

BMW 3-Series 320i & 320xi (12-14), 325i, 325xi, 330i & 330xi (06) & 328i & 328xi (07-14) Haynes Online Manual

## **Specifications**

### General

2.0L (N20/N26) engine

Displacement 122 cubic inches (1986cc)

Bore 3.307 inches (84 mm)

Stroke 3.527 inches (89.6 mm)

Direction of engine rotation Clockwise (viewed from the front of the vehicle)

No 1 cylinder location Timing chain end

Firing order 1-3-4-2

Minimum compression pressure 130 psi (9.0 bar)

Maximum deviation between cylinders 29 psi (2.0 bar)

3.0L (N52/N52K) engine

Displacement 182 cubic inches (2996cc)

 Bore
 3.359 inches (85mm)

 Stroke
 3.467 inches (88mm)

Direction of engine rotation Clockwise (viewed from the front of the vehicle)

No 1 cylinder location Timing chain end

Firing order 1-5-3-6-2-4

Minimum compression pressure 130 psi (9.0 bar)

Maximum deviation between cylinders 29 psi (2.0 bar)

Camshaft endplay 0.0008 to 0.0060 inch (0.020 to 0.162 mm)

### **Lubrication system**

Minimum oil pressure at idle speed

2.0L four-cylinder engine 14.5 psi (1.0 bar)
3.0L six-cylinder engine 21.7 psi (1.5 bar)
Regulated oil pressure 58.0 psi (4.0 bar)

Nm

Ft-lbs (unless otherwise indicated)

# **Torque specifications**

#### Note:

One foot-pound (ft-lb) of torque is equivalent to 12 inch-pounds (in-lbs) of torque. Torque values below approximately 15 foot-pounds are expressed in inch-pounds, because most foot-pound torque wrenches are not accurate at these smaller values.

Connecting rod cap bearing bolts		
2.0L engine		
Step 1	15	20
Step 2	Rotate an additional 70-degrees	
Step 3	Rotate an additional 70-degrees	
3.0L		
Step 1	15	20
Step 2	Tighten an additional 120 degrees	
Main bearing bedplate bolts		
2.0L engine	16.5	22
3.0L engine		
N52		
M8		
Step 1	84 in-lbs	10
Step 2	Tighten an additional 90 degrees	
M10		
Step 1	132 in-lbs	15
Step 2	Tighten an additional 90 degrees	
N52K		
M8 x 37 mm		
Step 1	72 in-lbs	8
Step 2	Tighten an additional 90 degrees	
M10 x 100 mm		
Step 1	15	20
Step 2	Tighten an additional 70 degrees	
M10 x 27 and 41 mm		
Step 1	132 in-lbs	15
Step 2	Tighten an additional 90 degrees	
Main bearing cap bolts*		
2.0L engine		

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Step 1	15	20
CLOP I	10	

Step 2 Rotate an additional 90-degrees

3.0L engine

Step 1 15 20

Step 2 Tighten an additional 70 degrees

#### Caution:

All aluminum fasteners must be replaced with new ones whenever they are removed. If in doubt, try to attract it with a magnet (aluminum is not magnetic). Additionally, most aluminum fasteners are identified with a blue paint marking.

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<sup>\*</sup> Do not re-use.