

11 00 Standard screw connection

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Screws and nuts	N57 D30 U/O 1	M5		5 Nm $\pm$ 0.5
2AZ Screws and nuts	N57 D30 U/O 1	M6		8 Nm $\pm$ 1
3AZ Screws and nuts	N57 D30 U/O 1	M7		13 Nm $\pm$ 2
4AZ Screws and nuts	N57 D30 U/O 1	M8		19 Nm $\pm$ 3
5AZ Screws and nuts	N57 D30 U/O 1	M10		38 Nm $\pm$ 5
6AZ Hose clamp, width across flats 5	N57 D30 U/O 1			1.0 to 1.5 Nm
7AZ Hose clamp, width across flats 6	N57 D30 U/O 1			2,5 up to 3.5 Nm

1100 Overview of tightening torques

Engine fixture to engine support arm		
Hexagon screws from special tool set	Tightening torque	105Nm
Engine support arm on the assembly stand		
M14 x 95	Tightening torque	130Nm
Standard screw connection 4 Nm		
Oval-head screw	Tightening torque	4Nm
Standard screw connection M10		
M10		38Nm
Standard screw connection M5		
M5		5Nm
Standard screw connection M6		
M6		8Nm
Standard screw connection M7		
M7		13Nm
Standard screw connection M8		
M8	Tightening torque	19Nm
Standard screw connection hose clamp 5		
Hose clamp L12 - L15	Tightening torque	1,25Nm

11 11 Engine block

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Main bearing bolts (steel bolts 12.9 PHR)	N57 D30 U/O 1	M10x85 12.9	Replace bolts 1. Jointing torque 2. Jointing torque 3. Angle of rotation 4. Angle of rotation	25 Nm 50 Nm 60 ° 60 °
2AZ Coolant drain plug on engine block.	N57 D30 U/O 1	M14x1.5	Replace sealing ring	25 Nm
3AZ Tensioning rail / guide rail	N57 D30 U/O 1	M10	Bearing journal	20 Nm
4AZ Chain tensioner, bottom	N57 D30 U/O 1	M6		10 Nm
5AZ Oil spray nozzle for chain drive	N57 D30 U/O 1	M6x22		8 Nm
6AZ Coolant connection to crankcase (feed)	N57 D30 U/O 1	M6x25		8 Nm
7AZ Coolant connection to crankcase (heating return)	N57 D30 U/O 1	M6x25		8 Nm
8AZ Support arms to special tool	N57 D30 U/O 1	M12x30		50 Nm
9AZ Special tool 00 2 320 to special tool 00 2 300	N57 D30 U/O 1	M14x90		90 Nm
10AZ Special tool 11 to engine block	N57 D30 U/O 1	M10x		35 Nm
11AZ Component carrier to engine block	N57 D30 U/O 1	M8x50		18 Nm
12AZ Coolant pipe to engine block	N57 D30 U/O 1	M6x25		8 Nm

11 00 Standard screw connection

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Screws and nuts	N57 D30 U/O 1	M5		5 Nm $\pm$ 0.5
2AZ Screws and nuts	N57 D30 U/O 1	M6		8 Nm $\pm$ 1
3AZ Screws and nuts	N57 D30 U/O 1	M7		13 Nm $\pm$ 2
4AZ Screws and nuts	N57 D30 U/O 1	M8		19 Nm $\pm$ 3
5AZ Screws and nuts	N57 D30 U/O 1	M10		38 Nm $\pm$ 5
6AZ Hose clamp, width across flats 5	N57 D30 U/O 1			1.0 to 1.5 Nm
7AZ Hose clamp, width across flats 6	N57 D30 U/O 1			2,5 up to 3.5 Nm

11 12 Cylinder head with lid

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Cylinder head bolts (steel bolt)	N57 D30 U/O 1	M12x1.5 x200	Replace screws Tighten bolts from middle in diagonal sequence in outward direction. 1. Jointing torque 2. Angle of rotation 3. Angle of rotation	50 Nm 120 ° 120 °
2AZ Chain tensioner, top	N57 D30 U/O 1	M22x1.5		70 Nm
3AZ Guide rail to cylinder head	N57 D30 U/O 1	M16x1.5	Bearing journal	20 Nm
4AZ Cylinder head cover to cylinder head	N57 D30 U/O1	M6	Replace all seals	9 Nm
5AZ Radiator supply connection fittings to cylinder head	N57 D30 U/O1	M6x25	Replace gasket	8 Nm

1112 Overview of Technical Data

Cross deviation from flatness	
	max. 0,05 mm

Longitudinal deviation from flatness	
	max. 0,10 mm

Valve underprotrusion	
	0,8 (0,7 - 0,9) mm

1112 Overview of tightening torques

Flange to assembly stand		
M14X30	Tightening torque	135Nm

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11 13 Oil sump

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Oil drain plug	N57	M12 x 1.5	Replace sealing ring	25 Nm
2AZ Oil sump to crankcase	N57	M8x 30 M8x110	Renew gasket	24 Nm

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11 13 Oil sump

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Oil drain plug	N57 D30 U/O 1	M12 x 16	Renew the sealing ring.	25 Nm
2AZ Oil sump to crankcase	N57 D30 U/O 1	M8x 30 M8x110	Renew gasket.	24 Nm
3AZ Spacer screw on oil sump (all-wheel drive vehicle)	N57 D30 U/O 1	M15x1		19 Nm
4AZ Acoustic cover, oil sump to starter motor	N57 D30 U/O 1	M6		3 Nm
5AZ Acoustic cover, oil sump to oil sump	N57 D30 U/O 1	M6		12 Nm

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11 14 Case Covers

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Screw plug to gear case cover	N57 D30 U/O/T 1	M34x1.5	Replace sealing cap	20 Nm
2AZ End cover to crankcase	N57 D30 U/O/T 1	M6x31	Replace screws Jointing torque Angle of rotation	8 Nm 90 Å°

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11 14 Case Covers

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Oil sump acoustic cover to starter motor	N57	6x16		3 Nm
2AZ Oil sump acoustic cover to oil sump	N57	M6		12 Nm

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11 24 Connecting Rods and Bearings

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Connecting rod bolts	N57 D30 U/O 1	M9x47	Replace, wash and oil screws Jointing torque Angle of rotation	20 Nm 70 Å°

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11 21 Crankshaft and Bearings

Tightening Torques

	Type	Thread	Tightening specification	Torque
1AZ Increment wheel on crankshaft	S54	M5 10.9	Replace screws Jointing torque Torque angle	5.0 Nm 45 Å°
Increment wheel on crankshaft		M5 10.9	Replace screws	13 Nm
Increment wheel on crankshaft		M5 8.8	Replace screws	5.5 Nm

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11 11 Engine block

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Main bearing bolts (steel bolts 12.9 PHR)	N57 D30 U/O 1	M10x85 12.9	Replace bolts 1. Jointing torque 2. Jointing torque 3. Angle of rotation 4. Angle of rotation	25 Nm 50 Nm 60 ° 60 °
2AZ Coolant drain plug on engine block.	N57 D30 U/O 1	M14x1.5	Replace sealing ring	25 Nm
3AZ Tensioning rail / guide rail	N57 D30 U/O 1	M10	Bearing journal	20 Nm
4AZ Chain tensioner, bottom	N57 D30 U/O 1	M6		10 Nm
5AZ Oil spray nozzle for chain drive	N57 D30 U/O 1	M6x22		8 Nm
6AZ Coolant connection to crankcase (feed)	N57 D30 U/O 1	M6x25		8 Nm
7AZ Coolant connection to crankcase (heating return)	N57 D30 U/O 1	M6x25		8 Nm
8AZ Support arms to special tool	N57 D30 U/O 1	M12x30		50 Nm
9AZ Special tool 00 2 320 to special tool 00 2 300	N57 D30 U/O 1	M14x90		90 Nm
10AZ Special tool 11 to engine block	N57 D30 U/O 1	M10x		35 Nm
11AZ Component carrier to engine block	N57 D30 U/O 1	M8x50		18 Nm
12AZ Coolant pipe to engine block	N57 D30 U/O 1	M6x25		8 Nm

11 22 Flywheel

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Flywheel to crankshaft (AT)	N57 D30 U/O 1	M12x1.5x25.5	Replace bolts	120 Nm
2AZ DM flywheel to crankshaft (MT)	N57 D30 U/O 1	M12x1.5x26 T60	Replace bolts	120 Nm

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11 00 Standard screw connection

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Screws and nuts	N57 D30 U/O 1	M5		5 Nm $\pm$ 0.5
2AZ Screws and nuts	N57 D30 U/O 1	M6		8 Nm $\pm$ 1
3AZ Screws and nuts	N57 D30 U/O 1	M7		13 Nm $\pm$ 2
4AZ Screws and nuts	N57 D30 U/O 1	M8		19 Nm $\pm$ 3
5AZ Screws and nuts	N57 D30 U/O 1	M10		38 Nm $\pm$ 5
6AZ Hose clamp, width across flats 5	N57 D30 U/O 1			1.0 to 1.5 Nm
7AZ Hose clamp, width across flats 6	N57 D30 U/O 1			2,5 up to 3.5 Nm

11 22 Flywheel

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Flywheel to crankshaft (AT)	N57 D30 U/O 1	M12x1.5x25.5	Replace bolts	120 Nm
2AZ DM flywheel to crankshaft (MT)	N57 D30 U/O 1	M12x1.5x26 T60	Replace bolts	120 Nm

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11 23 Vibration damper

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Torsion damper to crankshaft Important: Do not allow engine to run without ribbed V-belt (risk of damage).	N57 D30 U/O 1	M10x65	Replace bolts 1. Jointing torque 2. Angle of rotation	40 Nm 120 Å°

11 24 Connecting Rods and Bearings

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Connecting rod bolts	N57 D30 U/O 1	M9x47	Replace, wash and oil screws Jointing torque Angle of rotation	20 Nm 70 Å°

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11 11 Engine block

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Main bearing bolts (steel bolts 12.9 PHR)	N57 D30 U/O 1	M10x85 12.9	Replace bolts 1. Jointing torque 2. Jointing torque 3. Angle of rotation 4. Angle of rotation	25 Nm 50 Nm 60 ° 60 °
2AZ Coolant drain plug on engine block.	N57 D30 U/O 1	M14x1.5	Replace sealing ring	25 Nm
3AZ Tensioning rail / guide rail	N57 D30 U/O 1	M10	Bearing journal	20 Nm
4AZ Chain tensioner, bottom	N57 D30 U/O 1	M6		10 Nm
5AZ Oil spray nozzle for chain drive	N57 D30 U/O 1	M6x22		8 Nm
6AZ Coolant connection to crankcase (feed)	N57 D30 U/O 1	M6x25		8 Nm
7AZ Coolant connection to crankcase (heating return)	N57 D30 U/O 1	M6x25		8 Nm
8AZ Support arms to special tool	N57 D30 U/O 1	M12x30		50 Nm
9AZ Special tool 00 2 320 to special tool 00 2 300	N57 D30 U/O 1	M14x90		90 Nm
10AZ Special tool 11 to engine block	N57 D30 U/O 1	M10x		35 Nm
11AZ Component carrier to engine block	N57 D30 U/O 1	M8x50		18 Nm
12AZ Coolant pipe to engine block	N57 D30 U/O 1	M6x25		8 Nm

11 00 Standard screw connection

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Screws and nuts	N57 D30 U/O 1	M5		5 Nm $\pm$ 0.5
2AZ Screws and nuts	N57 D30 U/O 1	M6		8 Nm $\pm$ 1
3AZ Screws and nuts	N57 D30 U/O 1	M7		13 Nm $\pm$ 2
4AZ Screws and nuts	N57 D30 U/O 1	M8		19 Nm $\pm$ 3
5AZ Screws and nuts	N57 D30 U/O 1	M10		38 Nm $\pm$ 5
6AZ Hose clamp, width across flats 5	N57 D30 U/O 1			1.0 to 1.5 Nm
7AZ Hose clamp, width across flats 6	N57 D30 U/O 1			2,5 up to 3.5 Nm

11 28 V-ribbed belt with Tension and Deflection Element

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Belt tensioner to crankcase	N57	M10 x 35		38 Nm
2AZ Deflecting element to belt tensioner	N57	M10		38 Nm

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1130 Overview of tightening torques

SWZ2249117		
Screw M6	Tightening torque	10Nm

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11 31 Camshaft

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Sprocket wheel to fitted camshaft	N57 D30 U/O 1	M7x17.	With washer	17 Nm
2AZ Inlet and exhaust camshafts in camshaft carrier	N57 D30 U/O 1	M6x31		10 Nm
3AZ Camshaft carrier to cylinder head	N57 D30 U/O 1	M7x35	from centre toward outside in cross pattern	13 Nm

1131 Overview of tightening torques

Preload timing chain	
	Tightening torque0,6Nm

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11 41 Oil pump with strainer and motor

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Oil and vacuum pump to crankcase	N57 D30 U/O 1	M8x30	Replace bolts	19 Nm
2AZ Camshaft sprocket to oil/vacuum pump	N57 D30 U/O 1	M8x35	Important - left-hand thread Jointing torque Angle of rotation	5 Nm 50 Å°

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11- 42 Oil Filter and Lines

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Oil filter cover to oil filter housing	N57 D30 U/O 1		Replace O-ring	25 Nm
2AZ Oil supply for turbocharger to engine block	N57 D30 U/O 1		Replace banjo bolt, sealing rings	22 Nm
3AZ Oil return, turbocharger, to crankcase	N57 D30 U/O 1		Hose clamp L16--30	3 Nm
4AZ Heat exchanger to oil filter	N57 D30 U/O 1		Plastic screw	7 Nm
5AZ Oil filter module to engine block	N57 D30 U/O 1	M6x40		8 Nm

11- 42 Oil Filter and Lines

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Oil filter cover to oil filter housing	N57 Z		Replace O-ring	25 Nm
2AZ Exhaust turbocharger oil supply to crankcase	N57 Z	M10x30	Renew double hollow screw of seal rings	22 Nm
3AZ Exhaust turbocharger oil return to crankcase	N57 Z		Hose clamp L16--30	3 Nm
4AZ Heat exchanger to oil filter	N57 Z		Plastic screw	7 Nm
5AZ Oil filter module to engine block	N57 Z	M6x40		8 Nm
6AZ Oil supply to high and low pressure exhaust turbocharger	N57 Z		Hollow bolt	22 Nm
7AZ Oil return to high pressure exhaust turbocharger	N57 Z	M6x16	Fillister head bolt Replace seal	8 Nm
8AZ Oil return to low pressure exhaust turbocharger	N57 Z	M8x16	Hexagon screw Replace O-ring	19 Nm
9AZ Oil inlet line holder to low pressure exhaust turbocharger	N57 Z	M6x12	Hexagon screw	8 Nm

11- 51 Coolant pump with drive

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Coolant pump to crankcase	N57 D30 U/O 1	M6x30	Replace gasket	8 Nm

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11 71 Exhaust-gas recirculation

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Exhaust-gas recirculation pipe to exhaust manifold	N57 D30 T/O 1	M8x28		30 Nm
2AZ Bypass pipe to intake manifold and cooler for exhaust-gas recirculation	N57 D30 T/O 1	M6x35		10 Nm
3AZ Exhaust-gas recirculation cooler to cylinder head	N57 D30 T/O 1	M8x20	Screw	19 Nm
4AZ Exhaust-gas recirculation valve to exhaust-gas recirculation cooler	N57 D30 T/O 1	M6x20	Oval-head screw	8 Nm

11 65 Turbocharger and Control

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Turbocharger on exhaust manifold	N57 D30 U/O 1		Profile clamp	13 Nm
2AZ Support on turbocharger and engine block	N57 D30 U/O 1	M8x16	Screw	19 Nm

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11 52 Fan

Tightening Torques

	Type	Thread	Tightening specification	Torque
1AZ Fan clutch on water pump Coupling nut (left-hand threads)	All			40 Nm
	M54			45 Nm
2AZ Fan to fan clutch	All			10 Nm

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11 61 Intake manifold

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Intake manifold to cylinder head	alle	M8		22 Nm
	alle	M7		15 Nm
	alle	M6		10 Nm
2AZ Sound absorption cover to holder	M60/1 / M60/2 / M62	M6		8 Nm
3AZ Throttle valve to intake manifold	N73	M6x60/ M6x80		8 Nm

11 61 Intake plenum

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Intake manifold to cylinder head	N57 D30 U/O 1	6x35	Observe tightening sequence. 1. Join 1. Final torque	5 Nm 10 Nm

11 62 Exhaust manifold

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Exhaust manifold to cylinder head	N57 D30 U/O 1	M7 WAF 10	Replace flange nuts	13 Nm

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11 62 Exhaust manifold

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Exhaust manifold to cylinder head	N57 Z	M7 WAF 10	Replace flange nuts	13 Nm
2AZ Large heat shield to exhaust manifold	N57 Z	M6	Hexagon nut	8 Nm
2AZ Small heat shield to exhaust manifold	N57 Z	Mx12	Screw	8 Nm

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11 71 Exhaust-gas recirculation

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Exhaust-gas recirculation pipe to exhaust manifold	N57 D30 T/O 1	M8x28		30 Nm
2AZ Bypass pipe to intake manifold and cooler for exhaust-gas recirculation	N57 D30 T/O 1	M6x35		10 Nm
3AZ Exhaust-gas recirculation cooler to cylinder head	N57 D30 T/O 1	M8x20	Screw	19 Nm
4AZ Exhaust-gas recirculation valve to exhaust-gas recirculation cooler	N57 D30 T/O 1	M6x20	Oval-head screw	8 Nm

11 65 Turbocharger and Control

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Turbocharger on exhaust manifold	N57 D30 U/O 1		Profile clamp	13 Nm
2AZ Support on turbocharger and engine block	N57 D30 U/O 1	M8x16	Screw	19 Nm

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11 65 Turbocharger and Control

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ High pressure exhaust turbocharger (high-pressure stage) to exhaust manifold	N57Z	M8x20		25 Nm
2AZ Low pressure exhaust turbocharger (low -pressure stage) to exhaust manifold	N57Z	M10x25		40 Nm
3AZ Bypass to low pressure exhaust turbocharger	N57Z	M6x20		8 Nm
4AZ Heat shield to high pressure exhaust turbocharger	N57Z	M6		8 Nm
5AZ Clamp to oil return line	N57Z			3 Nm
6AZ Oil return line retaining clip to exhaust turbocharger	N57Z	M6		8 Nm
7AZ Low pressure (low-pressure stage) exhaust turbocharger holder to exhaust turbocharger and crankcase	N57Z	M8x16		19 Nm
8AZ Connecting pipe to high pressure exhaust turbocharger to low pressure exhaust turbocharger bypass	N57Z	6x16		8 Nm
9AZ Connecting pipe to high- and low pressure exhaust turbocharger	N57Z	6X16		8 Nm

11 71 Exhaust-gas recirculation

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Exhaust-gas recirculation pipe to exhaust manifold	N57 D30 T/O 1	M8x28		30 Nm
2AZ Bypass pipe to intake manifold and cooler for exhaust-gas recirculation	N57 D30 T/O 1	M6x35		10 Nm
3AZ Exhaust-gas recirculation cooler to cylinder head	N57 D30 T/O 1	M8x20	Screw	19 Nm
4AZ Exhaust-gas recirculation valve to exhaust-gas recirculation cooler	N57 D30 T/O 1	M6x20	Oval-head screw	8 Nm

11 78 Emissions-control, Lambda oxygen sensor

Tightening Torques

	Type	Thread	Tightening specification	Torque
1AZ Oxygen control sensor; oxygen monitor sensor	All	M18 x 1.5		50 Nm

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11 14 Case Covers

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Screw plug to gear case cover	N57 D30 U/O/T 1	M34x1.5	Replace sealing cap	20 Nm
2AZ End cover to crankcase	N57 D30 U/O/T 1	M6x31	Replace screws Jointing torque Angle of rotation	8 Nm 90 Å°

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11 14 Case Covers

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Oil sump acoustic cover to starter motor	N57	6x16		3 Nm
2AZ Oil sump acoustic cover to oil sump	N57	M6		12 Nm

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11 11 Engine block

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Main bearing bolts (steel bolts 12.9 PHR)	N57 D30 U/O 1	M10x85 12.9	Replace bolts 1. Jointing torque 2. Jointing torque 3. Angle of rotation 4. Angle of rotation	25 Nm 50 Nm 60 ° 60 °
2AZ Coolant drain plug on engine block.	N57 D30 U/O 1	M14x1.5	Replace sealing ring	25 Nm
3AZ Tensioning rail / guide rail	N57 D30 U/O 1	M10	Bearing journal	20 Nm
4AZ Chain tensioner, bottom	N57 D30 U/O 1	M6		10 Nm
5AZ Oil spray nozzle for chain drive	N57 D30 U/O 1	M6x22		8 Nm
6AZ Coolant connection to crankcase (feed)	N57 D30 U/O 1	M6x25		8 Nm
7AZ Coolant connection to crankcase (heating return)	N57 D30 U/O 1	M6x25		8 Nm
8AZ Support arms to special tool	N57 D30 U/O 1	M12x30		50 Nm
9AZ Special tool 00 2 320 to special tool 00 2 300	N57 D30 U/O 1	M14x90		90 Nm
10AZ Special tool 11 to engine block	N57 D30 U/O 1	M10x		35 Nm
11AZ Component carrier to engine block	N57 D30 U/O 1	M8x50		18 Nm
12AZ Coolant pipe to engine block	N57 D30 U/O 1	M6x25		8 Nm

11 00 Standard screw connection

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Screws and nuts	N57 D30 U/O 1	M5		5 Nm $\pm$ 0.5
2AZ Screws and nuts	N57 D30 U/O 1	M6		8 Nm $\pm$ 1
3AZ Screws and nuts	N57 D30 U/O 1	M7		13 Nm $\pm$ 2
4AZ Screws and nuts	N57 D30 U/O 1	M8		19 Nm $\pm$ 3
5AZ Screws and nuts	N57 D30 U/O 1	M10		38 Nm $\pm$ 5
6AZ Hose clamp, width across flats 5	N57 D30 U/O 1			1.0 to 1.5 Nm
7AZ Hose clamp, width across flats 6	N57 D30 U/O 1			2,5 up to 3.5 Nm

11 operating fluid overview

Testing equipment

Connecting hose Ä = 8 x 13 mm, length = 70 mm	
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Sealing compound

Loctite 5970 liquid sealing compound	50 ml, Cartridge	83190404517
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[Overview of consumables \(Electronic Parts Catalogue\)](#)

Expendable materials

Brake cleaner2.0	500 ml, Spray can	83192365214
	20 , Canister	83192365215

Expendable materials

lubricating grease Longtime PD -1	400 g, Cartridge	83192160340
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[Overview of consumables \(Electronic Parts Catalogue\)](#)

Expendable materials

Copper paste	100 g, Tube	81229400794
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[Overview of consumables \(Electronic Parts Catalogue\)](#)

Expendable materials

Lubricating grease SYNTHESO GLEP 1	100 g, Tube	83299407778
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[Overview of consumables \(Electronic Parts Catalogue\)](#)

Engine oil

Technically suitable engine oils for BMW Group engines	
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[3.0 Technically appropriate engine oils for BMW Group engines](#)

Engine oil

Technically suitable engine oils for BMW Group engines	
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[3.0 Specified engine oils for Toyota J29](#)

Sealing compound

Sealant Drei Bond 1209	30 ml, Tube	07 58 9 062 376
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