64 11 Housing, heater/air conditioner

	Type	Thread	Tightening specification	Measure
1AZ Bulkhead adapter	E85, E86			1.0 ± 0.3 Nm
2AZ Fan for heater/air conditioner	E85, E86			1.5 ± 0.3 Nm
3AZ Controller for heater - A/C system fan	E85, E86			1.0 ± 0.3 Nm
4AZ Air conditioner to bulkhead	E60, E61, E63, E64, E83, E81, E82, E87, E88, E90, E91, E92, E93			6 Nm
	E70, E71			6.5 Nm
5AZ Cooler box to luggage compartment partition wall	E65, E66, E67			4.5 Nm
6AZ Air conditioner to support tube	E81, E82, E87, E88, E90, E91, E92, E93			9 Nm
7AZ Mounting, positive/negative lead, to electric auxiliary heater	E83			8.8 Nm

	Type	thread	tightening specification	Dimension
1AZ Additional heater to body floor	All			4.5 Nm
2AZ Glow plug	E24			17.5 Nm
	E31 / E32 / E34			4 Nm
3AZ Temperature sensor	E31 / E32 / E34			0.5 Nm
4AZ Oil control plug and oil filler plug	All			16 Nm
5AZ Mounting screws	All	M5		6 Nm
	All	M6		10 Nm
	All	M8		24 Nm
	All	M10		48 Nm
6AZ Screws for filter cover	All			0.9 Nm
7AZ Central cover on heater	All			1.5 Nm
8AZ Combustion air fan unit on heater	All			1.5 Nm
9AZ Recirculating pump on heater	All			1.5 Nm
10AZ Control unit/transfers heat to heater Install screws with Loctite 243	All			4.5 Nm

	Type	thread	tightening specification	Measure
1AZ Battery positive and negative leads to auxiliary heater	E46	M6		8.8 Nm

	Type	Thread	Tightening specification	Measure
1AZ Muffler to independent heater bracket	E90, E91, E92, E93	M6		8.0 Nm
2AZ Mounting, independent heater, to engine carrier	E90, E91, E92, E93	M6		7.6 Nm
3AZ Mounting, independent heater, to locator, cooling module	E90, E91, E92, E93			19.5 Nm
4AZ Rubber mount to independent heater	E90, E91, E92, E93			8.0 Nm

	Type	Thread	Tightening specification	Measure
1AZ High/medium pressure pressostat Bolt cement, Part No. 81 22 9 407 144.	E32 / E34			25 Nm
2AZ Low pressure pressostat. Bolt cement, Part No. 81 22 9 407 144	E32 / E34			19 Nm
3AZ Three-way safety switch	E32 / E34			25 Nm

64 11 Housing, heater/air conditioner

	Type	Thread	Tightening specification	Measure
1AZ Bulkhead adapter	E85, E86			1.0 ± 0.3 Nm
2AZ Fan for heater/air conditioner	E85, E86			1.5 ± 0.3 Nm
3AZ Controller for heater - A/C system fan	E85, E86			1.0 ± 0.3 Nm
4AZ Air conditioner to bulkhead	E60, E61, E63, E64, E83, E81, E82, E87, E88, E90, E91, E92, E93			6 Nm
	E70, E71			6.5 Nm
5AZ Cooler box to luggage compartment partition wall	E65, E66, E67			4.5 Nm
6AZ Air conditioner to support tube	E81, E82, E87, E88, E90, E91, E92, E93			9 Nm
7AZ Mounting, positive/negative lead, to electric auxiliary heater	E83			8.8 Nm

	Type	Thread	Tightening specification	Measure
1AZ Refrigerant lines to A/C compressor	E36/7 M54, E36/7 S54, E38, E39, E46, E52, E53, E60, E61, E63, E64, E65, E66, E67, E83, E85, E87, E90, E91, E92, E93	M8		20 Nm
2AZ Filler plug, A/C compressor	E36, E38, E39, E46, E52, E53, E60, E61, E63, E64, E65, E66, E67, E83, E85, E87, E90, E91, E92, E93			30 ±1 Nm
3AZ A/C compressor to carrier	M67TU, M54, N62, S85, N54	M8		21 Nm
	N45, N46, M47T2, M57TU, M57T2	M8		19 Nm
	N52K	M8 x 87	Replace aluminium screw/bolt Jointing torque Torque angle	 10 Nm 180 ±15 °
	N52K	M8 x 52	Replace aluminium screw/bolt Jointing torque Torque angle	 10 Nm 90 ±15 °
	N52	M8 x 87	Replace aluminium screw/bolt Jointing torque Torque angle	 10 Nm 180 ±15 °

	N53	M8 x 52	Replace aluminium screw/bolt Jointing torque Torque angle	 10 Nm 90 ±15 °
	N53	M8 x 87	Replace aluminium screw/bolt Jointing torque Torque angle	 10 Nm 180 ±15 °
	E85 S54, E86 S54			20 Nm
4AZ Belt pulley / hub to A/C compressor	M47T2			35 ±5 Nm
5AZ Bracket, A/C compressor to lower crankcase	N54			19 Nm
6AZ Cable holder to A/C compressor	M47T2			3 Nm

	Type	Thread	Tightening specification	Measure
1AZ Refrigerant lines to A/C compressor	E70, E71	M8		21 Nm
	E60 / N47, E61 / N47, E81, E82, E87, E88, E90 / N47, E91 / N47, E92 / N47	M8		18.5 Nm
	E92 / S65	M8		21 Nm
2AZ Filler plug, A/C compressor	E70, E71			30 ±1 Nm
	E81 / N43, E82, E88			25 Nm
3AZ A/C compressor to carrier	E70	M8 x 15		20 Nm
	N52, N52K	M8 x 87	Replace aluminium screw/bolt Jointing torque Torque angle	 10 Nm 180 ±15 °
	N52, N52K	M8 x 52	Replace aluminium screw/bolt Jointing torque Torque angle	 10 Nm 90 ±15 °
	E81 / N43, E88			23 Nm
	E82 / N47, E90 / N47, E91 / N47, E92 / N47			19 Nm
	E71 / N54	M8 x 90		19 Nm
4AZ Bracket, pressure line, to compressor	E82 / N54			7.6 Nm

64 53 Refrigerant Lines and Expansion Valve

	Type	Thread	Tightening specification	Measure
1AZ Refrigerant lines to dryer bottle	E83, E85, E86	M8		20 Nm
2AZ Refrigerant lines to expansion valve/double pipe	E46, E83, E85, E86, E81, E82, E87, E88, E90, E91, E92, E93	M8		20 Nm
	E53	M8		18 Nm
3AZ Adapter plate to expansion valve	E85, E86	M6		10 ±2 Nm
4AZ Expansion valve to heater - A/C	E85, E86	M5		5.5 Nm
5AZ Refrigerant line to bulkhead	E85, E86	M6		8.6 Nm
6AZ Refrigerant lines to condenser	E60, E61, E63, E64, E81, E82, E83, E85, E86, E87, E88, E90, E91, E92, E93	M8		20 Nm
7AZ Refrigerant lines to expansion valve	E60, E61, E63, E64	M6		8.8 Nm
8AZ Refrigerant line to assembly compartment partition reinforcement	E60, E61, E63, E64	M6		7.6 Nm
9AZ Expansion valve to heater - A/C	E46, E60, E61, E63, E64, E83	M5		5.5 Nm
10AZ Refrigerant line to body	E46, E83	M6		5.5 Nm
11AZ Double pipe to expansion valve	E46, E83	M6		8.0 Nm
12AZ Screw plug to condenser	E53, E81, E82, E87, E88, E90, E91, E92			3.0 ±0.5 Nm
13AZ Expansion valve to retainer	E81, E82, E87, E88, E90, E91, E92, E93	M6		5.5 Nm

14AZ Pressure sensor in refrigerant line

	E53, E60, E61, E63, E64, E65, E66, E81, E82, E83, E85, E86, E87, E88, E90, E91, E92, E93			10 Nm

64 11 Housing, heater/air conditioner

	Type	Thread	Tightening specification	Measure
1AZ Bulkhead adapter	E85, E86			1.0 ± 0.3 Nm
2AZ Fan for heater/air conditioner	E85, E86			1.5 ± 0.3 Nm
3AZ Controller for heater - A/C system fan	E85, E86			1.0 ± 0.3 Nm
4AZ Air conditioner to bulkhead	E60, E61, E63, E64, E83, E81, E82, E87, E88, E90, E91, E92, E93			6 Nm
	E70, E71			6.5 Nm
5AZ Cooler box to luggage compartment partition wall	E65, E66, E67			4.5 Nm
6AZ Air conditioner to support tube	E81, E82, E87, E88, E90, E91, E92, E93			9 Nm
7AZ Mounting, positive/negative lead, to electric auxiliary heater	E83			8.8 Nm

64 53 Refrigerant Lines and Expansion Valve

	Type	Thread	Tightening specification	Measure
1AZ Refrigerant lines to dryer bottle	E83, E85, E86	M8		20 Nm
2AZ Refrigerant lines to expansion valve/double pipe	E46, E83, E85, E86, E81, E82, E87, E88, E90, E91, E92, E93	M8		20 Nm
	E53	M8		18 Nm
3AZ Adapter plate to expansion valve	E85, E86	M6		10 ±2 Nm
4AZ Expansion valve to heater - A/C	E85, E86	M5		5.5 Nm
5AZ Refrigerant line to bulkhead	E85, E86	M6		8.6 Nm
6AZ Refrigerant lines to condenser	E60, E61, E63, E64, E81, E82, E83, E85, E86, E87, E88, E90, E91, E92, E93	M8		20 Nm
7AZ Refrigerant lines to expansion valve	E60, E61, E63, E64	M6		8.8 Nm
8AZ Refrigerant line to assembly compartment partition reinforcement	E60, E61, E63, E64	M6		7.6 Nm
9AZ Expansion valve to heater - A/C	E46, E60, E61, E63, E64, E83	M5		5.5 Nm
10AZ Refrigerant line to body	E46, E83	M6		5.5 Nm
11AZ Double pipe to expansion valve	E46, E83	M6		8.0 Nm
12AZ Screw plug to condenser	E53, E81, E82, E87, E88, E90, E91, E92			3.0 ±0.5 Nm
13AZ Expansion valve to retainer	E81, E82, E87, E88, E90, E91, E92, E93	M6		5.5 Nm

14AZ Pressure sensor in refrigerant line

	E53, E60, E61, E63, E64, E65, E66, E81, E82, E83, E85, E86, E87, E88, E90, E91, E92, E93			10 Nm