12 12 Spark Plugs

	Type	Thread	Tightening specification	Measure
1AZ Spark plugs (ungreased)	All	M12x1.25		23 ± 3 Nm
	All	M14x1.25		30 ± 3 Nm

	Type	Thread	Tightening specification	Measure
1AZ Knock sensor	N52, N52K, N51, N53	M8x31	Replace screws Jointing torque Torque angle	 10 Nm 90 °
2AZ Pulse generator for crankshaft	N52, N52K, N51, N53	M6x16	Replace screws Jointing torque Torque angle	 3 Nm 45 °
3AZ Pulse generator for inlet camshaft	N52, N52K, N51, N53	M6x16		9 Nm
4AZ Pulse generator for exhaust camshaft	N52, N52K, N51, N53	M6x16		9 Nm

12 31 Alternator with Drive and Mounting Parts

	Type	Thread	Tightening specification	Measure
1AZ Wires to alternator				
Terminal D+	M10 / M20			5 Nm
	All / others	M6		7 Nm
Terminal B+	S38 / B38			8 Nm
	All / others	M8		13 Nm
2AZ Pulley	All			45 Nm
3AZ Pulley (ribbed drive belt)	Alternator with cooling jacket			80 Nm
	all others			70 Nm
	N42, N46 Valeo			75 Nm
	N42, N46 Bosch			65 Nm
4AZ Rear holder	All			3.5 Nm
5AZ Fillister head screw for wire holder	All			3.5 Nm
6AZ Alternator on bearing block	M40/M42 / M43 / M44			43 Nm
7AZ Alternator to crankcase	N42, N46, N62	M8		21 Nm
8AZ Belt pulley (ribbed V-belt) with freewheel (Ina) fitted to Bosch and Valeo alternators	N42, N43			80 Nm

	Type	Thread	Tightening specification	Measure
1AZ Wires to alternator	N52, N52K, N51, N53	M8		19 Nm
2AZ Alternator to crankcase	N52, N52K, N51, N53	M8x82	Replace screws Jointing torque Torque angle	 10 Nm 180 °
3AZ Belt pulley (ribbed V-belt) with freewheel (Ina) fitted to Bosch and Valeo alternators	N52			80 Nm

	Type	thread	tightening specification	Value
1AZ Regulator switch	All	M4		2 Nm
	All	M5		4 Nm

12 41 Starter motor with mounting

	Type	Thread	Tightening specification	Measure
1AZ Starter motor mounting to crankcase	N52, N52K, N51, N53	M10x85	Replace screw Jointing torque Torque angle	 20 Nm 180 °
2AZ Starter motor mounting to crankcase	N52, N52K, N51, N53	M10x30	Replace screw Jointing torque Torque angle	 20 Nm 90 °
3AZ Battery positive lead to starter	N52, N52K, N51, N53	M8		13 Nm

12 42 Starter line

	Type	Thread	Tightening specification	Measure
1AZ Starter line to jump-start connection point	N52, N52K, N51, N53	M8		19 Nm
2AZ Starter line to jump-start connection point	E70 / N52K	M8		13 Nm

12 42 Wires to starter

	Type	Thread	Tightening specification	Measure
1AZ Battery positive terminal in/on distribution box	E32 / E34 / E31 / E36 / E46 / E87 / E90 / E85 / E86 / E81	M8		20 Nm
	E39 / M57	M8		11 Nm
	E38 / M67	M8		11 Nm
	E46 / M47TU	M8		11 Nm
	E60 / N62	M8		15 Nm
	E65 / N62 / N73	M8		15 Nm
2AZ Wiring harness on distributor	E36 / M41	M8		10 Nm

	Type	Thread	Tightening specification	Measure
1AZ Holder, wiring harness, to cylinder head	N52, N54	M6x12		8 Nm
2AZ Cable duct to cylinder head cover	N52, N54, N53	M6	Replace screws Jointing torque Torque angle	 3 Nm 45 °
3AZ Ground cable to crankcase (electr. coolant pump)	N52, N54, N52K, N51, N53	M8	Replace screws Jointing torque Torque angle	 8 Nm 45 °
4AZ Assembly: holder, monitor sensors	N54	M6x12		8 Nm

	Type	Thread	Tightening specification	Measure
1AZ Holder, wiring harness, to cylinder head	N52, N54	M6x12		8 Nm
2AZ Cable duct to cylinder head cover	N52, N54, N53	M6	Replace screws Jointing torque Torque angle	 3 Nm 45 °
3AZ Ground cable to crankcase (electr. coolant pump)	N52, N54, N52K, N51, N53	M8	Replace screws Jointing torque Torque angle	 8 Nm 45 °
4AZ Assembly: holder, monitor sensors	N54	M6x12		8 Nm

	Type	Thread	Tightening specification	Measure
1AZ Engine oil pressure switch/engine oil temperature sensor	N52, N52K, N51, N54, N53	M12x1.5	Jointing torque Torque angle	20 Nm 16 °
2AZ Oil condition sensor for engine oil	N52, N52K, N51, N54, N53	M6	Jointing torque 2 Nm	8.5 Nm

12 61 Oil pressure, oil temperature, oil level display

	Type	Thread	Tightening specification	Measure
1AZ Oil-pressure switch/oil-temperature switch	All	M12x1.5		27 Nm
2AZ Level switch for engine oil	N62 / N73 / M67TU		Jointing torque 2 Nm	8.5 Nm
3AZ Oil pressure switch	N46	M12 x 1.5		27 Nm
4AZ Level sensor to oil sump	N46	M6		9 Nm

	Type	Thread	Tightening specification	Measure
1AZ Temperature sensor to water flange (glow time/coolant temperature gauge)	M21			18 Nm
	M51			13 Nm
2AZ Temperature switch (5.5 °C / 17 °C) to fuel filter/cylinder head	M21			18 Nm
3AZ Coolant temperature sensor (2-pin plug-in connection)	S38 / S50			13 Nm
	S85	M12 /1.52		13.5 Nm
	All / others			20 Nm
4AZ Remote thermometer sensor (2-pin plug-in connection)	All			20 Nm
Remote thermometer sensor (4-pin plug-in connection)	M62			16 Nm
	S62	M12 x 1.5		14 Nm
5AZ Remote thermometer sensor on coolant flange	S50			18 Nm
6AZ Temperature sensor - air	S38 / S50			13 Nm
7AZ Temperature sensor - oil	S38 / S50			13 Nm

	Type	Thread	Tightening specification	Measure
1AZ Lever to pedal value sender	E32 / E34 / E31 / E36			9 Nm
2AZ Pedal value sender to pedal console	E32 / E34 / E31			5 Nm

	Type	Thread	Tightening specification	Measure
1AZ Assembly of upper and lower sections	E32 / E34 / E36			5 Nm
2AZ Center section to body	E32 / E34			3 Nm
3AZ Control unit holder in E box	E36			5 Nm
4AZ Control unit box cover	E38 / E39 / E52			4 Nm
	E46			6 Nm
	E53 / E36/7 / E54			3 Nm
5AZ Electronics box to firewall	E65	Plastic screw		6 Nm