

36 12 ... Notes and specifications for tyre / wheel exchange

General:

- The tyre size, manufacturer and tyre tread must be the same on one axle
- To meet the BMW standards, the vehicle should be equipped with tyres from the same manufacturer and with the same tyre tread (tyres approved by BMW) on all 4 wheels
- The difference in tyre tread depth on one axle must not exceed 2 mm (control quality of suspension control systems and wheel alignment requirement)
- The tyres with the higher tread depths must be mounted on the rear axle
- The DOT age difference must not exceed 4 years
- The tyre pressure must be adjusted when the tyres are exchanged
- Wheel exchange between the axles

The wheels may be exchanged between axles to achieve even abrasion. However, BMW does **not recommend** switching the front wheels to the rear or vice-versa.

The wheel exchange may lead to the following customer complaints:

- complaints regarding acoustics
- Risk of increased lane groove sensitivity

Compliance with the following requirements is required when exchanging wheels between the axles:

- Assess the wear pattern
- The tread difference between the front and rear wheels must not exceed a maximum of 2-3 mm
- Exchange the wheels between the axles every **5000 Km**

Additionally for all-wheel drive vehicles:

- The tyre size, manufacturer and tyre tread must be identical on all wheels; different tyre sizes between front and rear axles are only permissible if mixed tyres are fitted.
- The tyre tread difference between tyres in all wheel positions must not exceed **2 mm** (normal quality of the wheel control systems and wheel alignment requirement)

36 10 300 Remove or install front or rear wheel



WARNING

Vehicle may slip off the vehicle hoist if the vehicle hoist is handled incorrectly.

Danger! Life-threatening injuries!

- Observe safety information on raising the vehicle using a vehicle hoist.
- For additional information see: 00 ... Raising the vehicle using a vehicle hoist.

1 – Removing the wheel



- If several wheels are removed simultaneously: Use a piece of chalk to mark on each tyre the axle and side on which the corresponding wheel is fitted.
- Unscrew the wheel bolts (arrows) and remove the wheel.

Use the matching adapter from tool set (wheel bolt adapter set) to loosen and tighten down the wheel bolt with security code.

2 – Mounting the wheel



- Clean the contact surfaces between the brake disc and the wheel rim



TECHNICAL INFORMATION

The contact surface between the brake disc and the wheel rim must be clean and free from oil and grease. There is otherwise a risk of the wheel becoming loose at a later time.

- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool **2 344 011**.

Do not operate special tool **2 344 011** with an impact screwdriver.

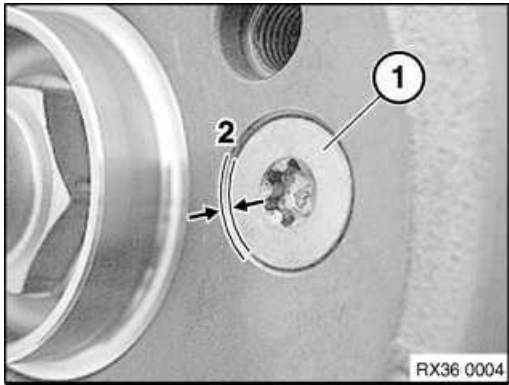
- Degrease the contact surfaces with the universal cleaner (see BMW Group Parts).
- In the event of grease residue in the area of the wheel bolt holes, remove and clean the brake disc.

- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool **2 344 011**.

Do not operate special tool **2 344 011** with an impact screwdriver.

- Degrease the contact surfaces with the universal cleaner (see BMW Group Parts).





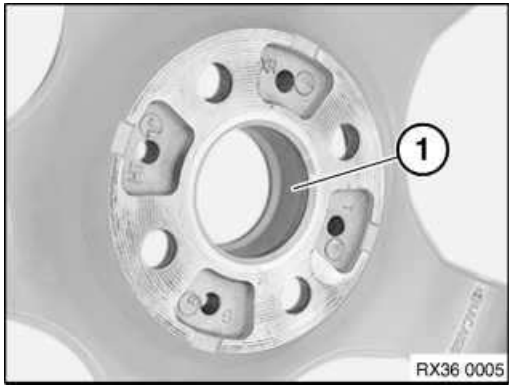
- Renew mounting bolt (1).
- Parts:** Mounting bolt
- Check that the mounting bolt (1) for the brake disc is securely seated.
- The mounting bolt (1) for the brake disc may not protrude under any circumstances on the contact surface (2) between the brake disc and the wheel rim.

Brake disc to rear wheel hub

M8	Renew screw.	Tightening torque	16 Nm
----	--------------	-------------------	-------

Brake disc to front wheel hub

M8	Renew screw.	Tightening torque	16 Nm
----	--------------	-------------------	-------



- Lightly grease the wheel centring (1) in the wheel rim; refer to additional information for grease for the wheel centring (1).



TECHNICAL INFORMATION

Never use impact screwdrivers or electric screwdrivers to screw in and tighten the wheel bolts.

The wheel rim must rest uniformly against the brake disc.

In the case of non-original BMW wheel bolts/wheel rims, it may be necessary to retighten the wheel bolts on account of setting properties (refer to the documentation from the manufacturer).

Do not apply oil to new wheel bolts.

- Renew corroded wheel bolts.

Parts: Wheel bolts

- Clean the wheel bolts.
- Check the wheel bolts and threads for damage, renew the wheel bolts if necessary.
- Join and tighten the wheel bolts (arrows).

Wheel bolts

M 14/AF 17	Screw in wheel bolts and evenly tighten crosswise by hand in order to centre the wheel rim.	Tightening torque	140 Nm
	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.	Check	140 Nm

3 – Resetting the RDC



TECHNICAL INFORMATION

The tyre pressure control monitors the tyre pressure in all four wheels.

Each tyre incorporates a wheel electronics module, which constantly monitors the tyre pressure.

The system signals when the tyre pressure drops in one or more tyres.

The reset must be carried out in each case immediately after tyre pressure has been corrected, after tyres/wheels have been changed and after repairs to the air spring system.

Please refer to the corresponding motor vehicle's Owner's Handbook for details on the reset procedure.

- Reset the RDC.

Additional Information

Overview of Tightening Torques

Brake disc to rear wheel hub

Used in step 2

M8	Renew screw.	Tightening torque	16 Nm
----	--------------	-------------------	-------

Brake disc to front wheel hub

Used in step 2

M8	Renew screw.	Tightening torque	16 Nm
----	--------------	-------------------	-------

Wheel bolts

Used in step 2

M 14/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	140 Nm
		Check	140 Nm

Overview of Special Tools

2 344 011 Tool



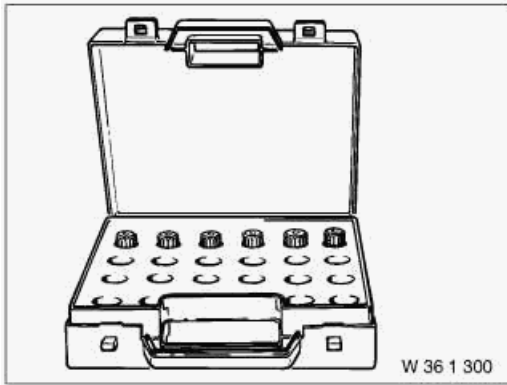
Common

Used in step 2

Usage	Tool (wheel hub grinder) for cleaning the connection of the wheel rim (wheel contact face) to the wheel hub.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	08 08 12 (872)

Replacement tools:

0 495 221 (36 1 323) Wheel stud

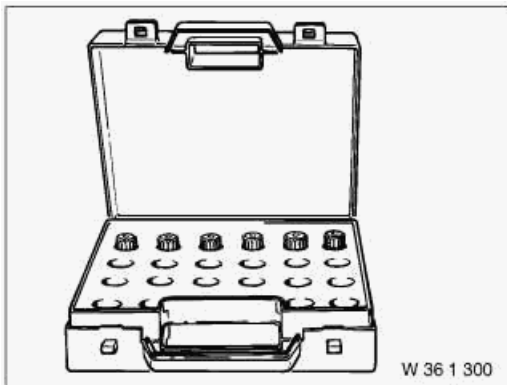


Common

Used in step 1

Usage	(Code 30) Code 39 available separately, (see EPC) under 36 13 1 181 259
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 224 (36 1 326) Wheel stud



Common

Used in step 1

Usage	(Code 33) With centring bore available separately, (see EPC) under 36 13 6 765 546
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 225 (36 1 327) Wheel stud



Common		Used in step	1
Usage	(Code 34) With centring bore available separately (see EPC) under 36 13 6 765 547		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 495 226 (36 1 328) Wheel stud



Common		Used in step	1
Usage	(Code 35) With centring bore available separately, (see EPC) under 36 13 6 762 340		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 495 227 (36 1 329) Wheel stud



Common		Used in step	1
Usage	(Code 36) With centring bore available separately (see EPC) under 36 13 6 762 341		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 495 228 (36 1 331) Wheel stud



Common		Used in step	1
Usage	(Code 37) With centring bore available separately (see EPC) under 36 13 6 762 342		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 495 229 (36 1 332) Wheel stud



Common		Used in step	1
Usage	(Code 38) With centring bore available separately (see EPC) under 36 13 6 762 343		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 495 230 (36 1 333) Wheel stud



Common		Used in step	1
Usage	(Code 40) With centring bore available separately (see EPC) under 36 13 6 762 344		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

Links

Operating materials	Used in step
2.0 Grease for wheel centring	2

36 11 003 Resetting the RDC

1 – Resetting the RDC



TECHNICAL INFORMATION

The tyre pressure control monitors the tyre pressure in all four wheels.

Each tyre incorporates a wheel electronics module, which constantly monitors the tyre pressure.

The system signals when the tyre pressure drops in one or more tyres.

The reset must be carried out in each case immediately after tyre pressure has been corrected, after tyres/wheels have been changed and after repairs to the air spring system.

Please refer to the corresponding motor vehicle's Owner's Handbook for details on the reset procedure.

- Reset the RDC.

36 12 ... Notes and specifications for tyre / wheel exchange

General:

- The tyre size, manufacturer and tyre tread must be the same on one axle
- To meet the BMW standards, the vehicle should be equipped with tyres from the same manufacturer and with the same tyre tread (tyres approved by BMW) on all 4 wheels
- The difference in tyre tread depth on one axle must not exceed 2 mm (control quality of suspension control systems and wheel alignment requirement)
- The tyres with the higher tread depths must be mounted on the rear axle
- The DOT age difference must not exceed 4 years
- The tyre pressure must be adjusted when the tyres are exchanged
- Wheel exchange between the axles

The wheels may be exchanged between axles to achieve even abrasion. However, BMW does **not recommend** switching the front wheels to the rear or vice-versa.

The wheel exchange may lead to the following customer complaints:

- complaints regarding acoustics
- Risk of increased lane groove sensitivity

Compliance with the following requirements is required when exchanging wheels between the axles:

- Assess the wear pattern
- The tread difference between the front and rear wheels must not exceed a maximum of 2-3 mm
- Exchange the wheels between the axles every **5000 Km**

Additionally for all-wheel drive vehicles:

- The tyre size, manufacturer and tyre tread must be identical on all wheels; different tyre sizes between front and rear axles are only permissible if mixed tyres are fitted.
- The tyre tread difference between tyres in all wheel positions must not exceed **2 mm** (normal quality of the wheel control systems and wheel alignment requirement)

36 12 ... Notes and specifications for tyre / wheel exchange

General:

- The tyre size, manufacturer and tyre tread must be the same on one axle
- To meet the BMW standards, the vehicle should be equipped with tyres from the same manufacturer and with the same tyre tread (tyres approved by BMW) on all 4 wheels
- The difference in tyre tread depth on one axle must not exceed 2 mm (control quality of suspension control systems and wheel alignment requirement)
- The tyres with the higher tread depths must be mounted on the rear axle
- The DOT age difference must not exceed 4 years
- The tyre pressure must be adjusted when the tyres are exchanged
- Wheel exchange between the axles

The wheels may be exchanged between axles to achieve even abrasion. However, BMW does **not recommend** switching the front wheels to the rear or vice-versa.

The wheel exchange may lead to the following customer complaints:

- complaints regarding acoustics
- Risk of increased lane groove sensitivity

Compliance with the following requirements is required when exchanging wheels between the axles:

- Assess the wear pattern
- The tread difference between the front and rear wheels must not exceed a maximum of 2-3 mm
- Exchange the wheels between the axles every **5000 Km**

Additionally for all-wheel drive vehicles:

- The tyre size, manufacturer and tyre tread must be identical on all wheels; different tyre sizes between front and rear axles are only permissible if mixed tyres are fitted.
- The tyre tread difference between tyres in all wheel positions must not exceed **2 mm** (normal quality of the wheel control systems and wheel alignment requirement)