

31 10 Front Axle Suspension

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Front axle support to body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12x45 front		120 Nm
	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12x165 centre		120 Nm
	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M14x60, rear		120 Nm
2AZ Underride protection to front axle support	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M5	Replace expansion nuts.	3 Nm
3AZ Heat shield to front axle carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M6		8 Nm
4AZ Reinforcement plate to front axle carrier	F20ALL / F21ALL / F22ALL / F23ALL / F30ALL / F31ALL / F32ALL / F33ALL / F34ALL / F35ALL / F36ALL	M10	Renew screws.	
			Jointing torque Angle of rotation	56 Nm 60 °
5AZ Vibration absorber to front axle support	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36			28 Nm
6AZ Stiffening plate to front axle support	F23 (2WD) / F33 (2WD)	M10x22	Renew screws.	
			Jointing torque Angle of rotation	56 Nm 45 °
7AZ Stiffening plate on adapter plate	F23 (2WD) / F33 (2WD)	M10x16	Renew screws.	
			Jointing torque Angle of rotation	56 Nm 90 °
8AZ Torsion strut to front axle support	F23 (2WD) / F33 (2WD)	M10x22	Renew screws.	
			Jointing torque Angle of rotation	56 Nm 45 °
9AZ Torsion strut to side member	F23 (2WD) / F33 (2WD)	M12x35	Renew screw.	
			Jointing torque	100 Nm



			Angle of rotation	90 °
10AZ Set protection to body	F30 PHEV	M12		56 Nm

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3110 Overview of tightening torques

Front axle support to body		
M12x45		120Nm
M12x165		120Nm
M14x60		120Nm
Reinforcement plate to front axle carrier		
M10 Renew screws.	Jointing torque	56Nm
	Angle of rotation	60°

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31 12 Axle guide and axle strut

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Tension strut to front axle support	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew screw. Tighten down in normal position. Jointing torque Angle of rotation	100 Nm 90 °
2AZ Tension strut to swivel bearing	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M14	Renew nut.	175 Nm
3AZ Wishbone to front axle support	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew screw and nut. Tighten down in normal position. Jointing torque Angle of rotation	100 Nm 90 °
4AZ Wishbone to swivel bearing	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M14	Renew nut.	175 Nm



3112 Overview of tightening torques

Wishbone to front axle support

M12

Renew screw and nut.

Tighten nut in normal position.

Jointing torque

100Nm

Angle of rotation

90°

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31 21 Wheel Bearings and Steering Knuckle

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Wheel bearing to swivel bearing	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Replace screws. Jointing torque Angle of rotation	80 Nm 90 Å°

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31 31 Spring Struts

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Nut and locknut/self-locking nut	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8	Renew screws. Jointing torque Angle of rotation	30 Nm 90 °
		M10	Renew screws. Jointing torque Angle of rotation	56 Nm 90 °
2AZ Spring strut shock absorber to support bearing	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew nut.	64 Nm
3AZ Spring strut shock absorber to swivel bearing	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M10	Renew screw and nut. Jointing torque Angle of rotation	44 Nm 90 °



31 35 Anti-roll bar

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Anti-roll bar bracket to front axle support	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8	Replace nuts.	28 Nm
2AZ Anti-roll bar link to anti-roll bar/spring strut	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M10	Replace nut.	56 Nm

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3135 Overview of tightening torques

Anti-roll bar link to anti-roll bar	
M10 Renew nut.	56Nm

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3150 Overview of Technical Data

Front axle transmission oil	
Front axle differential capacity	600 ml

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3160 Overview of tightening torques

Output shaft to wheel bearing

M16

Replace collar bolt and compression spring.

Jointing torque

210Nm

Angle of rotation

90°

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31 operating fluid overview

Transmission oil

Technically suitable front axle transmission oils

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