

2002 BMW X5

2000-03 ENGINE Engine - Technical Data - X5 (4.4L)

2000-03 ENGINE**Engine - Technical Data - X5 (4.4L)****ENGINE GENERAL****11 00 ENGINE IN GENERAL M62 B 35****11 00 ENGINE IN GENERAL M62 B 35 TECHNICAL DATA**

Design		90° V
Cylinder		8
Bore	mm	84
Stroke	mm	78.9
Effective displacement	cm ³	3498
Compression ratio	:1	10.0
Max. permissible engine speed	RPM	6200
Compression pressure (approx. equal value for all cylinders)	min. bar	12-14

11 00 ENGINE IN GENERAL M62 B 44**11 00 ENGINE IN GENERAL M62 B 44 TECHNICAL DATA**

Design		90° V
Cylinder		8
Bore	mm	92
Stroke	mm	82.7
Effective displacement	cm ³	4398
Compression ratio	:1	10.0
Max. permissible engine speed	RPM	6100
Compression pressure (approx. equal value for all cylinders)	min. bar	12-14

11 00 ENGINE IN GENERAL M62 B 46**11 00 ENGINE IN GENERAL M62 B 46 TECHNICAL DATA**

Design		90° V
Cylinder		8
Bore	mm	93
Stroke	mm	85.0
Effective displacement	cm ³	4619
Compression ratio	:1	10.5
Max. permissible engine speed	RPM	6500
Compression pressure (approx. equal value for all cylinders)	min. bar	12-14

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ENGINE BLOCK**11 11 ENGINE BLOCK, CYLINDER CRANKCASE M62 B 35****11 11 ENGINE BLOCK, CYLINDER CRANKCASE M62 B 35 TECHNICAL DATA**

Bore dia. ⁽¹⁾	mm	84.000 ^{+0.014}
Permitted out-of-round of cylinder bore a)	mm	0.007
Permissible total wear tolerance between piston and cylinder (engine operated)	mm	0.10
(1) new condition		

11 11 ENGINE BLOCK, CYLINDER CRANKCASE M62 B 44**11 11 ENGINE BLOCK, CYLINDER CRANKCASE M62 B 44 TECHNICAL DATA**

Bore dia. ⁽¹⁾	mm	92.000+0 ^{+0.014}
Permitted out-of-round of cylinder bore a)	mm	0.007
Permissible total wear tolerance between piston and cylinder (engine operated)	mm	0.10
(1) new condition		

11 11 ENGINE BLOCK, CYLINDER CRANKCASE M62 B 46**11 11 ENGINE BLOCK, CYLINDER CRANKCASE M62 B 46 TECHNICAL DATA**

Bore dia. ⁽¹⁾	mm	93.000 ^{+0.014}
Permitted out-of-round of cylinder bore ⁽¹⁾	mm	0.007
Permissible total wear tolerance between piston and cylinder (engine operated)	mm	0.10
(1) new condition		

CYLINDER HEAD WITH COVER**11 12 CYLINDER HEAD WITH COVER M62 B 35****11 12 CYLINDER HEAD WITH COVER M62 B 35 TECHNICAL DATA**

Cylinder head height Original height	mm	140.0
Machining limit	mm	139.7
Valve guides are not available as replacement parts.		
Valve guide interior Oslash (installed)		
Standard	mm	6.0 H7
Size 1	mm	6.1 H7

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Size 2	mm	6.2 H7
Max. tilt clearance (wear between valve and valve guide)	mm	0.5
Camshaft bearing		
Guide bearing width (cylinder head)	mm	21.90 ^{-0.006}

1112 CYLINDER HEAD WITH COVER M62 B 44**1112 CYLINDER HEAD WITH COVER M62 B 44 TECHNICAL DATA**

Cylinder head height Original height	mm	140.0
Machining limit	mm	139.7
Valve guides are not available as replacement parts.		
Valve guide interior Oslash (installed)		
Standard	mm	6.0 H7
Size 1	mm	6.1 H7
Size 2	mm	6.2 H7
Max. tilt clearance (wear between valve and valve guide)	mm	0.5
Camshaft bearing		
Guide bearing width (cylinder head)	mm	21.90 ^{-0.06}

11 12 CYLINDER HEAD WITH COVER M62 B 46**11 12 CYLINDER HEAD WITH COVER M62 B 46 TECHNICAL DATA**

Cylinder head height Original height	mm	140.0
Machining limit	mm	139.7
Valve guides are not available as replacement parts.		
Valve guide interior Oslash (installed)		
Standard	mm	6.0 H7
Size 1	mm	6.1 H7
Size 2	mm	6.2 H7
Max. tilt clearance (wear between valve and valve guide)	mm	0.5
Camshaft bearing		
Guide bearing width (cylinder head)	mm	21.90 ^{-0.06}

11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 35**11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 35 TECHNICAL DATA**

Valve seat angle	°	45
Correction angle (outer)	°	15
Correction angle (inner)	°	60
Valve seat width (dimension "B")		
Inlet	mm	1.25 +/-0.25

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Exhaust	mm	1.65 +/-0.35
PHY Valve seat		
Inlet outside dia.	mm	31.5
Exhaust outside dia.	mm	28.0

11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 44**11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 44 TECHNICAL DATA**

Valve seat angle	°	45
Correction angle (outer)	°	15
Correction angle (inner)	°	60
Valve seat width (dimension "B")		
Inlet	mm	1.25 +/-0.25
Exhaust	mm	1.65 +/-0.35
PHY Valve seat		
Inlet outside dia.	mm	34.5
Exhaust outside dia.	mm	30.0

11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 46**11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 46 TECHNICAL DATA**

Valve seat angle	°	45
Correction angle (outer)	°	15
Correction angle (inner)	°	60
Valve seat width (dimension "B")		
Inlet	mm	0.95 +0.30
Exhaust	mm	1.50 +/-0.35
Inlet outside dia.	mm	34.5
Exhaust outside dia.	mm	30.0

CRANKSHAFT AND BEARINGS**11 21 CRANKSHAFT AND BEARINGS M62 B 35****11 21 CRANKSHAFT AND BEARINGS M62 B 35 TECHNICAL DATA**

Ground sizes of main bearing journals		
Standard yellow	mm	69.984 ^{+0.006}
Standard green	mm	69.977 ^{+0.006}
Standard white	mm	69.971 ^{+0.005}
Stage 1 (U 0.25) yellow	mm	69.734 ^{+0.006}
Stage 1 (U 0.25) green	mm	69.727 ^{+0.006}

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Stage 1 (U 0.25) white	mm	69.721 ^{+0.005}
Stage 2 (U 0.50) yellow	mm	69.484 ^{+0.006}
Stage 2 (U 0.50) green	mm	69.477 ^{+0.006}
Stage 2 (U 0.50) white	mm	69.471 ^{+0.006}
Undersize 3 (U 0.75 mm) yellow	mm	69.234 ^{+0.006}
Undersize 3 (U 0.75) green	mm	69.227 ^{+0.006}
Undersize 3 (U 0.75) white	mm	69.221 ^{+0.006}
Radial crankshaft bearing play	mm	0.020 ... 0.050

11 21 CRANKSHAFT AND BEARINGS M62 B 35**11 21 CRANKSHAFT AND BEARINGS M62 B 35 TECHNICAL DATA**

Grinding stages, crankshaft guide bearing		
Standard	mm	32.0 F8
Size 1	mm	32.2 F8
Size 2	mm	32.4 F8
Size 3	mm	32.6 F8
Crankshaft axial play	mm	0.085 ... 0.257

11 21 CRANKSHAFT AND BEARINGS M62 B 35**11 21 CRANKSHAFT AND BEARINGS M62 B 35 TECHNICAL DATA**

Ground sizes of conrod bearing journals		
Standard	mm	48.00 ^{+0.00-} _{-0.025}
Size 1	mm	47.75 ^{+0.00-} _{-0.025}
Size 2	mm	47.50 ^{+0.00-} _{-0.025}
Size 3	mm	47.25 ^{+0.00-} _{-0.025}
Radial conrod bearing play	mm	0.016... 0.055

11 21 CRANKSHAFT AND BEARINGS M62 B 35**11 21 CRANKSHAFT AND BEARINGS M62 B 35 TECHNICAL DATA**

Maximum permitted runout on central crankshaft journal (crankshaft supported at outer bearing journal)	mm	0.15
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11 21 CRANKSHAFT AND BEARINGS M62 B 44**11 21 CRANKSHAFT AND BEARINGS M62 B 44 TECHNICAL DATA**

Ground sizes of main bearing journals		

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2000-03 ENGINE Engine - Technical Data - X5 (4.4L)

Standard yellow	mm	69.984 ^{+0.006}
Standard green	mm	69.977 ^{+0.006} +0 006
Standard white	mm	69.971 ^{+0.005} +0.005
Stage 1 (U 0.25) yellow	mm	69.734 ^{+0.006}
Stage 1 (U 0.25) green	mm	69.727 ^{+0.006}
Stage 1 (U 0.25) white	mm	69.721 ^{+0.005}
Stage 2 (U 0.50) yellow	mm	69.484 ^{+0.006}
Stage 2 (U 0.50) green	mm	69.477 ^{+0.006}
Stage 2 (U 0.50) white	mm	69.471 ^{+0.005}
Undersize 3 (U 0.75 mm) yellow	mm	69.234 ^{+0.006}
Undersize 3 (U 0.75) green	mm	69.227 ^{+0.006}
Undersize 3 (U 0.75) white	mm	69.221 ^{+0.005}
Radial crankshaft bearing play	mm	0.020 ... 0.050

11 21 CRANKSHAFT AND BEARINGS M62 B 44**11 21 CRANKSHAFT AND BEARINGS M62 B 44 TECHNICAL DATA**

Grinding stages, crankshaft guide bearing		
Standard	mm	32.0 F8
Size 1	mm	32.2 F8
Size 2	mm	32.4 F8
Size 3	mm	32.6 F8
Crankshaft axial play	mm	0.085 ... 0.257

11 21 CRANKSHAFT AND BEARINGS M62 B 44**11 21 CRANKSHAFT AND BEARINGS M62 B 44 TECHNICAL DATA**

Ground sizes of conrod bearing journals		
Standard	mm	48.00 ^{-0.009} -0.025
Size 1	mm	47.75 ^{-0.009} -0.025
Size 2	mm	47.50 ^{-0.009} -0.025
Size 3	mm	47.25 ^{-0.009} -0.025
Radial conrod bearing play	mm	0.016... 0.055

11 21 CRANKSHAFT AND BEARINGS M62 B 44**11 21 CRANKSHAFT AND BEARINGS M62 B 44 TECHNICAL DATA**

Maximum permitted runout on central crankshaft journal (crankshaft	mm	0.15
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supported at outer bearing journal)

11 21 CRANKSHAFT AND BEARINGS M62 B 46**11 21 CRANKSHAFT AND BEARINGS M62 B 46 TECHNICAL DATA**

Ground sizes of main bearing journals		
Standard yellow	mm	69.984 ^{+0.006}
Standard green	mm	69.977 ^{+0.006}
Standard white	mm	69.971 ^{+0.006}
Stage 1 (U 0.25) yellow	mm	69.734 ^{+0.006}
Stage 1 (U 0.25) green	mm	69.727 ^{+0.006}
Stage 1 (U 0.25) white	mm	69.721 ^{+0.005}
Stage 2 (U 0.50) yellow	mm	69.484 ^{+0.006}
Stage 2 (U 0.50) green	mm	69.477 ^{+0.006}
Stage 2 (U 0.50) white	mm	69.471 ^{+0.005}
Undersize 3 (U 0.75 mm) yellow	mm	69.234 ^{+0.006}
Undersize 3 (U 0.75) green	mm	69.227 ^{+0.006}
Undersize 3 (U 0.75) white	mm	69.221 ^{+0.006}
Radial crankshaft bearing play	mm	0.020 ... 0.050

11 21 CRANKSHAFT AND BEARINGS M62 B 46**11 21 CRANKSHAFT AND BEARINGS M62 B 46 TECHNICAL DATA**

Grinding stages, crankshaft guide bearing		
Standard	mm	32.0 F8
Size 1	mm	32.2 F8
Size 2	mm	32.4 F8
Size 3	mm	32.6 F8
Crankshaft axial play	mm	0.085 ... 0.257

11 21 CRANKSHAFT AND BEARINGS M62 B 46**11 21 CRANKSHAFT AND BEARINGS M62 B 46 TECHNICAL DATA**

Ground sizes of conrod bearing journals		
Standard	mm	48.00 ^{-0.009} -0.025
Size 1	mm	47.75 ^{-0.009} -0.025
Size 2	mm	47.50 ^{-0.009} -0.025
Size 3	mm	47.25 ^{-0.009} -0.025

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Radial conrod bearing play	mm	0.016... 0.055
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11 21 CRANKSHAFT AND BEARINGS M62 B 46

11 21 CRANKSHAFT AND BEARINGS M62 B 46 TECHNICAL DATA

Maximum permitted runout on central crankshaft journal (crankshaft supported at outer bearing journal)	mm	0.15
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VIBRATION DAMPER

11 23 VIBRATION DAMPER M62 B35

11 23 VIBRATION DAMPER M62 B35 TECHNICAL DATA

Max. radial runout	mm	0.20
Max. axial runout	mm	0.30

11 23 VIBRATION DAMPER M62 B44

11 23 VIBRATION DAMPER M62 B44 TECHNICAL DATA

Max. radial runout	mm	0.20
Max. axial runout	mm	0.30

11 23 VIBRATION DAMPER M62 B46

11 23 VIBRATION DAMPER M62 B46 TECHNICAL DATA

Max. radial runout	mm	0.20
Max. axial runout	mm	0.30

CONNECTING RODS AND BEARINGS

11 24 CONNECTING RODS AND BEARINGS M62 B 35

11 24 CONNECTING RODS AND BEARINGS M62 B 35 TECHNICAL DATA

Dia. large conrod eye (without bearing shells)	mm	52.000... 52.013
Conrod bush inside diameter	mm	22 ^{+0.012} _{+0.005}
Permissible total deviation of connecting rods (without bearing shells)	g	+/-3

11 24 CONNECTING RODS AND BEARINGS M62 B 44

11 24 CONNECTING RODS AND BEARINGS M62 B 44 TECHNICAL DATA

Dia. large conrod eye (without bearing shells)	mm	52.000... 52.013
Conrod bush inside diameter	mm	

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		22 ^{+0.012} _{+0.005}
Permissible total deviation of connecting rods (without bearing shells)	g	+/-3

11 24 CONNECTING RODS AND BEARINGS M62 B 46**11 24 CONNECTING RODS AND BEARINGS M62 B 46 TECHNICAL DATA**

Dia. large conrod eye (without bearing shells)	mm	52.000... 52.013
Conrod bush inside diameter	mm	22 ^{+0.012} _{+0.005}
Permissible total deviation of connecting rods (without bearing shells)	g	+/-3

PISTONS WITH RINGS AND PINS**11 25 PISTONS WITH RINGS AND PINS M62 B 35****11 25 PISTONS WITH RINGS AND PINS M62 B 35 TECHNICAL DATA**

Piston and pin are paired to each other - replace together only.		
Measuring point "A" (position)	mm	22
Piston dia. measuring point "A"	mm	83.976 ... 83.994
Piston running clearance	mm	0.006 ... 0.038
Permissible total wear tolerance between piston and cylinder (engine operated)	mm	0.1

11 25 PISTONS WITH RINGS AND PINS M62 B 35**11 25 PISTONS WITH RINGS AND PINS M62 B 35 TECHNICAL DATA**

1st groove		
End clearance	mm	0.1 ... 0.3
Axial play	mm	0.02 ... 0.055
2nd groove		
End clearance	mm	0.2 ... 0.4
Axial play	mm	0.02 ... 0.055
3rd groove		
End clearance	mm	0.2 ... 0.9
Axial play	mm	does not have to be measured

11 25 PISTONS WITH RINGS AND PINS M62 B 44**11 25 PISTONS WITH RINGS AND PINS M62 B 44 TECHNICAL DATA**

Piston and pin are paired to each other - replace together only.		
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Measuring point "A" (position)	mm	12
Piston dia. measuring point "A"	mm	91.976... 91.994
Piston running clearance	mm	0.006 ... 0.038
Permissible total wear tolerance between piston and cylinder (engine operated)	mm	0.1

11 25 PISTONS WITH RINGS AND PINS M62 B 44**11 25 PISTONS WITH RINGS AND PINS M62 B 44 TECHNICAL DATA**

1st groove		
End clearance	mm	0.1 ... 0.3
Axial play	mm	0.02 ... 0.060
2nd groove		
End clearance	mm	0.2 ... 0.4
Axial play	mm	0.02 ... 0.060
3rd groove		
End clearance	mm	0.2 ... 0.9
Axial play	mm	does not have to be measured

11 25 PISTONS WITH RINGS AND PINS M62 B 46**11 25 PISTONS WITH RINGS AND PINS M62 B 46 TECHNICAL DATA**

Piston and pin are paired to each other - replace together only.		
Measuring point "A" (position)	mm	21.5
Piston dia. measuring point "A"	mm	92.980 ... 92.000
Piston running clearance	mm	0.006 ... 0.034
Permissible total wear tolerance between piston and cylinder (engine operated)	mm	0.1

11 25 PISTONS WITH RINGS AND PINS M62 B 46**11 25 PISTONS WITH RINGS AND PINS M62 B 46 TECHNICAL DATA**

1st groove		
End clearance	mm	0.1 ... 0.3
Axial play	mm	0.02 ... 0.070
2nd groove		
End clearance	mm	0.2 ... 0.4
Axial play	mm	0.02 ... 0.060
3rd groove		
End clearance	mm	0.25 ... 0.50
Axial play	mm	0.02 ... 0.06

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CAMSHAFT**11 31 CAMSHAFT M62 B 35****11 31 CAMSHAFT M62 B 35 TECHNICAL DATA**

Guide bearing (width)	mm	22.10 ^{+0.10}
Bearing radial play	mm	0.040 ... 0.074
Bearing end float	mm	0.20 ... 0.36

11 31 CAMSHAFT M62 B 44**11 31 CAMSHAFT M62 B 44 TECHNICAL DATA**

Guide bearing (width)	mm	22.10 ^{+0.10}
Bearing radial play	mm	0.040 ... 0.074
Bearing end float	mm	0.20 ... 0.36

11 31 CAMSHAFT M62 B 46**11 31 CAMSHAFT M62 B 46 TECHNICAL DATA**

Guide bearing (width)	mm	22.10 ^{+0.10}
Bearing radial play	mm	0.040 ... 0.074
Bearing end float	mm	0.20 ... 0.36

VALVE WITH SPRINGS**1112 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 35****11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 35 TECHNICAL DATA**

Valve seat angle	°	45
Correction angle (outer)	°	15
Correction angle (inner)	°	60
Valve seat width (dimension "B")		
Inlet	mm	1.25 +/-0.25
Exhaust	mm	1.65 +/-0.35
PHY Valve seat		
Inlet outside dia.	mm	31.5
Exhaust outside dia.	mm	28.0

11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 44**11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 44 TECHNICAL DATA**

Valve seat angle	°	45
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Correction angle (outer)	°	15
Correction angle (inner)	°	60
Valve seat width (dimension "B")		
Inlet	mm	1.25 +/-0.25
Exhaust	mm	1.65 +/-0.35
PHY Valve seat		
Inlet outside dia.	mm	34.5
Exhaust outside dia.	mm	30.0

11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 46**11 12 CYLINDER HEAD WITH VALVE SEAT COVER M62 B 46 TECHNICAL DATA**

Valve seat angle	°	45
Correction angle (outer)	°	15
Correction angle (inner)	°	60
Valve seat width (dimension "B")		
Inlet	mm	0.95 +0.30
Exhaust	mm	1.50 +/-0.35
Inlet outside dia.	mm	34.5
Exhaust outside dia.	mm	30.0

11 34 VALVES WITH SPRINGS M62 B 35**11 34 VALVES WITH SPRINGS M62 B 35 TECHNICAL DATA**

Plate PHY		
Inlet original	mm	32
Exhaust original	mm	28.5
Stem PHY		
Inlet original	mm	6.0 -0.025 -0.040
Exhaust original	mm	6.0 -0.040 -0.055
The following valve versions are available for repairs in addition to the standard valves:		
Stem PHY		
Inlet stage 1	mm	6.1 -0.025 -0.055
Inlet stage 2	mm	6.1 -0.025 -0.055
Exhaust stage 1	mm	6.1 -0.040 -0.055
Exhaust stage 2	mm	6.1 -0.040 -0.055

11 34 VALVES WITH SPRINGS M62 B 44

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11 34 VALVES WITH SPRINGS M62 B 44 TECHNICAL DATA

Plate PHY		
Inlet original	mm	35
Exhaust original	mm	30.5
Stem PHY		
Inlet original	mm	6.0 ^{-0.025} _{-0.040}
Exhaust original	mm	6.0 ^{-0.040} _{-0.055}
The following valve versions are available for repairs in addition to the standard valves:		
Stem PHY		
Inlet stage 1	mm	6.1 ^{-0.025} _{-0.040}
Inlet stage 2	mm	6.2 ^{-0.025} _{-0.040}
Exhaust stage 1	mm	6.1 ^{-0.040} _{-0.055}
Exhaust stage 2	mm	6.2 ^{-0.040} _{-0.055}

11 34 VALVES WITH SPRINGS M62 B 46**11 34 VALVES WITH SPRINGS M62 B 46 TECHNICAL DATA**

Plate PHY		
Inlet original	mm	35
Exhaust original	mm	30.5
Stem PHY		
Inlet original	mm	6.0 ^{-0.025} _{-0.040}
Exhaust original	mm	6.0 ^{-0.040} _{-0.055}
The following valve versions are available for repairs in addition to the standard valves:		
Stem PHY		
Inlet stage 1	mm	6.1 ^{-0.025} _{-0.040}
Inlet stage 2	mm	6.2 ^{-0.025} _{-0.040}
Exhaust stage 1	mm	6.1 ^{-0.040} _{-0.055}
Exhaust stage 2	mm	6.2 ^{-0.040} _{-0.055}

OIL SUPPLY**11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 35****11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 35 TECHNICAL DATA**

Oil pressure at idle speed with engine at operating temperature	min. bar	0.5

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Regulated pressure	bar	4.5
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11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 44**11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 44 TECHNICAL DATA**

Oil pressure at idle speed with engine at operating temperature	min. bar	0.5
Regulated pressure	bar	4.5

11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 46**11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 46 TECHNICAL DATA**

Oil pressure at idle speed with engine at operating temperature	min. bar	0.5
Regulated pressure	bar	4.5

11 40 OIL SUPPLY E53/M62**11 40 OIL SUPPLY E53/M62 TECHNICAL DATA**

Oil grade, refer to BMW Service Operating Fluids .		
Oil consumption, refer to BMW Service Operating Fluids .		
Oil change volume with oil filter	ltr.	8.0

OIL PUMP WITH FILTER**11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 35****11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 35 TECHNICAL DATA**

Oil pressure at idle speed with engine at operating temperature	min. bar	0.5
Regulated pressure	bar	4.5

11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 44**11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 44 TECHNICAL DATA**

Oil pressure at idle speed with engine at operating temperature	min. bar	0.5
Regulated pressure	bar	4.5

11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 46**11 41 OIL PUMP WITH STRAINER AND DRIVE M62 B 46 TECHNICAL DATA**

Oil pressure at idle speed with engine at operating temperature	min. bar	0.5
Regulated pressure	bar	4.5

11 40 OIL SUPPLY E53/M62

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11 40 OIL SUPPLY E53/M62 TECHNICAL DATA

Oil grade, refer to BMW Service Operating Fluids .

Oil consumption, refer to BMW Service Operating Fluids .

Oil change volume with oil filter	ltr.	8.0
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FAN**11 52 FAN M62 B 35/B 44****11 52 FAN M62 B 35 TECHNICAL DATA**

Switch-on temperature	°C	95 +/-4
Switch-off temperature	°C	60
Tilt play of bearing (with dia. 156 mm)	mm	+/-0.65

11 52 FAN M62 B 46**11 52 FAN M62 B 46 TECHNICAL DATA**

Switch-on temperature	°C	92 +/-4
Switch-off temperature	°C	60
Tilt play of bearing (with dia. 156 mm)	mm	+/-0.45