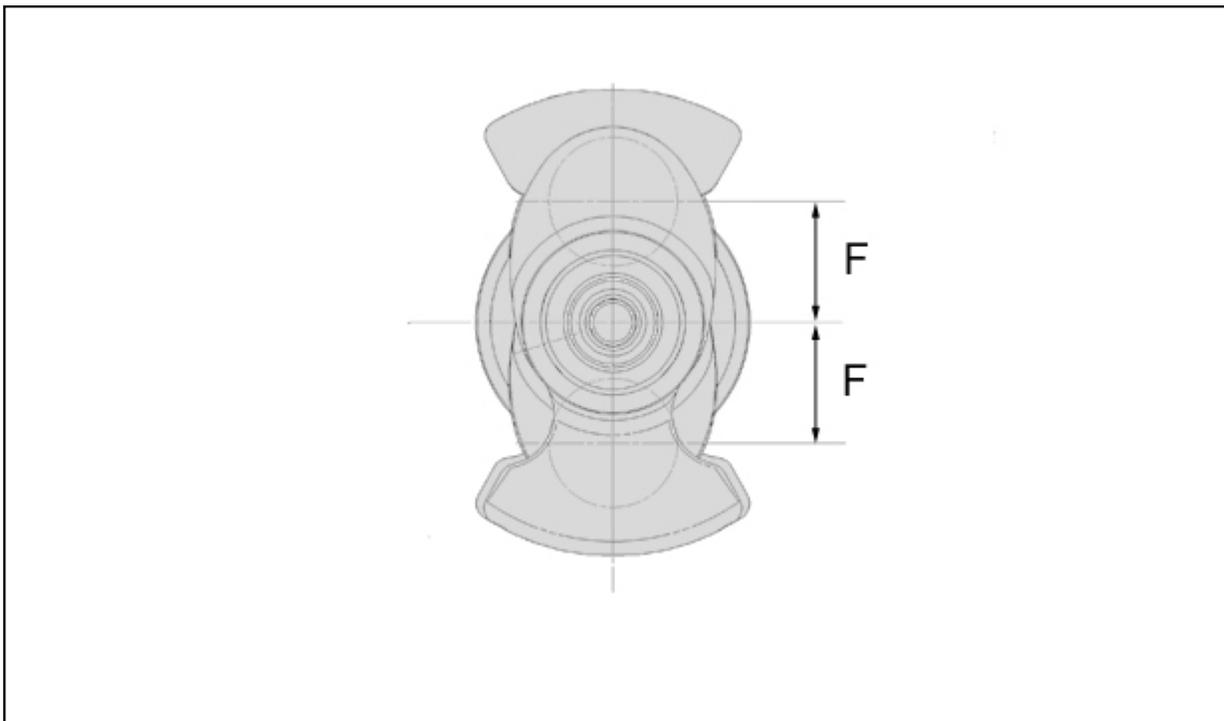


Figure : B1BB0WVD

| engine | EP3 | EP6 |
|--------------------------------------|----------------|----------------|
| "F" Crank pin / main journal overlap | 37,5 ± 0,05 mm | 42,9 ± 0,05 mm |

2.3. Measurement of the diameter of the main journals

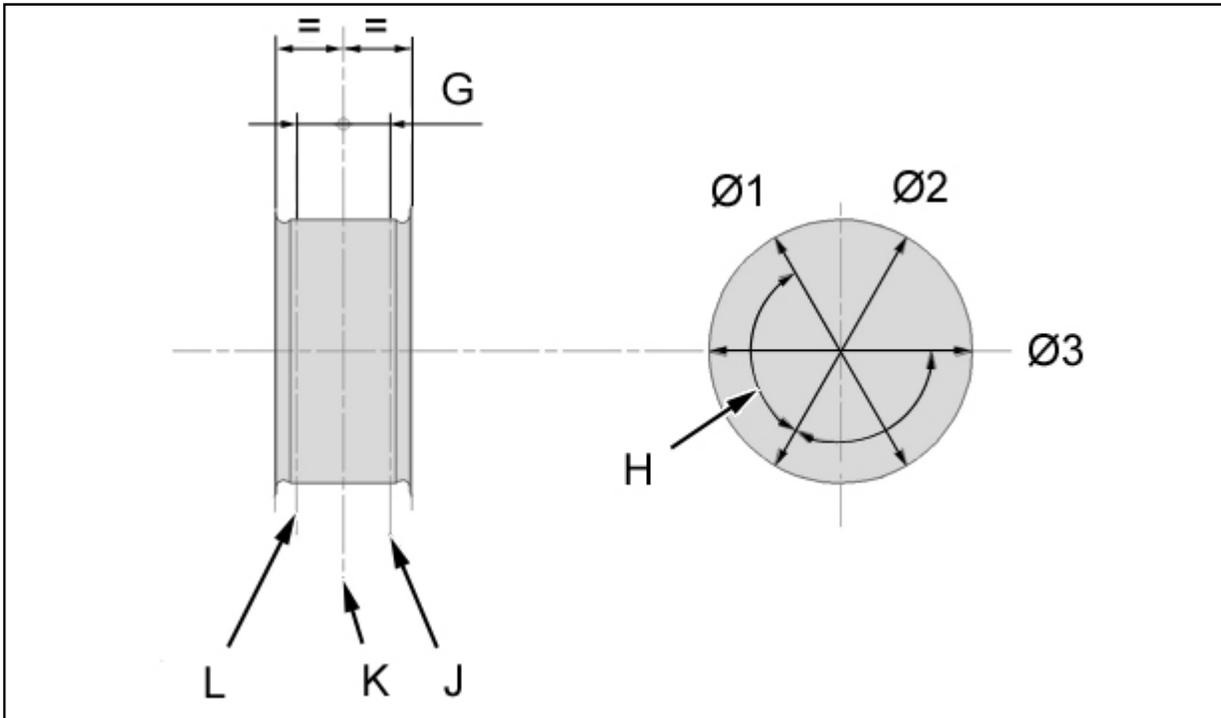


Figure : B1BB0WYD

| Components | Measurement | Values |
|---------------|-----------------------------|--------|
| "G" | Measuring zone | 6 mm |
| "H" | Angle between each diameter | 120° |
| "J", "K", "L" | Measurement diameters | - |

Calculation of the diameter of the main journal "D" :

- $\varnothing J = \varnothing J1 + \varnothing J2 + \varnothing J3 / 3$
- $\varnothing K = \varnothing K1 + \varnothing K2 + \varnothing K3 / 3$
- $\varnothing L = \varnothing L1 + \varnothing L2 + \varnothing L3 / 3$

Diameter of the main journal "D" : $(\varnothing D = \varnothing J + \varnothing K + \varnothing L) / 3$.

3. Crankshaft bearing shells

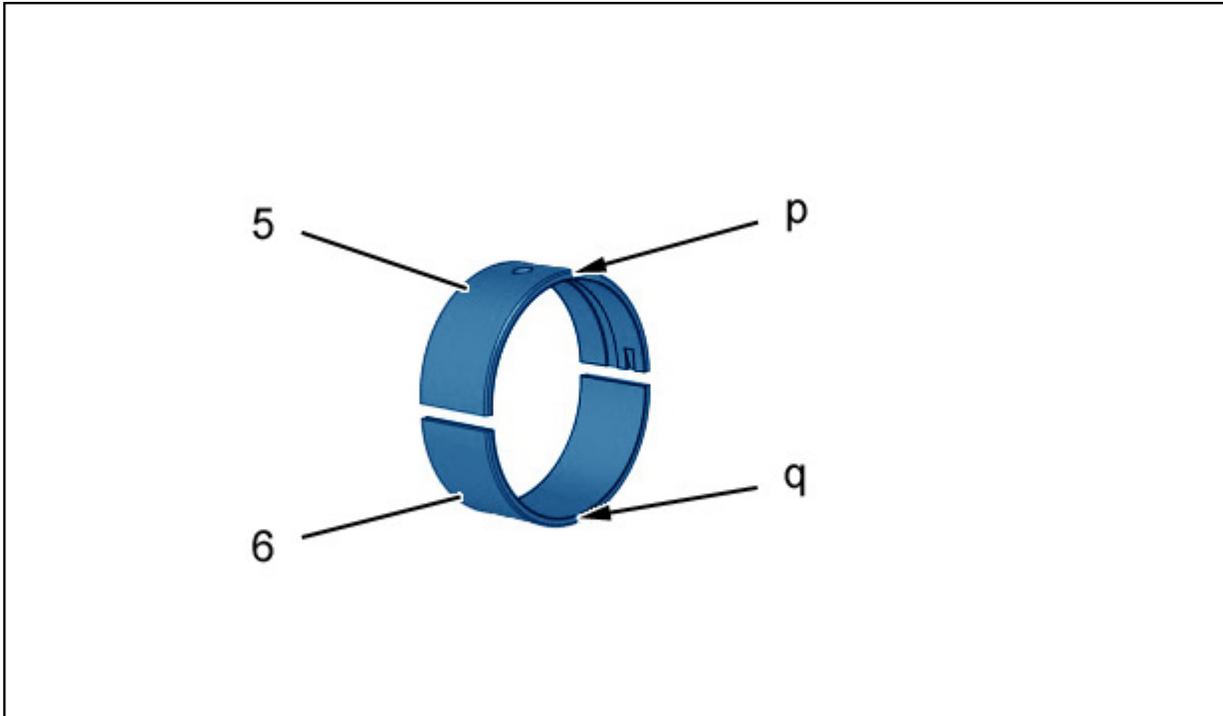


Figure : B1CB03CD

CAUTION : The crankshaft bearing upper and lower half-shells are different.

"p" Colour-coded marking zone on the upper, grooved, half-shells (5).

"q" Colour-coded marking zone on the lower, smooth, half-shells (6).

N.B. : There are 5 classes of grooved upper crankshaft bearing half-shells and 5 classes of smooth lower half-shells (crankshaft bearing cap casing side).

| Classes of crankshaft bearing shells - EP3 - EP6 engine | |
|---|-------------------|
| Colour identification | Nominal dimension |
| Blue | 1,821 - 1,825 mm |
| Black | 1,825 - 1,829 mm |
| Green | 1,829 - 1,833 mm |
| Yellow | 1,833 - 1,837 mm |
| Orange | 1,837 - 1,841 mm |

| Classes of crankshaft bearing shells - EP3C - EP6C engine | |
|---|-------------------|
| Colour identification | Nominal dimension |
| Black | 1,822 -1,826 mm |
| Green | 1,826 - 1,830 mm |
| Yellow | 1,830 - 1,834 mm |
| Orange | 1,834 - 1,838 mm |
| Brown | 1,838 - 1,842 mm |

CAUTION : Half-shells on the same bearing may have colour references that differ.

N.B. : Only the half-shells for engines EP3C and EP6C are available from replacement parts, replacing the old ones on

engines EP3 and EP6 (Without a blue class).

4. Crankshaft lateral shims

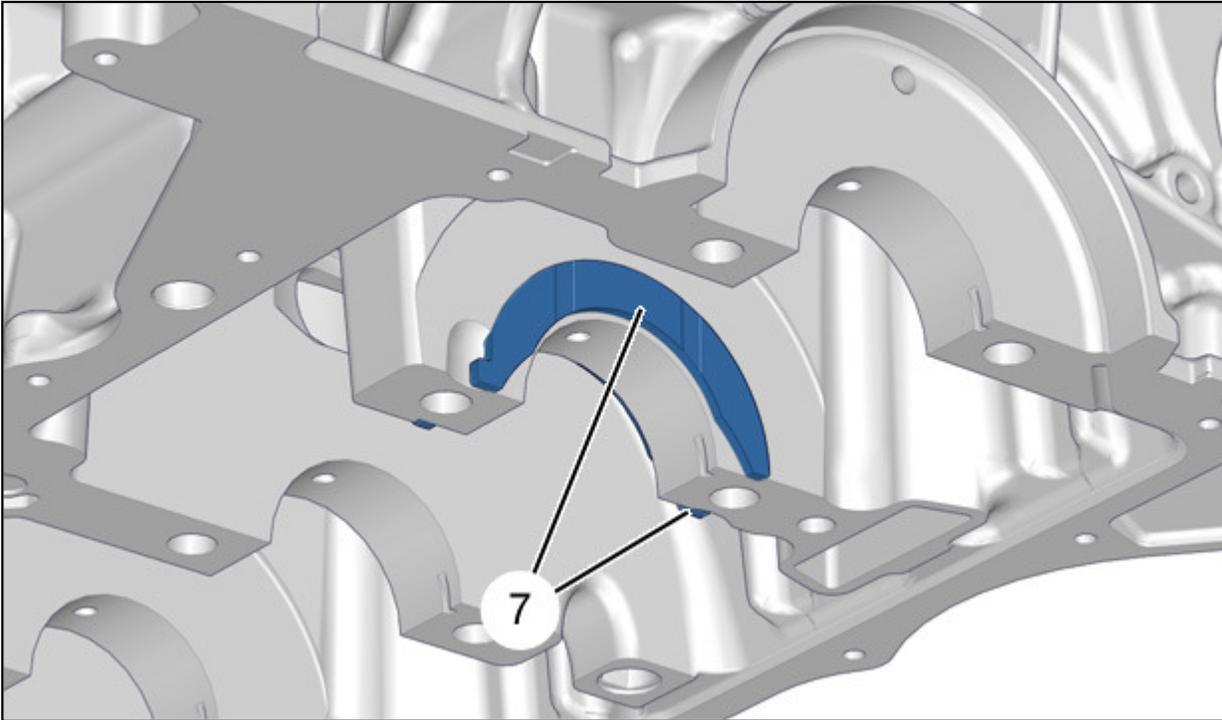


Figure : B1CB03DD

The lateral play of the crankshaft is assured by 2 identical shims (7) on the cylinder block.
The shims are mounted on bearing n°2.

| | EP3 - EP6 | EP3C - EP6C |
|---|----------------------|----------------------|
| Thickness of a lateral play shim | 2,40 (0 ; + 0,05) mm | 2,35 (0 ; + 0,05) mm |

N.B. : Only the lateral play shims for engines EP3C and EP6C are available from replacement parts, replacing the old ones on engines EP3 and EP6.

5. Conrods

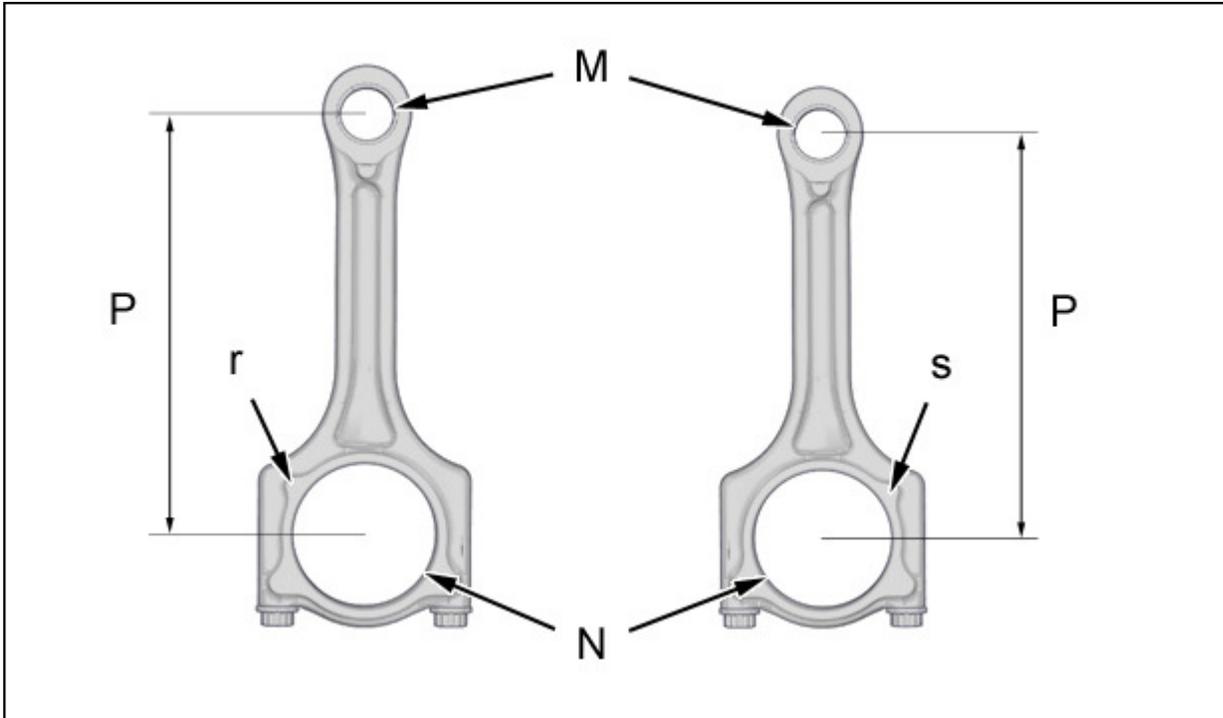


Figure : B1BB0X5D

Sectile conrods in forged steel.

| engine | EP3 | EP6 |
|--|-----------------------------|-----------------------------|
| Ø "M" | 18 (+ 0,02 ; + 0,007) mm | 18 (+ 0,02 ; + 0,007) mm |
| Ø "N" | 43 (+ 0,016 ; 0) mm | 48 (+ 0,016 ; 0) mm |
| "P" | 144,69 ± 0,025 mm | 139,29 ± 0,025 mm |
| Maximum permissible weight difference between conrods of the same engine | 3 grammes | 3 grammes |
| Direction of fitting identification (3rd boss towards the timing) | "r" | "s" |

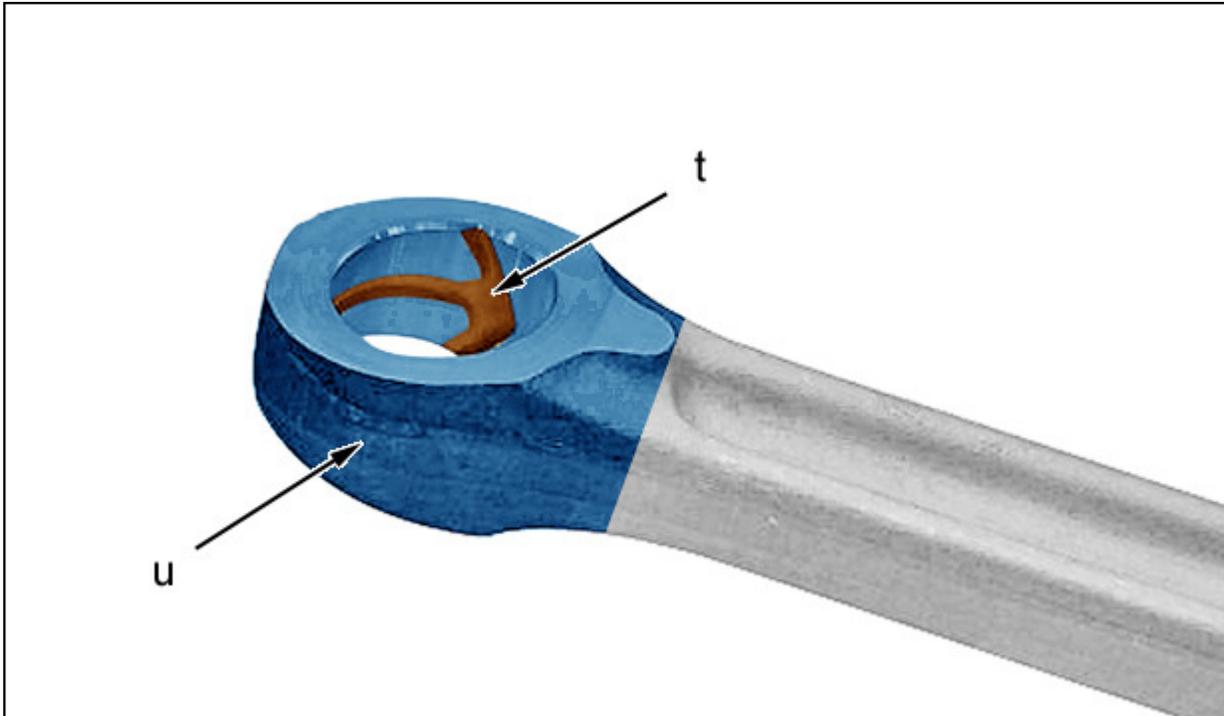


Figure : B1BB0X8D

The conrod little end has a bronze ring that is non-repairable.
The whole is machined to the shape of a viper's head ("u") (After assembly).
The bronze ring is grooved (at "t").

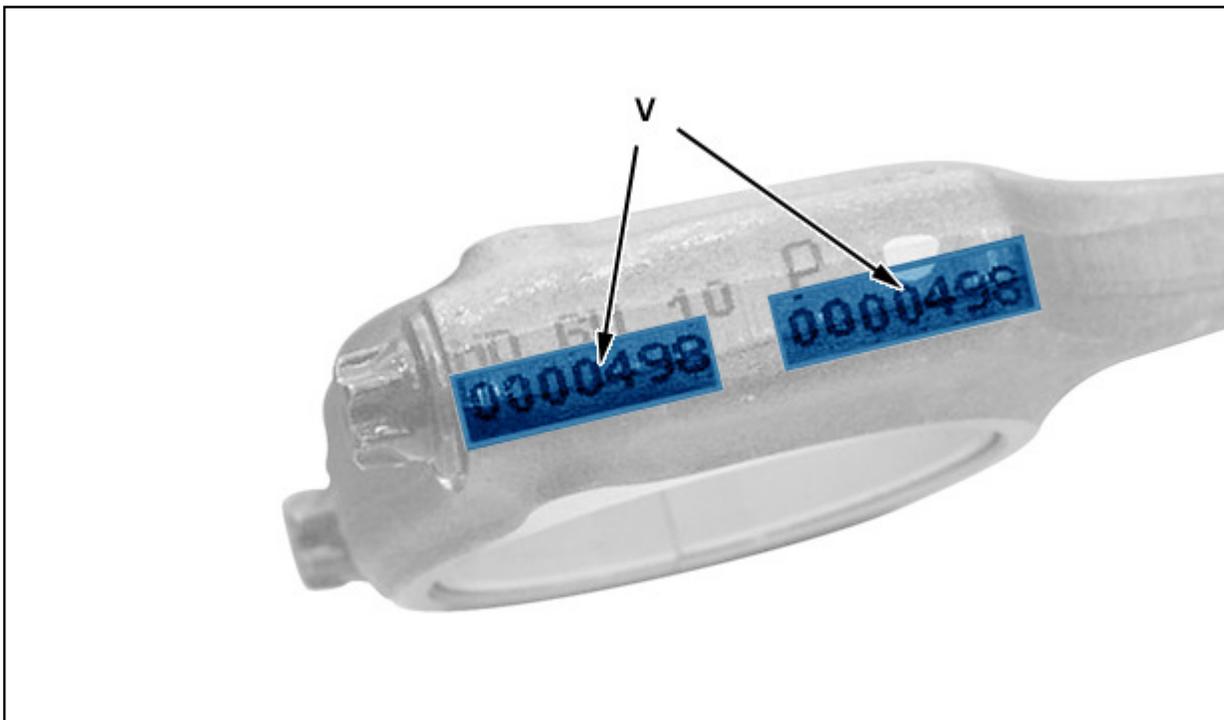


Figure : B1BB0XBD

A marking identifies the assembly of casing and body of the conrod for refitting (at "v").

6. Big end half-shells

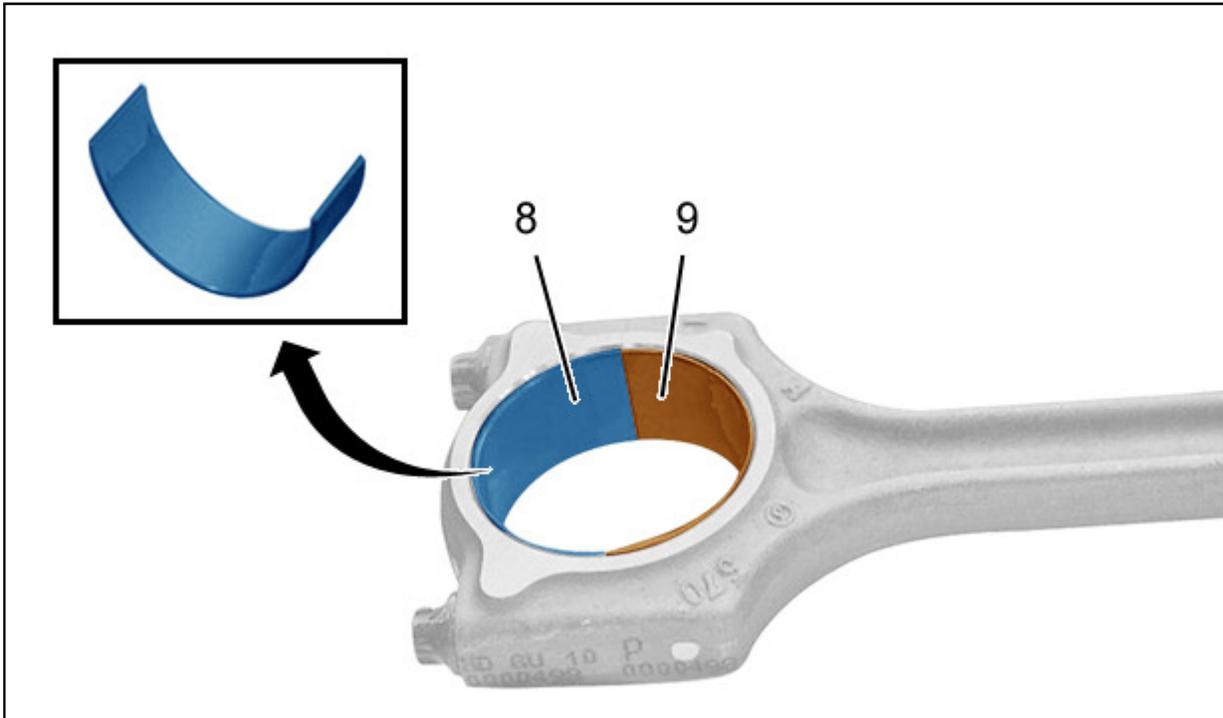


Figure : B1CM0EGD

The lower (8) and upper (9) big end half-shells are identical, smooth, without positioning lugs and have only one thickness class.

| | EP3 - EP6 engine | EP3C - EP6C engine |
|------------------|------------------|--------------------|
| Thickness | 1,492 - 1,498 mm | 1,487 - 1,493 mm |

N.B. : Only the conrod half-shells for engines EP3C and EP6C are available from replacement parts, replacing the old half-shells on engines EP3 and EP6.

7. Piston

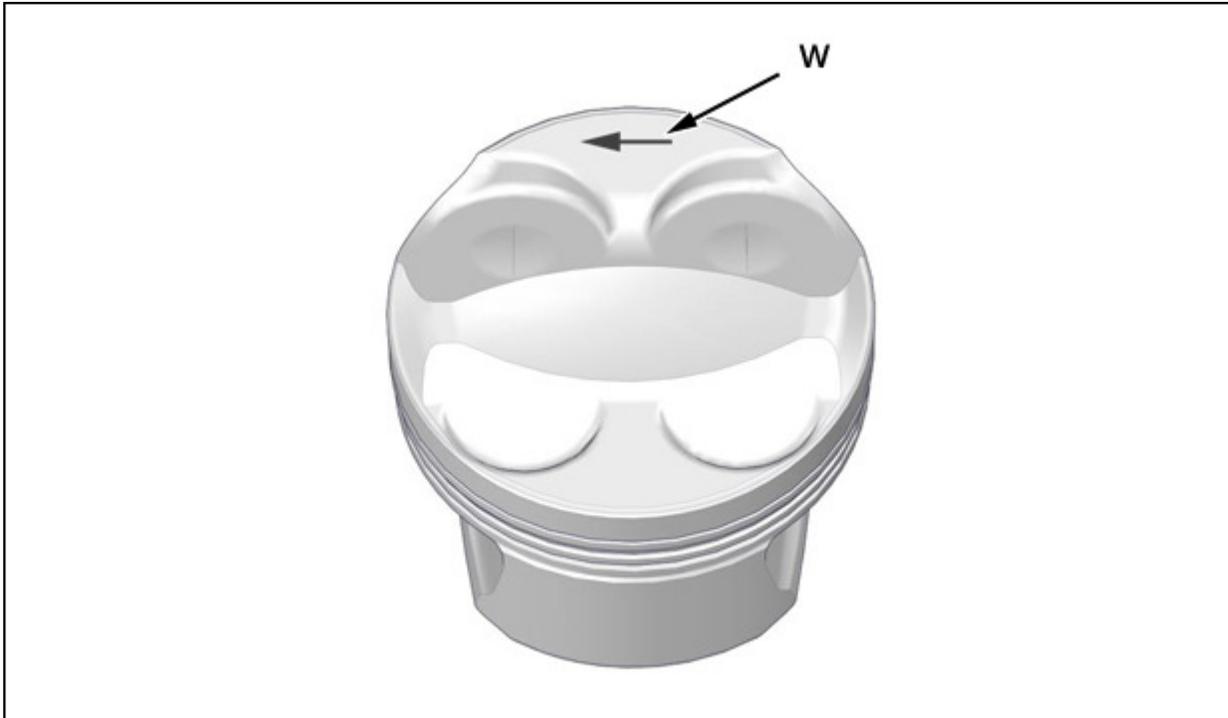


Figure : B1BB0XGD

Marking in "w" (Arrow pointing to timing end).

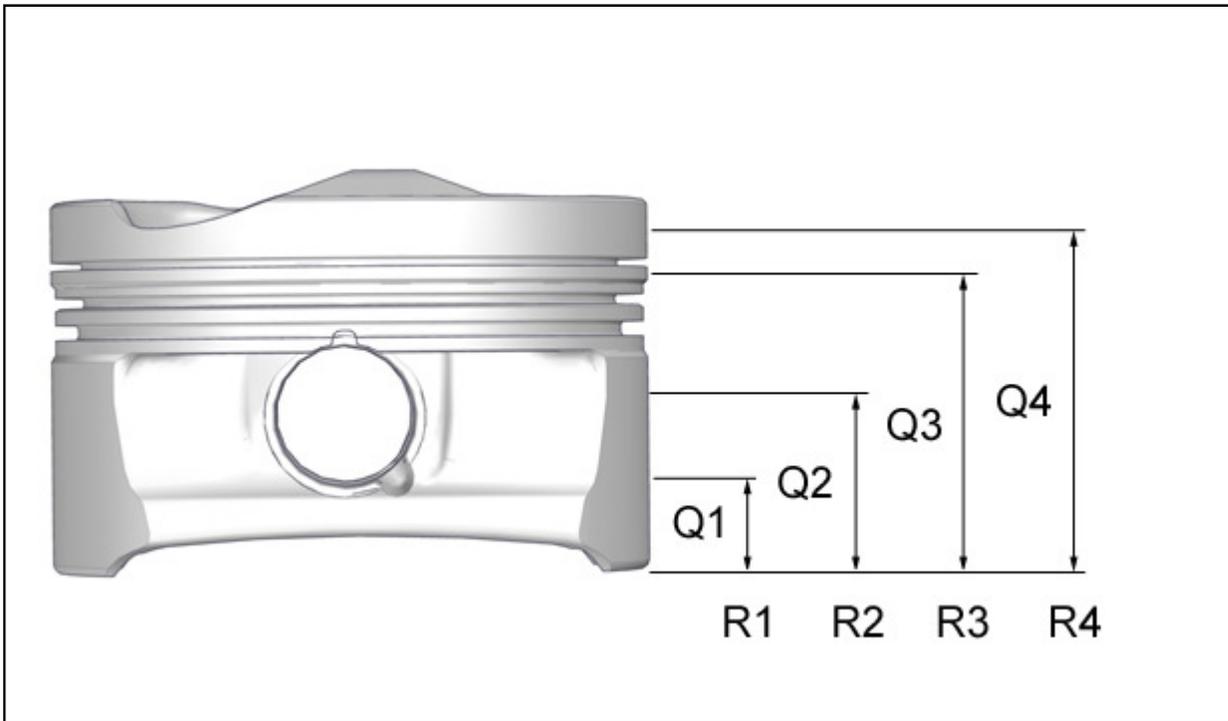


Figure : B1BB0XJD

| |
|--------------------------------|
| EP3 - EP6 - EP6C engine |
|--------------------------------|

| Components | Height | Piston diameter | Slotting |
|-------------------------|----------------|-------------------|--------------------|
| "R1" (Nominal diameter) | "Q1" = 10 mm | 76,958 ± 0,009 mm | - 0,490 ± 0,03 mm |
| "R2" | "Q2" = 25 mm | 76,880 ± 0,007 mm | - 0,480 ± 0,03 mm |
| "R3" | "Q3" = 38,1 mm | 76,463 ± 0,015 mm | - 0,180 ± 0,02 mm |
| "R4" | "Q4" = 43,9 mm | 76,278 ± 0,015 mm | - 0,030 ± 0,015 mm |

| EP3C engine | | | |
|-------------------------|----------------|-------------------|--------------------|
| Components | Height | Piston diameter | Slotting |
| "R1" (Nominal diameter) | "Q1" = 10 mm | 76,948 ± 0,009 mm | - 0,490 ± 0,03 mm |
| "R2" | "Q2" = 25 mm | 76,870 ± 0,007 mm | - 0,480 ± 0,03 mm |
| "R3" | "Q3" = 38,1 mm | 76,473 ± 0,015 mm | - 0,180 ± 0,02 mm |
| "R4" | "Q4" = 43,9 mm | 76,288 ± 0,015 mm | - 0,030 ± 0,015 mm |

N.B. : Only the pistons for engine EP3C are available from replacement parts, replacing the old pistons on engine EP3.

8. Piston rings

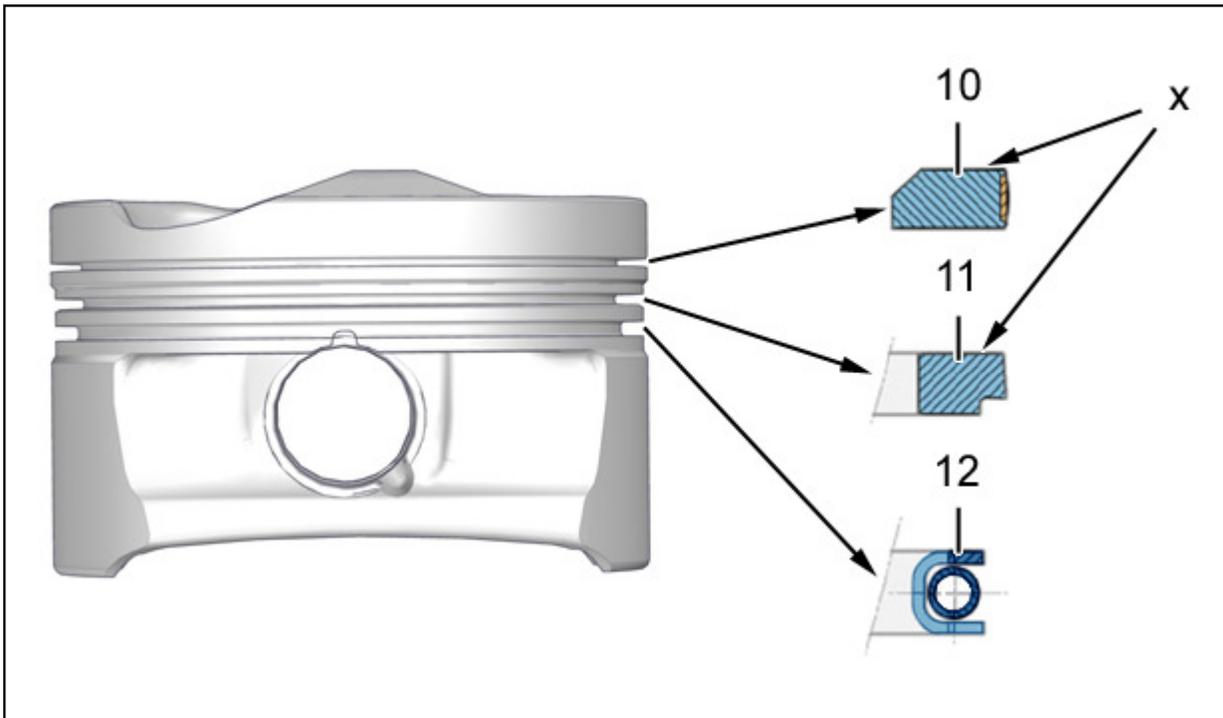


Figure : B1BB0XMMD

(10) Rectangular fire stop ring.

(11) Hooked sealing ring.

(12) Scraper ring "u-flex".

"x" Piston ring markings.

TOP marking oriented upwards.

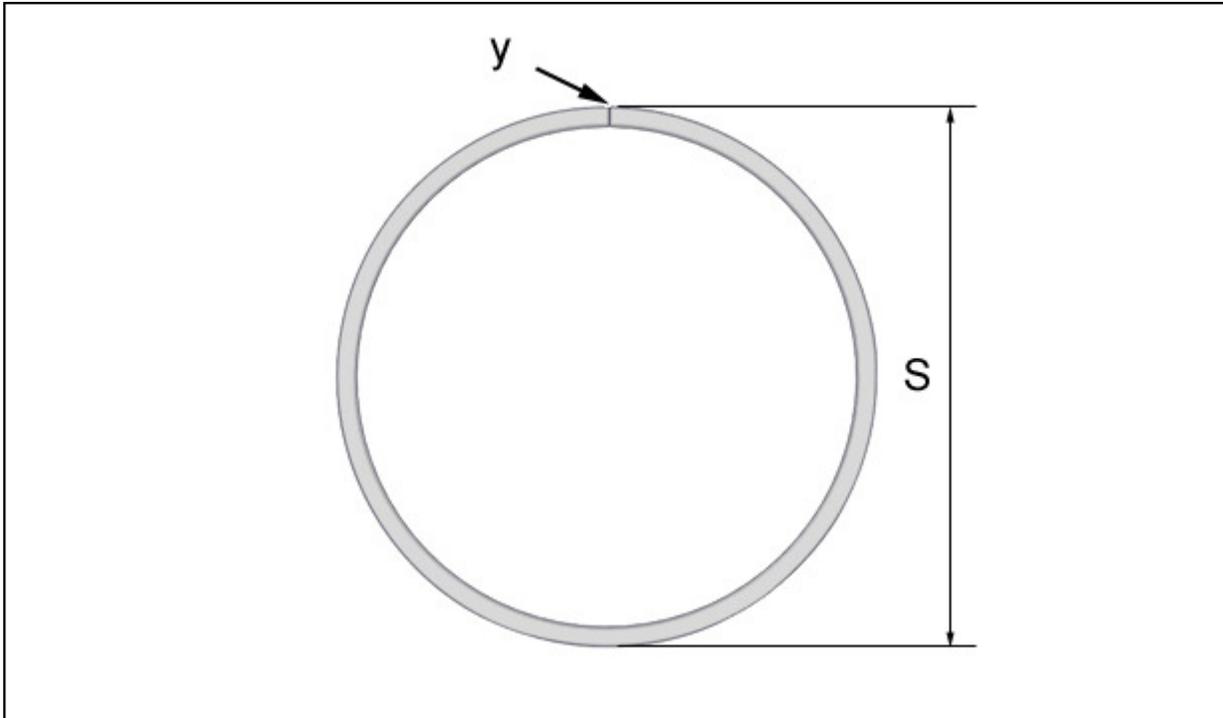


Figure : B1BB0XPD

| Piston rings | Fire stop ring | Sealing ring | Scraper ring |
|---------------------------------|---------------------------|-------------------------|-------------------------------|
| Thickness | 1,2 (- 0,005 ; - 0,03) mm | 1,5 (-0,005 ; -0,03) mm | 2 (-0,01 ; -0,05) mm |
| "y" Clearance at the gap | 0,2 (+ 0,20 ; 0) mm | 0,3 (+ 0,25 ; 0) mm | Without (Blue colour marking) |
| "S" Diameter /Colour | 77 mm / Mauve | 77 mm / Yellow | 77 mm / Without |

9. The piston shaft

The piston shafts are free-fitted in the little ends and the pistons, then laterally immobilised by means of two stop rings.

| | |
|--------------------------|----------------------------|
| External diameter | 18 (0 ; - 0,005) mm |
| length | 43 (0 ; - 0,3) mm |