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## WM 4201TW Tightening torques for rear axle

### Technical values

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Stud securing carrier side section to body (front), M12 x 1.5 x 133	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Screw-in torque	46 Nm (34 ftlb.)		
Carrier side section to body (front), M12 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	110 Nm (81.5 ftlb.)		
Carrier side section to body (middle and rear), M12 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	110 Nm (81.5 ftlb.)		
Cross member to carrier side section, M12 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	110 Nm (81.5 ftlb.)		
Transverse strut to carrier side section (front), M10 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	65 Nm (48 ftlb.)		
Brake hose bracket to carrier side section, M6	Please note: Do not grease threaded connections	Tightening torque	10 Nm (7.5 ftlb.)		

	in Dacromet finish - aluminium colour.				
Diagonal brace to body, M10 x 1.5 (changed to M12 x 1.5 in current model year 2008)	Please note: This was changed to M12 x 1.5 in the current model year 2008! Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	M10=65 Nm (48 ftlb.)		
Diagonal brace to body, M12 x 1.5 (M12 x 1.5 used instead of M10 x 1.5 in current model year 2008)	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	M12=110 Nm (81.5 ftlb.)		
Screw connection securing diagonal brace to cross member, M12 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	110 Nm (81.5 ftlb.)		
Screw connection securing diagonal brace to carrier side section, (collar nut) M10 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	23 Nm (17 ftlb.)		
Screw connection for securing control arm 2 (toe control arm) to wheel carrier M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	56 ftlb.		
Screw connection for securing	Please note: Do not grease	Tightening torque	74 ftlb.		

control arm 2 (toe control arm) to cross member (toe eccentric) M12 x 1.5	screwed connections in Dacromet finish - aluminium colour.				
Screw connection for securing control arm (lower control arm) to wheel carrier M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque		56 ftlb.	
Screw connection for securing control arm (lower control arm) to carrier side section (camber eccentric) M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque		74 ftlb.	
Screw connection for securing diagonal arm to control arm M14 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque		118 ftlb.	
Screw connection for securing diagonal arm to carrier side section M14 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque		133 ftlb.	
Screw connection for securing control arm 3 and control arm 4 (upper control arm) to carrier side section M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque		81.5 ftlb.	
Screw connection for securing control arm 3	Please note: Do not grease screwed	Tightening torque		81.5 ftlb.	

and control arm 4 (upper control arm) to wheel carrier M12 x 1.5	connections in Dacromet finish - aluminium colour.				
Screw connection for securing wheel bearing to wheel carrier (lid) M8	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque		27 ftlb.	
Screw connection for securing speed sensor to wheel carrier M6	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque		7.5 ftlb.	
Screw connection for securing brake cover plate to wheel carrier M6	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque		7.5 ftlb.	
Screw connection for securing brake disc to wheel hub M6	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque		7.5 ftlb.	
Screw connection for securing brake calliper to wheel carrier M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour. Replace screws on front and rear axle whenever they have been removed.	Tightening torque		63 ftlb.	

Screw connection for securing combination wire holder to wheel carrier M6	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	7.5 ftlb.		
Spring strut to body, M10 (911 Carrera and 911 Turbo)	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	46 Nm (34 ftlb.)		
Spring strut to body, M10 (911 GT3)	911 GT3 with roll-over bar: Carry out a test drive after performing assembly work on the roll-over bar/spring support on the body and then retighten the M10 fastening nuts (three per side) to the same torque! Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	46 Nm (34 ftlb.)		
Spring strut to wheel carrier, M12 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	110 Nm (81.5 ftlb.)		
Shock absorber to supporting mount	Please note: Do not grease threaded	Tightening torque	32 Nm (24 ftlb.)		

(piston rod) – with and without PASM (M12 x 1 lock nut). Also applicable for 911 GT3!	connections in Dacromet finish - aluminium colour.				
Height adjustment on spring strut (lock nut), M52 x 1.5 (911 GT3)		Tightening torque	50 Nm (37 ftlb.)		
Screw connection for securing stabiliser to side section M8	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	17 ftlb.		
Threaded connection for securing stabilizer mount to stabilizer (collar nut M10)	Please note: Observe three-stage tightening procedure! Do not grease threaded connection in Dacromet finish - aluminium colour.	Three-stage tightening procedure (First stage: initial tightening to 37 ftlb. Second stage: loosen by 90 degrees. Third stage: final tightening to 48 ftlb.)	48 ftlb.		
Threaded connection for securing stabiliser mount to wheel carrier M10	Please note: Observe three-stage tightening procedure! Do not grease threaded connections in Dacromet finish - aluminium colour.	Three-stage tightening procedure (First stage: initial tightening to 37 ftlb. Second stage: loosen by 90 degrees. Third stage: final tightening to 48 ftlb.)	48 ftlb.		
Engine mounting to body, M8		Tightening torque	23 Nm (17 ftlb.)		
Adapter to		Tightening	23 Nm (17 ftlb.)		

body, M8		torque			
Engine mounting to engine carrier, M12 x 1.5	Sleeve nut	Tightening torque	85 Nm (63 ftlb.)		
Engine carrier to engine, M10	Hexagon-head bolt/hexagon nut	Tightening torque	65 Nm (48 ftlb.)		
Transmission support to body, M10 x 1.5		Tightening torque	65 Nm (48 ftlb.)		
Stud for transmission support to body, M10		Tightening torque	20 Nm (15 ftlb.)		
Longitudinal support to body, M10		Tightening torque	65 Nm (48 ftlb.)		
Mount to longitudinal support, M10		Tightening torque	65 Nm (48 ftlb.)		
Transmission support and longitudinal support to transmission mount, M12 x 1.5		Tightening torque	120 Nm (89 ftlb.)		
Transmission mount to transmission, M12 x 1.5		Tightening torque	120 Nm (89 ftlb.)		
Intermediate carrier to body, M10	PDK transmission	Tightening torque	65 Nm (48 ftlb.)		
Drive shaft to manual and Tiptronic transmission on 911 Carrera (M10 x 1.5 thread)	911 Carrera Tiptronic and manual transmission (M10 x 1.5 thread)	Tightening torque	81 Nm (60 ftlb.)		
Drive shaft to PDK transmission on 911 Carrera with M10 x 1.5 thread/2009 model and some 2010 models	911 Carrera PDK transmission with M10 x 1.5 thread/2009 model and some 2010 models (will be changed)	Tightening torque	81 Nm (60 ftlb.)		

	to M10 x 1 fine thread in the current 2010 model)				
Drive shaft to PDK transmission on 911 Carrera with M10 x 1 fine thread/as of current 2010 model	911 Carrera PDK transmission with M10 x 1 fine thread	Tightening torque	M10x1=90 Nm (67 ftlb.)		
Drive shaft to Tiptronic transmission on 911 Turbo (M10 x 1.5 thread)	911 Turbo Tiptronic (M10 x 1.5 thread)	Tightening torque	81 Nm (60 ftlb.)		
Drive shaft to manual and PDK transmission on 911 Turbo (M10 x 1 fine thread)	911 Turbo with PDK and manual transmission (M10 x 1 fine thread)	Tightening torque	M10x1=90 Nm (67 ftlb.)		
Drive shaft to manual transmission on 911 GT3, GT3 RS, GT2 (M10 x 1 fine thread)	911 GT3, GT3 RS, GT2 (M10 x 1 fine thread)	Tightening torque	M10x1=90 Nm (67 ftlb.)		
Threaded connection securing drive shaft to wheel hub, M22 x 1.5		Tightening torque	460 Nm (340 ftlb.)		
Steering pressure line	Wrench size 15 mm	Tightening torque	30 Nm (22 ftlb.)		
Steering return line	Wrench size 19 mm	Tightening torque	40 Nm (30 ftlb.)		
Clutch line	Wrench size 15 mm	Tightening torque	30 Nm (22 ftlb.)		
Wheel to wheel hub on front and rear axle when using silver wheel bolts (up to model year 2011), M14 x 1.5	Apply a light coating of Optimoly TA (aluminium paste) to the thread, shank and under the head (between screw head bearing	Tightening torque for using silver wheel bolts (up to model year 2011): 130 Nm (96 ftlb.) (160 Nm/118 ftlb. also permitted	130Nm Nm (96 ftlb.) (160 Nm/118 ftlb. also permitted)		



	<p>surface and spherical cap ring) of the wheel bolts. Do not grease bearing surface of the spherical cap facing the wheel. If heavily soiled, clean bolts first with a lint-free cloth. Replace damaged wheel bolts (cannot be reworked)</p>	retroactively)			
<p>Wheel to wheel hub on front and rear axle when using silver wheel bolts (as of model year 2012), M14 x 1.5</p>	<p>Apply a light coating of Optimoly TA (aluminium paste) to the thread, shank and under the head (between screw head bearing surface and spherical cap ring) of the wheel bolts. Do not grease bearing surface of the spherical cap facing the wheel. If heavily soiled, clean bolts first with a lint-free cloth. Replace damaged wheel bolts (cannot be reworked).</p>	<p>Tightening torque for using silver wheel bolts (as of model year 2012): 160 Nm (118 ftlb.)</p>	160Nm Nm (118 ftlb.)		
<p>Wheel to wheel hub on front and rear axle when using black wheel bolts, M14 x 1.5</p>	<p>Apply a light coating of Optimoly TA (aluminium paste) to the thread, shank and under the head</p>	<p>Tightening torque for using black wheel bolts: 160 Nm (118 ftlb.)</p>	160Nm Nm (118 ftlb.)		

	(between screw head bearing surface and spherical cap ring) of the wheel bolts. Do not grease bearing surface of the spherical cap facing the wheel. If heavily soiled, clean bolts first with a lint-free cloth. Replace damaged wheel bolts (cannot be reworked).				
Wheel to wheel hub/central bolt	All contact surfaces of the wheel, wheel hub and brake disc as well as the trapezoidal thread in the wheel hub must be free of abrasion, sand, dust or chips. Apply some aluminium paste (Optimoly TA) on the trapezoidal thread of the wheel hub if necessary. Grease the conical surface of the central bolt with a very light coating of aluminium paste (Optimoly TA) before fitting each wheel. For advanced grease specifications	3-step tightening procedure (Step 1: Tighten to 600 Nm (444 ftlb.). Step 2: Loosen the central bolt again (slightly) by approx. 60 angular degrees (1/6 turn). Step 3: Tighten to 600 Nm (444 ftlb.)). The tightening torque was increased to 600 Nm (444 ftlb.) (previously 500 Nm (370 ftlb.)) in the course of model year 2011. The higher tightening torque also applies to older vehicles.	600 Nm (444 ftlb.)		

	(which are only necessary under certain conditions), refer to the description 440519 Removing and installing wheel with central bolt.				
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## Tightening torques for rear axle

### Tightening torques for carrier side section/cross member

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Stud securing carrier side section to body (front), M12 x 1.5 x 133	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Screw-in torque	46 Nm (34 ftlb.)		
Carrier side section to body (front), M12 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	110 Nm (81.5 ftlb.)		
Carrier side section to body (middle and rear), M12 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	110 Nm (81.5 ftlb.)		
Cross member to carrier side section, M12 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	110 Nm (81.5 ftlb.)		
Transverse strut to carrier side section (front), M10 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	65 Nm (48 ftlb.)		
Brake hose bracket to carrier side section, M6	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	10 Nm (7.5 ftlb.)		
Diagonal brace to body, M10 x 1.5 (changed to M12 x 1.5 in current model year 2008)	Please note: This was changed to M12 x 1.5 in the current model year 2008! Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	M10=65 Nm (48 ftlb.)		
Diagonal brace to body, M12 x 1.5 (M12 x 1.5 used instead of M10 x 1.5 in current model year 2008)	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	M12=110 Nm (81.5 ftlb.)		

Screw connection securing diagonal brace to cross member, M12 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	110 Nm (81.5 ftlb.)		
Screw connection securing diagonal brace to carrier side section, (collar nut) M10 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	23 Nm (17 ftlb.)		

### Tightening torques for axle strut

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Screw connection for securing control arm 2 (toe control arm) to wheel carrier M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	56 ftlb.		
Screw connection for securing control arm 2 (toe control arm) to cross member (toe eccentric) M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	74 ftlb.		
Screw connection for securing control arm (lower control arm) to wheel carrier M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	56 ftlb.		
Screw connection for securing control arm (lower control arm) to carrier side section (camber eccentric) M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	74 ftlb.		
Screw connection for securing diagonal arm to control arm M14 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	118 ftlb.		
Screw connection for securing diagonal arm to carrier side section M14 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	133 ftlb.		
Screw connection for securing control arm 3 and control arm 4 (upper control arm) to carrier side section M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	81.5 ftlb.		
Screw connection for securing control arm 3 and control arm 4 (upper control arm) to wheel carrier M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	81.5 ftlb.		

### Tightening torques for wheel carrier

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Screw connection for securing wheel	Please note: Do not grease screwed connections in Dacromet finish -	Tightening torque	27 ftlb.		

bearing to wheel carrier (lid) M8	aluminium colour.				
Screw connection for securing speed sensor to wheel carrier M6	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	7.5 ftlb.		
Screw connection for securing brake cover plate to wheel carrier M6	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	7.5 ftlb.		
Screw connection for securing brake disc to wheel hub M6	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	7.5 ftlb.		
Screw connection for securing brake calliper to wheel carrier M12 x 1.5	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour. Replace screws on front and rear axle whenever they have been removed.	Tightening torque	63 ftlb.		
Screw connection for securing combination wire holder to wheel carrier M6	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	7.5 ftlb.		

### Tightening torques for spring strut

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Spring strut to body, M10 (911 Carrera and 911 Turbo)	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	46 Nm (34 ftlb.)		
Spring strut to body, M10 (911 GT3)	911 GT3 with roll-over bar: Carry out a test drive after performing assembly work on the roll-over bar/spring support on the body and then retighten the M10 fastening nuts (three per side) to the same torque! Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	46 Nm (34 ftlb.)		
Spring strut to wheel carrier, M12 x 1.5	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	110 Nm (81.5 ftlb.)		
Shock absorber to supporting mount (piston rod) – with and without PASM (M12 x 1 lock nut). Also applicable for 911 GT3!	Please note: Do not grease threaded connections in Dacromet finish - aluminium colour.	Tightening torque	32 Nm (24 ftlb.)		
Height adjustment on spring strut (lock nut), M52 x 1.5 (911 GT3)		Tightening torque	50 Nm (37 ftlb.)		

### Tightening torques for stabilizer

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Screw connection for securing stabiliser to side section M8	Please note: Do not grease screwed connections in Dacromet finish - aluminium colour.	Tightening torque	17 ftlb.		
Threaded connection for securing stabilizer mount to stabilizer (collar nut M10)	Please note: Observe three-stage tightening procedure! Do not grease threaded connection in Dacromet finish - aluminium colour.	Three-stage tightening procedure (First stage: initial tightening to 37 ftlb. Second stage: loosen by 90 degrees. Third stage: final tightening to 48 ftlb.)	48 ftlb.		
Threaded connection for securing stabiliser mount to wheel carrier M10	Please note: Observe three-stage tightening procedure! Do not grease threaded connections in Dacromet finish - aluminium colour.	Three-stage tightening procedure (First stage: initial tightening to 37 ftlb. Second stage: loosen by 90 degrees. Third stage: final tightening to 48 ftlb.)	48 ftlb.		

### Tightening torques for unit mounts - as of model year 2009

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Engine mounting to body, M8		Tightening torque	23 Nm (17 ftlb.)		
Adapter to body, M8		Tightening torque	23 Nm (17 ftlb.)		
Engine mounting to engine carrier, M12 x 1.5	Sleeve nut	Tightening torque	85 Nm (63 ftlb.)		
Engine carrier to engine, M10	Hexagon-head bolt/hexagon nut	Tightening torque	65 Nm (48 ftlb.)		
Transmission support to body, M10 x 1.5		Tightening torque	65 Nm (48 ftlb.)		
Stud for transmission support to body, M10		Tightening torque	20 Nm (15 ftlb.)		
Longitudinal support to body, M10		Tightening torque	65 Nm (48 ftlb.)		
Mount to longitudinal support, M10		Tightening torque	65 Nm (48 ftlb.)		
Transmission support and longitudinal support to transmission mount, M12 x 1.5		Tightening torque	120 Nm (89 ftlb.)		
Transmission mount to transmission, M12 x 1.5		Tightening torque	120 Nm (89 ftlb.)		
Intermediate carrier to body, M10	PDK transmission	Tightening torque	65 Nm (48 ftlb.)		

### Tightening torques for drive shaft

Location	Description	Type	Basic value	Tolerance	Tolerance
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Drive shaft to manual and Tiptronic transmission on 911 Carrera (M10 x 1.5 thread)	911 Carrera Tiptronic and manual transmission (M10 x 1.5 thread)	Tightening torque	81 Nm (60 ftlb.)		
Drive shaft to PDK transmission on 911 Carrera with M10 x 1.5 thread/2009 model and some 2010 models	911 Carrera PDK transmission with M10 x 1.5 thread/2009 model and some 2010 models (will be changed to M10 x 1 fine thread in the current 2010 model)	Tightening torque	81 Nm (60 ftlb.)		
Drive shaft to PDK transmission on 911 Carrera with M10 x 1 fine thread/as of current 2010 model	911 Carrera PDK transmission with M10 x 1 fine thread	Tightening torque	M10x1=90 Nm (67 ftlb.)		
Drive shaft to Tiptronic transmission on 911 Turbo (M10 x 1.5 thread)	911 Turbo Tiptronic (M10 x 1.5 thread)	Tightening torque	81 Nm (60 ftlb.)		
Drive shaft to manual and PDK transmission on 911 Turbo (M10 x 1 fine thread)	911 Turbo with PDK and manual transmission (M10 x 1 fine thread)	Tightening torque	M10x1=90 Nm (67 ftlb.)		
Drive shaft to manual transmission on 911 GT3, GT3 RS, GT2 (M10 x 1 fine thread)	911 GT3, GT3 RS, GT2 (M10 x 1 fine thread)	Tightening torque	M10x1=90 Nm (67 ftlb.)		
Threaded connection securing drive shaft to wheel hub, M22 x 1.5		Tightening torque	460 Nm (340 ftlb.)		

### Tightening torques for plug-in couplings for steering hydraulics

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Steering pressure line	Wrench size 15 mm	Tightening torque	30 Nm (22 ftlb.)		
Steering return line	Wrench size 19 mm	Tightening torque	40 Nm (30 ftlb.)		

### Tightening torques for plug-in couplings for clutch hydraulic system

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Clutch line	Wrench size 15 mm	Tightening torque	30 Nm (22 ftlb.)		

### Tightening torques for wheel mounting

Location	Description	Type	Basic value	Tolerance 1	Tolerance 2
Wheel to wheel hub on front	Apply a light coating of Optimoly TA	Tightening torque for using silver	130Nm Nm (96 ftlb.) (160 Nm/118 ftlb. also permitted)		

and rear axle when using silver wheel bolts (up to model year 2011), M14 x 1.5	(aluminium paste) to the thread, shank and under the head (between screw head bearing surface and spherical cap ring) of the wheel bolts. Do not grease bearing surface of the spherical cap facing the wheel. If heavily soiled, clean bolts first with a lint-free cloth. Replace damaged wheel bolts (cannot be reworked)	wheel bolts (up to model year 2011): 130 Nm (96 ftlb.) (160 Nm/118 ftlb. also permitted retroactively)			
Wheel to wheel hub on front and rear axle when using silver wheel bolts (as of model year 2012), M14 x 1.5	Apply a light coating of Optimoly TA (aluminium paste) to the thread, shank and under the head (between screw head bearing surface and spherical cap ring) of the wheel bolts. Do not grease bearing surface of the spherical cap facing the wheel. If heavily soiled, clean bolts first with a lint-free cloth. Replace damaged wheel bolts (cannot be reworked).	Tightening torque for using silver wheel bolts (as of model year 2012): 160 Nm (118 ftlb.)	160Nm Nm (118 ftlb.)		
Wheel to wheel hub on front and rear	Apply a light coating of Optimoly TA (aluminium	Tightening torque for using black wheel bolts:	160Nm Nm (118 ftlb.)		



<p>axle when using black wheel bolts, M14 x 1.5</p>	<p>paste) to the thread, shank and under the head (between screw head bearing surface and spherical cap ring) of the wheel bolts. Do not grease bearing surface of the spherical cap facing the wheel. If heavily soiled, clean bolts first with a lint-free cloth. Replace damaged wheel bolts (cannot be reworked).</p>	<p>160 Nm (118 ftlb.)</p>			
<p>Wheel to wheel hub/central bolt</p>	<p>All contact surfaces of the wheel, wheel hub and brake disc as well as the trapezoidal thread in the wheel hub must be free of abrasion, sand, dust or chips. Apply some aluminium paste (Optimoly TA) on the trapezoidal thread of the wheel hub if necessary. Grease the conical surface of the central bolt with a very light coating of aluminium paste (Optimoly TA) before fitting each wheel. For advanced grease specifications (which are</p>	<p>3-step tightening procedure (Step 1: Tighten to 600 Nm (444 ftlb.)). Step 2: Loosen the central bolt again (slightly) by approx. 60 angular degrees (1/6 turn). Step 3: Tighten to 600 Nm (444 ftlb.)). The tightening torque was increased to 600 Nm (444 ftlb.) (previously 500 Nm (370 ftlb.)) in the course of model year 2011. The higher tightening torque also applies to older vehicles.</p>	<p>600 Nm (444 ftlb.)</p>		

	only necessary under certain conditions), refer to the description 440519 Removing and installing wheel with central bolt.				
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997110, 997111, 997120, 997121, 997140, 997141, 997150, 997151, 997160, 997161, 997170, 997310, 997311, 997320, 997321, 997350, 997351, 997360, 997361, 997370, 997410, 997411, 997420, 997421, 997430, 997431, 997450, 997451, 997460, 997461, 997470, 997471, 997480, 997481, 997510, 997511, 997520, 997521, 997560, 997561, 997610, 997611, 997620, 997621, 997630, 997631, 997650, 997651, 997660, 997661, 997670, 997671, 997680, 997681, 997720, 997721, 997810, 997811, 997840, 997841, 997850, 997851, 997860, 997861, 997880, 997881

Model year as of 2005

C00, C02, C05, C06, C07, C08, C09, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C32, C33, C34, C35, C36, C37, C38, C39, C41, C45, C45, C46, C96, C97, C98, C99