

3300 Overview of tightening torques

Heat shield to vehicle underbody		
Screws and nuts	Tightening torque	3Nm

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33 11 Transmission housing with lid

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Case Covers	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M10	168LW 188LW 215LW	90 Nm
2AZ Screw plug with O-ring	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M22	Renew screw plug with O-ring.	60 Nm

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33 17 Rear axle final drive suspension

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Rear differential to rear axle carrier, front	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Follow repair instruction.	100 Nm
2AZ Rear differential to rear axle carrier, rear	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M14	Observe instructions in Repair Manual. Renew nut.	165 Nm
3AZ Vibration absorber to screw connection of rear axle differential, rear	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8		28 Nm
4AZ Vibration absorber to rear axle support, rear	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M8		19 Nm
5AZ Vibration absorber to rear axle differential	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew screw.	100 Nm
6AZ Vibration absorber to screw connection of rear axle differential, rear	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M10x32	Renew screw. Jointing torque Angle of rotation	56 Nm 90 °
7AZ Vibration absorber to screw connection of rear axle differential, rear	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	Torx E14 M 10x32	Renew screw. Jointing torque Angle of rotation	56 Nm 90 °



33 32 Axle guide and axle strut

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Trailing arm to rear axle support	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew nut. Tighten in normal position.	100 Nm
2AZ Trailing arm to wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew nut. Tighten in normal position.	100 Nm
3AZ Control arm to rear axle support	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew nut. Tighten in normal position.	100 Nm
4AZ Control arm to wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew screw. Tighten in normal position. Jointing torque Angle of rotation	100 Nm 90 ㄲ
5AZ Wishbone to rear axle support	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew nut. Tighten in normal position.	100 Nm
6AZ Wishbone to wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew screw. Tighten in normal position. Jointing torque Angle of rotation	100 Nm 90 ㄲ
7AZ Toe arm to rear axle support	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F35	M12	Renew nut. Tighten in normal position.	100 Nm
	F34 / F36	M12	Renew nut. Tighten in normal position.	108 Nm
8AZ Toe arm to wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Renew screw. Tighten in normal position. Jointing torque Angle of rotation	100 Nm 90 ㄲ
9AZ Camber control arm to rear axle support	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F35	M14	Renew nut and screw. Tighten in normal position.	165 Nm
	F34 / F36	M14	Renew nut. Tighten in normal position.	175 Nm
10AZ Camber control arm to wheel carrier	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M14	Renew nut.	165 Nm



11AZ Aerodynamic cover on camber arm	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M6	Replace nuts.	4 Nm
12AZ Tension strut to body	F20 / F21 / F22 / F23 / F31 / F32 / F33 / F34 / F36	M8		24 Nm
13AZ Tension strut to compression strut	F20 / F21 / F22 / F23 / F31 / F32 / F33 / F34 / F36	M12	Renew screws. Jointing torque Angle of rotation	100 Nm 90 ㄱ

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33 33 Rear Axle Suspension

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Rear axle support with rubber mounts to body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M12	Follow repair instruction.	108 Nm
2AZ Compression strut, front, to body	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M10	Replace screws. Jointing torque Angle of rotation	47 Nm 45 Å°
3AZ Rear compression strut to body	F34 / F36	M10		56 Nm

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33 41 Wheel Bearings

Tightening Torques

	Type	Thread	Tightening specifications	Torque
1AZ Drive flange hub to output shaft	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M24	Replace collar nut. Jointing torque Angle of rotation	145 Nm 45 Å°

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33 52 Shock Absorbers

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 screw.	28 Nm
2AZ Support bearing on shock absorber	F20 / F21 / F22 / F23 / F30 / F31 / F32 / F33 / F34 / F35 / F36	M10	Renew nut.	38 Nm
3AZ Shock absorber to camber arm	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 Å°



33 55 Anti-roll bar

Tightening Torques

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

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33 operating fluid overview

Transmission oil

Hypoid Axle Oil G4	500 ml, Bottle	83222447362
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Transmission oil

Hypoid Axle Oil G3	500 ml, Bottle	83222413512
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Transmission oil

Rear axle differential oil SAF-XJ Booster	3x 1 l, Bottle	83222282583
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Transmission oil

Rear axle differential oil SAF Carbon Mod	500 ml, Bottle	83120445832
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Transmission oil

Hypoid Axle Oil G2	500 ml, Bottle	83222413511
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Transmission oil

Technically suitable rear axle differential oils		
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[Main group 33](#)

Transmission oil

BMW Synthetics OSP	1 l, Bottle	83222365987
	60 l, Barrel	83229407768

Transmission oil

BMW HOC oil	850 ml, Bottle	83222413513
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Transmission oil

Rear axle differential oil MSP/A * TU = Trade Unit. TU numbers cannot be ordered! For invoicing purposes only.	1 l, Bottle	83222365988
	1000 ml, TU*	83229405462

