

34 00 Testing and bleeding brakes

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Vent valve	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	WAF 11		10 Nm

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34 11 Front Brake

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Brake disc to wheel hub	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36		Replace screws	16 Nm
2AZ Brake anchor plate to swivel bearing	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12x1.5	Replace screws	110 Nm
3AZ Guard plate to swivel bearing	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M6	Replace screws	12 Nm
4AZ Guide screw (socket head cap screw)	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			28 Nm

3411 Overview of tightening torques

Brake disc to front wheel hub	
M8 Renew screw.	16Nm

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34 21 Rear brakes

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Brake disc to wheel hub	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36		Replace screws	16 Nm
2AZ Caliper carrier to wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12x1.5	Replace screws! Jointing torque Angle of rotation	50 Nm 60°
3AZ Protective plate to wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M6	Replace screws	12 Nm
	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8		15 Nm
4AZ Guide screw (socket head cap screw)	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			28 Nm

3421 Overview of tightening torques

Brake disc to rear wheel hub	
M8 Renew screw.	16Nm

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34 31 Master Brake Cylinder

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Brake master cylinder to brake booster (vacuum)	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8	Replace self-locking nuts.	21 Nm
2AZ Retaining screw for expansion tank	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			4 Nm

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34 32 Brake Lines

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Brake line screw connection/ union screws	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12x1/M10x1		17 Nm
2AZ Brake hose to brake caliper, front	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			24 Nm
3AZ Brake hose to brake caliper, rear	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			24 Nm

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34 33 Brake servo

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Brake booster to pedal assembly console	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8	Replace nuts	22 Nm
2AZ Electric vacuum pump holder to oil sump	F30h	M10		38 Nm
3AZ Electric vacuum pump to bracket	F30h	M6		9 Nm

34 41 Parking brake

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Handbrake lever to body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			19 Nm
2AZ Spring clip to wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M6		8 Nm
3AZ Support Duo-Servo to wheel carrier, rear	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8		15 Nm

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35 11 Pedal Assembly Console

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Bearing pedestal to brake assembly and body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8	Replace self-locking nuts.	21 Nm
	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M6		8 Nm
2AZ Pedal sensor to the bearing support	F30 / PHEV			2 Nm

34 51 Slip control system (DSC)

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Control unit to hydraulic control unit	F20 / F21 / F22 / F30 / F31 / F32 / F33 / F34 / F35		Renew screws.	2 Nm
1AZ Control unit to hydraulic control unit DSC MK 100	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36		Renew screws.	5,5 Nm
2AZ ICM control unit on holder	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			8 Nm
3AZ Pulse generator to swivel bearing/wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			8 Nm
4AZ Holder on hydraulic unit	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			8 Nm
5AZ Bracket, hydraulic unit to body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			8 Nm

34 51 Slip control system (DSC)

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Control unit to hydraulic control unit	F20 / F21 / F22 / F30 / F31 / F32 / F33 / F34 / F35		Renew screws.	2 Nm
1AZ Control unit to hydraulic control unit DSC MK 100	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36		Renew screws.	5,5 Nm
2AZ ICM control unit on holder	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			8 Nm
3AZ Pulse generator to swivel bearing/wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			8 Nm
4AZ Holder on hydraulic unit	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			8 Nm
5AZ Bracket, hydraulic unit to body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			8 Nm

34 operating fluid overview

Expendable materials

Lubricating grease Staburags NBU 12K	100 g, Tube	83 23 9 407 810
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Expendable materials

Safety cleaner 2.0	500 ml, Spray can	83192362037
	20 l, Canister	83192362038
	60 l, Canister	83192362040

Expendable materials

Brake block paste * TU = Trade Unit. TU numbers cannot be ordered! For invoicing purposes only.	3 g, Bag	83192158851
	100 g, Tube	83192158852
	5 g, TU*	83230140233

Brake fluid and hydraulic fluid

Brake fluid DOT4, low viscosity OFF	500 ml, Can	83130042718
	30 , Barrel	83130430440

Brake fluid and hydraulic fluid

Brake fluid DOT4, low viscosity CHN	1 , Can	83132406162
	1 , Can	83132467487

Brake fluid and hydraulic fluid

Brake fluid DOT4 front left, low viscosity * TU = Trade Unit. TU numbers cannot be ordered! For invoicing purposes only. EU	250 ml, Can	83132405975
	500 ml, Can	83132405976
	1 l, Can	83132405977
	5 l, Can	83132405978
	30 l, Barrel	83130443028
	60 l, Barrel	83130443029
	1000 ml, TU*	83132184842
	1000 ml, TU*	83132184843

	1000 ml, TU*	83130443030
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35 11 Pedal Assembly Console

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Bearing pedestal to brake assembly and body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8	Replace self-locking nuts.	21 Nm
	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M6		8 Nm
2AZ Pedal sensor to the bearing support	F30 / PHEV			2 Nm

34 41 Parking brake

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Handbrake lever to body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			19 Nm
2AZ Spring clip to wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M6		8 Nm
3AZ Support Duo-Servo to wheel carrier, rear	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8		15 Nm

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35 11 Pedal Assembly Console

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Bearing pedestal to brake assembly and body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8	Replace self-locking nuts.	21 Nm
	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M6		8 Nm
2AZ Pedal sensor to the bearing support	F30 / PHEV			2 Nm

35 40 Pedals

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Accelerator pedal module to body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M6		8 Nm

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36 10 Wheels

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Wheel bolt	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M14x1.25	- Screw in the wheel bolts and evenly tighten by hand in a crosswise sequence in order to centre the wheel rim. - Tighten the wheel bolts to the specified tightening torque in a crosswise sequence using a calibrated torque wrench. - Check all wheel bolts in the same sequence and retighten to the prescribed tightening torque if necessary.	140 Nm

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3610 Overview of tightening torques

Wheel bolt

M14

After installation, torque of all wheel bolts must be checked again. Wheel bolts must not be oiled!

140Nm

Wheel bolts

M14/AF 17

Screw in wheel bolts and evenly tighten crosswise by hand in order to centre the wheel rim.

Tighten wheel bolts to the prescribed tightening torque with a calibrated torque wrench in a crosswise sequence.

Check all the wheel bolts in the same order or retighten to the prescribed tightening torque again.

Tightening torque

140Nm

Check

140Nm

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36 11 Wheel Rims

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Valve on disc wheel (Tyre Pressure Monitor)	F22 / F30 / F31 / F32 / F33 / F34 / up to 03/2014			3,5 Nm
2AZ Wheel electronics (Tyre Pressure Monitor) on valve	F22 / F30 / F31 / F32 / F33 / F34 / up to 03/2014			3,5 Nm
3AZ Valve on disc wheel (RDCi)	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F36 / from 03/2014	WAF 11		8 Nm

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36 operating fluid overview

Expendable materials

Tyre-fitting paste	3500 g, Bucket	81220433046
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Expendable materials

Lubricating spray	400 ml, Spray can	83192156562
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