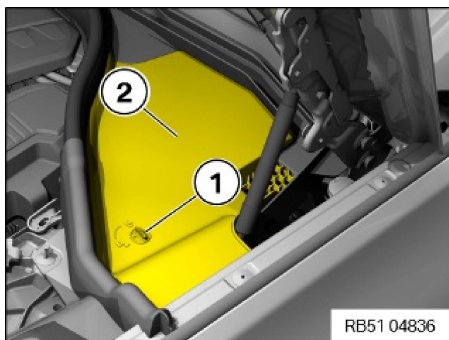


61 61 270 Completely removing and installing the console for the windscreen wiper system including engine

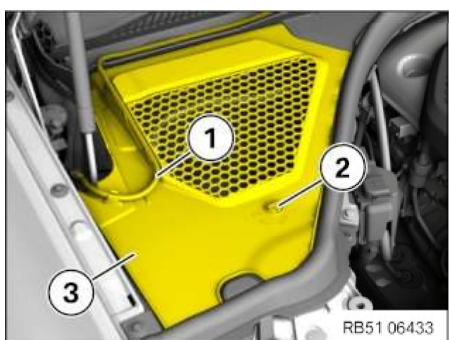
PRELIMINARY WORK

1 – Remove the cover of the engine compartment at the rear left



- Loosen the lock (1).
- Remove rear left cover of engine compartment (2).

2 – Remove the cover of the rear right engine compartment



- Release washer fluid hose (1) from the guides.
- Loosen the lock (2).
- Remove the cover of rear right engine compartment (3).

3 – Removing both wiper arms



NOTICE

Description is for left component only. Procedure on the right side is identical.

► Remove the wiper arm

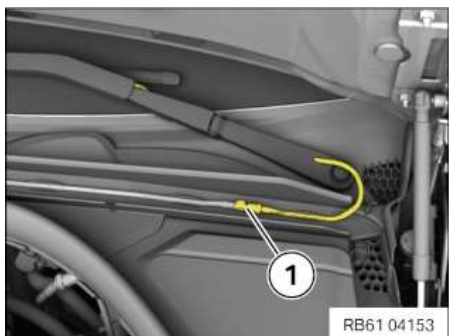


RISK OF DAMAGE

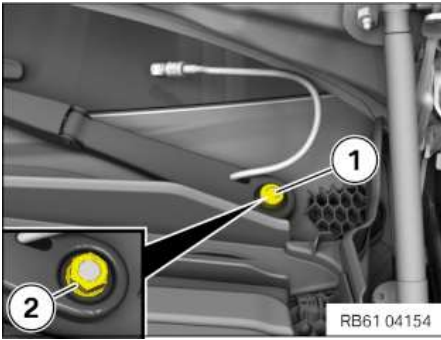
Damage to wiper console

While removing the wiper arms without using special tool, the wiper console can break.

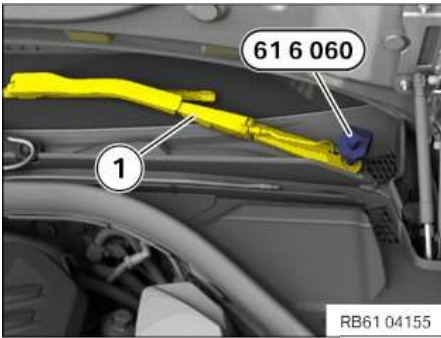
- Removing the wiper arms must be carried out only using the prescribed special tool.
- Do not lift off wiper arm, else the wiper console may break on the predetermined breaking point for the pedestrian protection.



- Disconnect the windscreen wash hose(1) at the separation point and remove from the cowl guide.

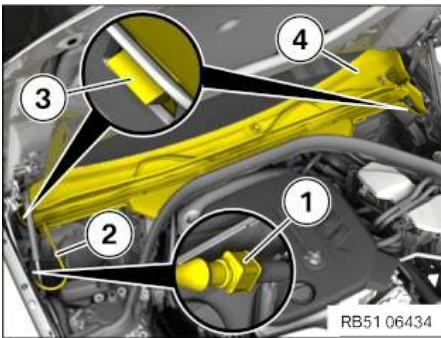


- Remove the protective cap (1).
- Loosen nut (2).

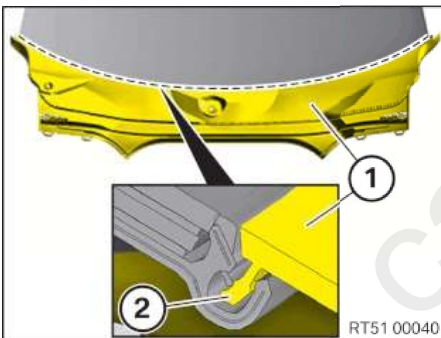


- Pull off the wiper arm (1) using special tool .

4 – Remove cowl panel cover



- Release snap fastener of the washer fluid hose (1) and put the washer fluid hose(2) to one side.
- Unclip clips (3) on the cowl panel cover (4).



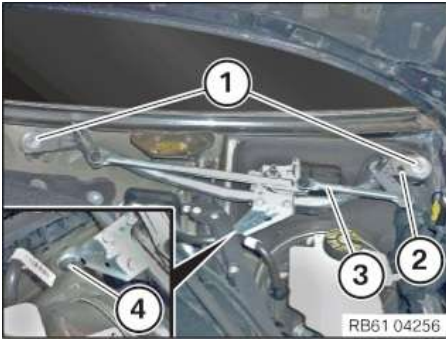
- Pull the cowl panel cover (1) upward out of the latch mechanism (2) beginning on the side.

MAIN WORK

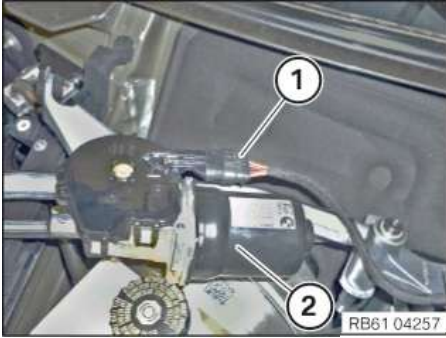
5 – Remove wiper console.



- Remove the water drain channel (1).

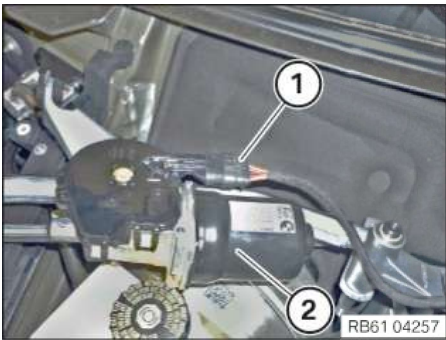


- Loosen nuts (1).
- Unclip the cable clip (2).
- Remove the wiper console (3) from the guide (4) and raise it.

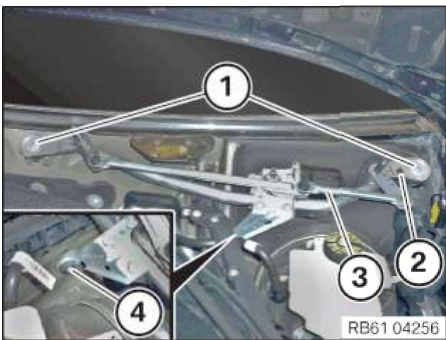


- Unlock plug connection (1) and disconnect.
- Remove the wiper console (2).

6 – Installing the wiper console



- Position the wiper console (2).
- Connect connectors (1) and lock.



- Insert the wiper console (3) into the guide (4) and position it correctly.
- Clip in the cable clip (2).
- Renew nuts (1) and tighten.

Wiper console to body

Nut M8	Renew nut.	Tightening torque	11,8 Nm
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- Guide in the water drain channel (1) and clip into place.

POSTPROCESSES

7 – Installing cowl panel cover

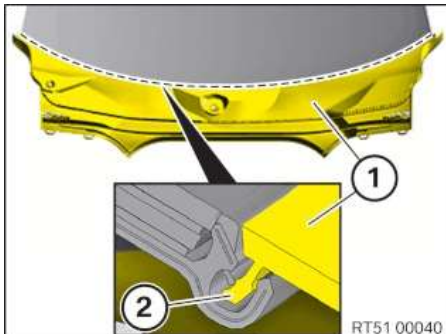


RISK OF DAMAGE

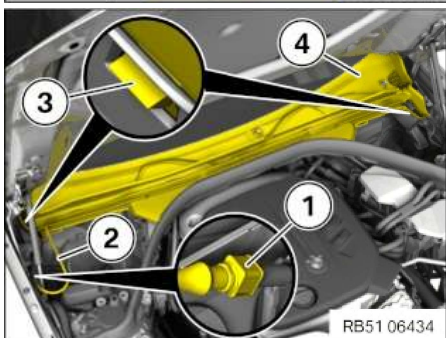
Damage caused by water ingress into the vehicle.

Water ingress into the vehicle may result in damage to components, malfunctions and corrosion.

- Ensure correct installation of the components.
- Only use undamaged components.



- Push the cowl panel cover (1) into the latch mechanism (2) beginning on the side.



- Clip cowl panel cover (4) in by means of the latch mechanisms (3).
- Position windscreen wash hose (2) and connect windscreen wash hose (1) quick lock.

8 – Installing both wiper arms



NOTICE

Description is for left component only. Procedure on the right side is identical.

- Install the wiper arm

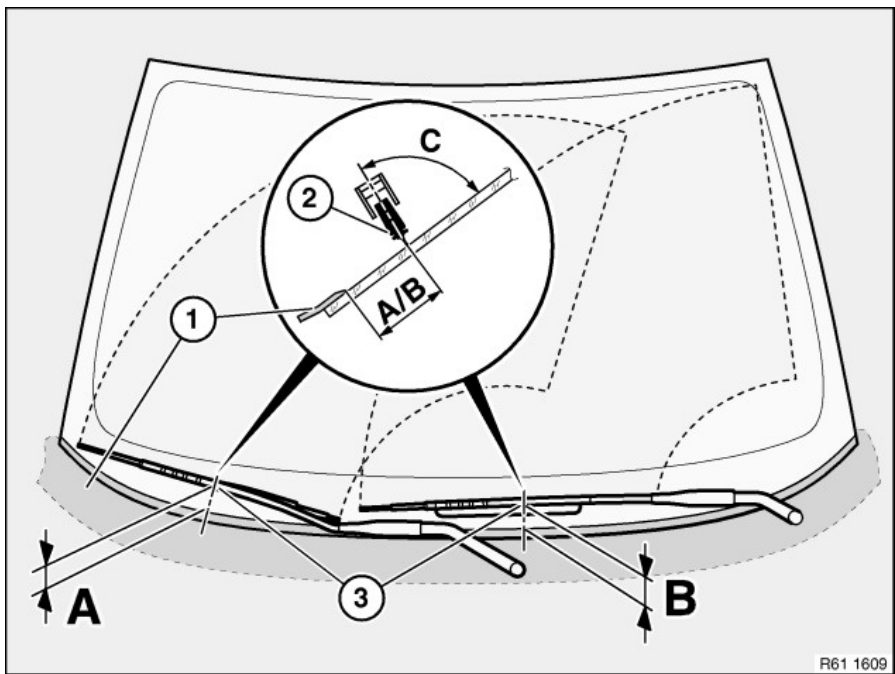


TECHNICAL INFORMATION

The wiper system must be in zero position.

After installing the cowl panel cover and before fitting the wiper arm:

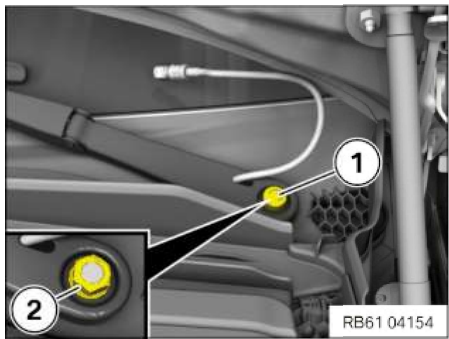
Activate the wiper system once to ensure that it has the correct installation position.



- Connect the wiper arm (3).
- Correctly position the wiper arm (2) in relation to the window edge (1).

Distance from window pane edge to wiper blade

Wiper arm right (A)	57,5 ± 5 mm
Wiper arm left (B)	63,3 ± 4 mm

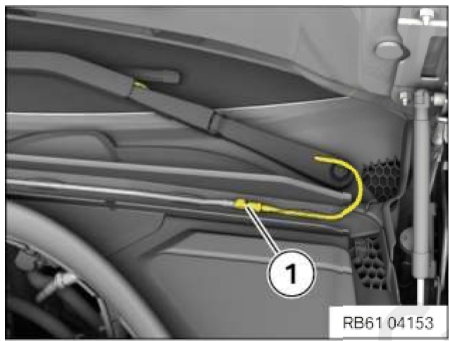


- Tighten nut (2).

Windscreen wiper arm

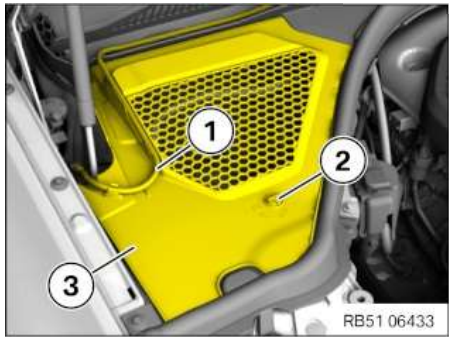
Combination hexagon nut		Tightening torque	35 Nm
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- Connect the protective cap (1).



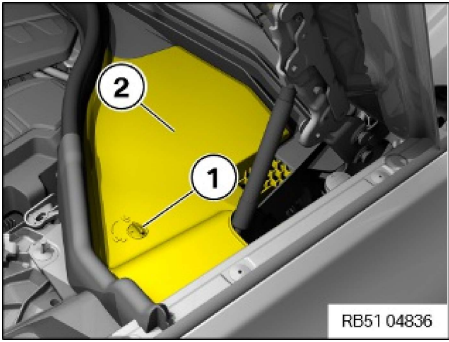
- Insert windscreen wash hose (1) into the cowl and connect at the separating point.

9 – Install the rear right engine compartment cover



- Position the cover of the engine compartment on the rear right (3).
- Close lock (2).
- Insert washer fluid hose (1) into the guides.

10 – Install the cover of the engine compartment on the rear left



- Position the engine compartment cover at the rear left (2) .
- Close lock (1).

Additional Information

Overview of Tightening Torques

Wiper console to body			Used in step	6
Nut M8	Renew nut.	Tightening torque	11,8 Nm	

Windscreen wiper arm			Used in step	8
Combination hexagon nut		Tightening torque	35 Nm	

Overview of Special Tools

Overview Technical Data

Distance from window pane edge to wiper blade		Used in step	8
Wiper arm right (A)		57,5 ± 5 mm	
Wiper arm left (B)		63,3 ± 4 mm	

61 61 100 Removing and installing/replacing both windscreen wiper arms



TECHNICAL INFORMATION

The wiper arm must not touch the windscreen or the rear window without a wiper blade. Otherwise the windscreen or the rear window could be damaged.



NOTICE

Description is for left component only. Procedure on the right side is identical.

1 – Remove the wiper arm

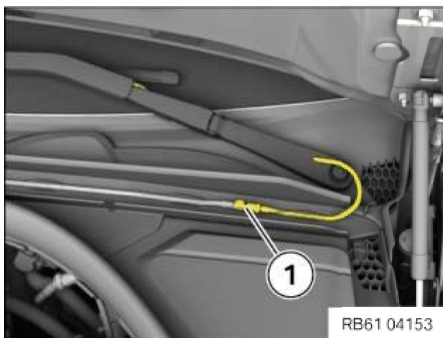


RISK OF DAMAGE

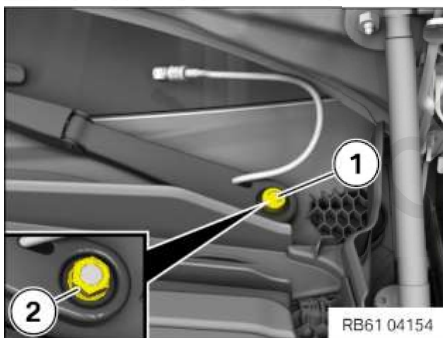
Damage to wiper console

While removing the wiper arms without using special tool, the wiper console can break.

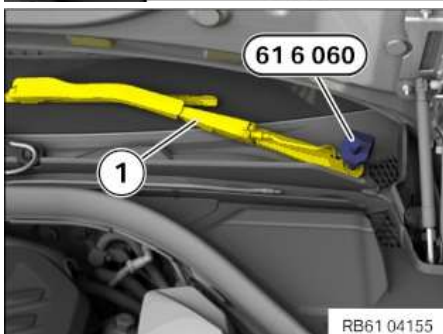
- Removing the wiper arms must be carried out only using the prescribed special tool.
- Do not lift off wiper arm, else the wiper console may break on the predetermined breaking point for the pedestrian protection.



- Disconnect the windscreen wash hose(1) at the separation point and remove from the cowl guide.



- Remove the protective cap (1).
- Loosen nut (2).



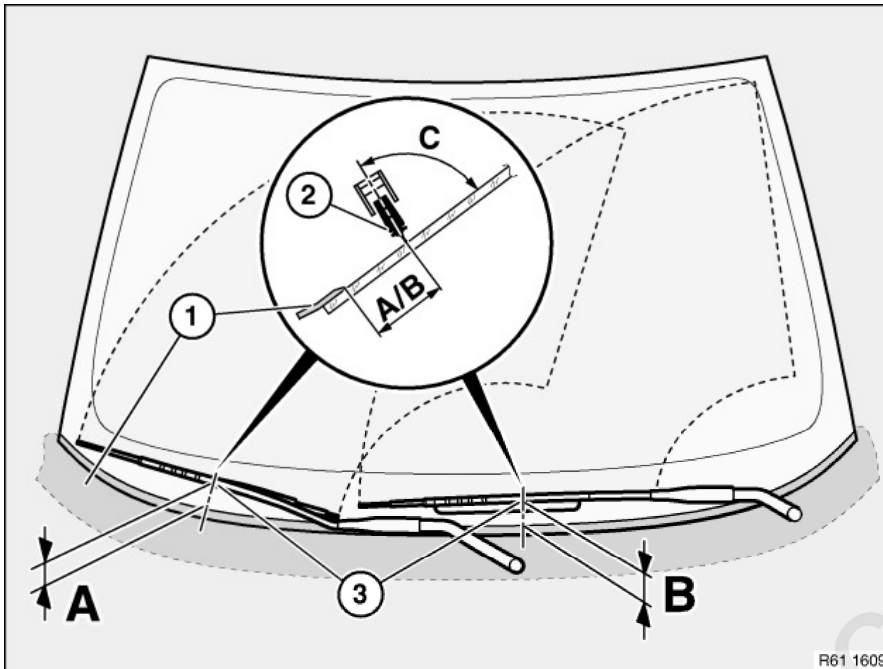
- Pull off the wiper arm (1) using special tool .

2 – Install the wiper arm

The wiper system must be in zero position.

After installing the cowl panel cover and before fitting the wiper arm:

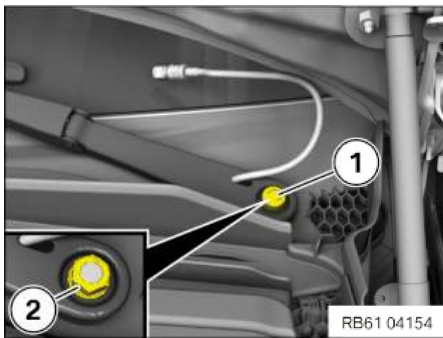
Activate the wiper system once to ensure that it has the correct installation position.



- Connect the wiper arm (3).
- Correctly position the wiper arm (2) in relation to the window edge (1).

Distance from window pane edge to wiper blade

Wiper arm right (A)	57,5 ± 5 mm
Wiper arm left (B)	63,3 ± 4 mm

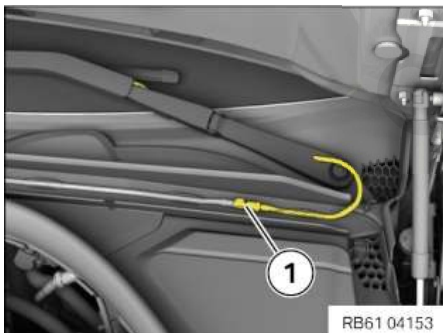


- Tighten nut (2).

Windscreen wiper arm

Combination hexagon nut	Tightening torque	35 Nm
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- Connect the protective cap (1).



- Insert windscreen wash hose (1) into the cowl and connect at the separating point.

Additional Information

Overview of Tightening Torques

Windscreen wiper arm

Used in step 2

Combination hexagon nut	Tightening torque	35 Nm
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Overview of Special Tools

Overview Technical Data

Distance from window pane edge to wiper blade

Used in step 2

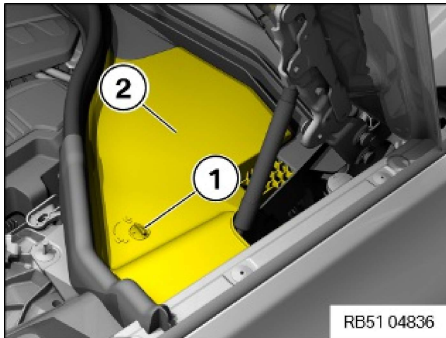
Wiper arm right (A)	57,5 ± 5 mm
Wiper arm left (B)	63,3 ± 4 mm

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61 61 271 Replace console for windscreen wiper system

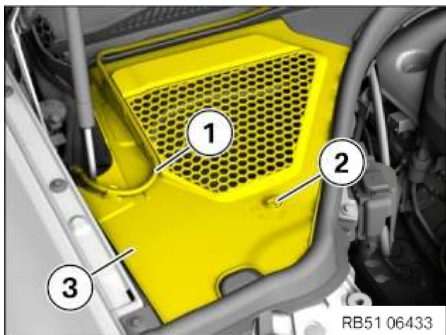
PRELIMINARY WORK

1 – Remove the cover of the engine compartment at the rear left



- Loosen the lock (1).
- Remove rear left cover of engine compartment (2).

2 – Remove the cover of the rear right engine compartment



- Release washer fluid hose (1) from the guides.
- Loosen the lock (2).
- Remove the cover of rear right engine compartment (3).

3 – Removing both wiper arms



NOTICE

Description is for left component only. Procedure on the right side is identical.

► Remove the wiper arm

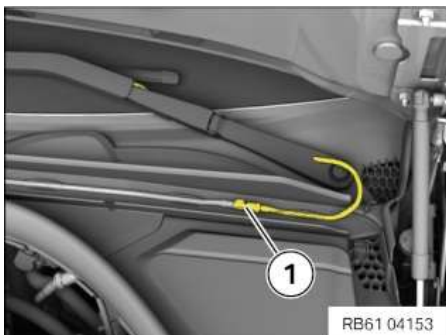


RISK OF DAMAGE

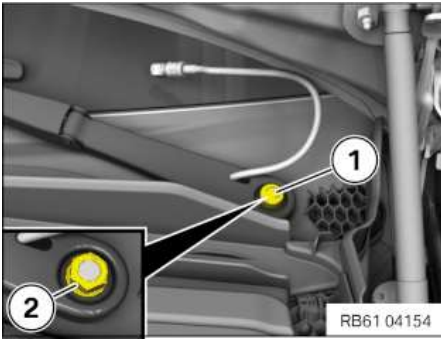
Damage to wiper console

While removing the wiper arms without using special tool, the wiper console can break.

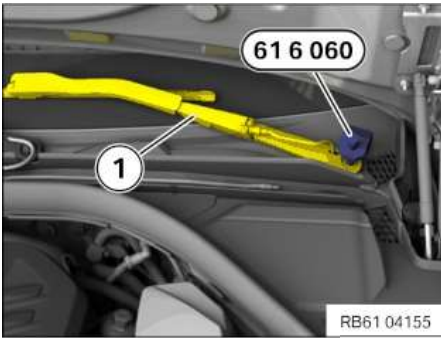
- Removing the wiper arms must be carried out only using the prescribed special tool.
- Do not lift off wiper arm, else the wiper console may break on the predetermined breaking point for the pedestrian protection.



- Disconnect the windscreen wash hose(1) at the separation point and remove from the cowl guide.

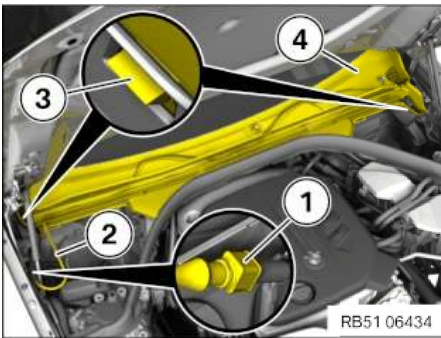


- Remove the protective cap (1).
- Loosen nut (2).

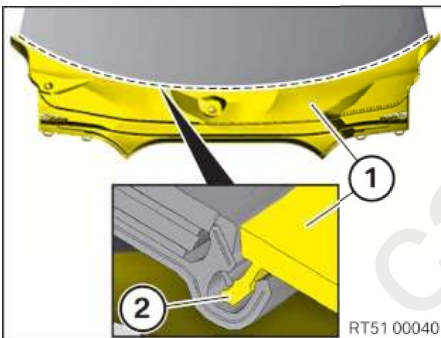


- Pull off the wiper arm (1) using special tool .

4 – Remove cowl panel cover



- Release snap fastener of the washer fluid hose (1) and put the washer fluid hose(2) to one side.
- Unclip clips (3) on the cowl panel cover (4).



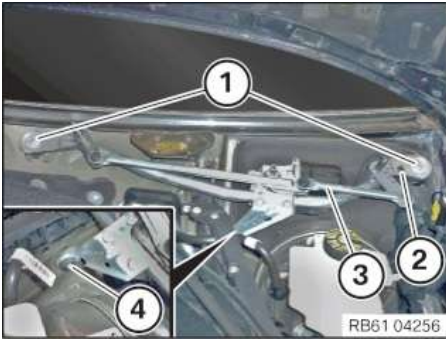
- Pull the cowl panel cover (1) upward out of the latch mechanism (2) beginning on the side.

MAIN WORK

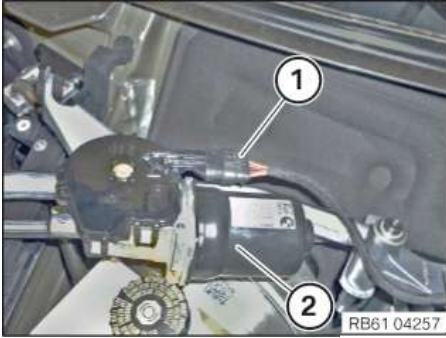
5 – Remove wiper console.



- Remove the water drain channel (1).

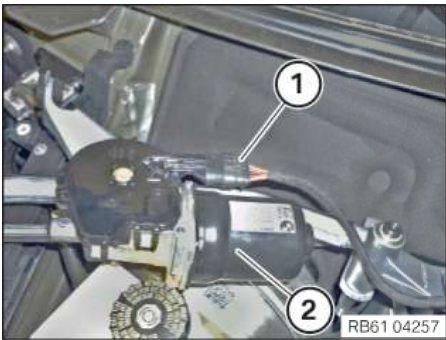


- Loosen nuts (1).
- Unclip the cable clip (2).
- Remove the wiper console (3) from the guide (4) and raise it.

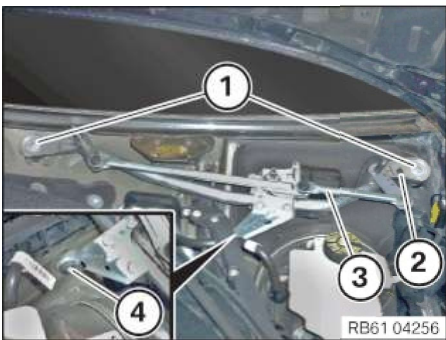


- Unlock plug connection (1) and disconnect.
- Remove the wiper console (2).

6 – Installing the wiper console



- Position the wiper console (2).
- Connect connectors (1) and lock.



- Insert the wiper console (3) into the guide (4) and position it correctly.
- Clip in the cable clip (2).
- Renew nuts (1) and tighten.

Wiper console to body

Nut M8	Renew nut.	Tightening torque	11,8 Nm
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- Guide in the water drain channel (1) and clip into place.

POSTPROCESSES

7 – Installing cowl panel cover

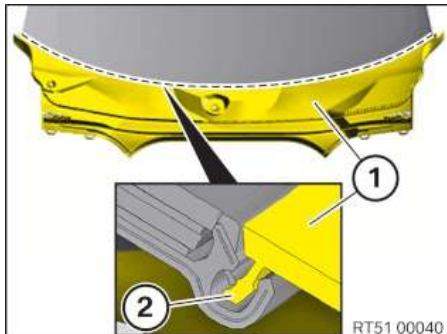


RISK OF DAMAGE

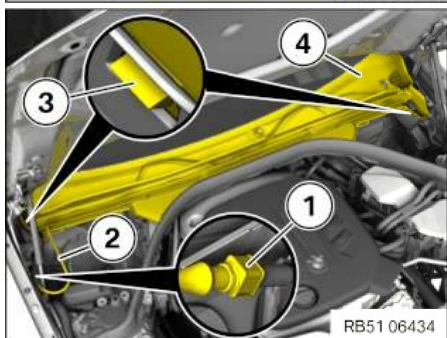
Damage caused by water ingress into the vehicle.

Water ingress into the vehicle may result in damage to components, malfunctions and corrosion.

- Ensure correct installation of the components.
- Only use undamaged components.



- Push the cowl panel cover (1) into the latch mechanism (2) beginning on the side.



- Clip cowl panel cover (4) in by means of the latch mechanisms (3).
- Position windscreen wash hose (2) and connect windscreen wash hose (1) quick lock.

8 – Installing both wiper arms



NOTICE

Description is for left component only. Procedure on the right side is identical.

- Install the wiper arm

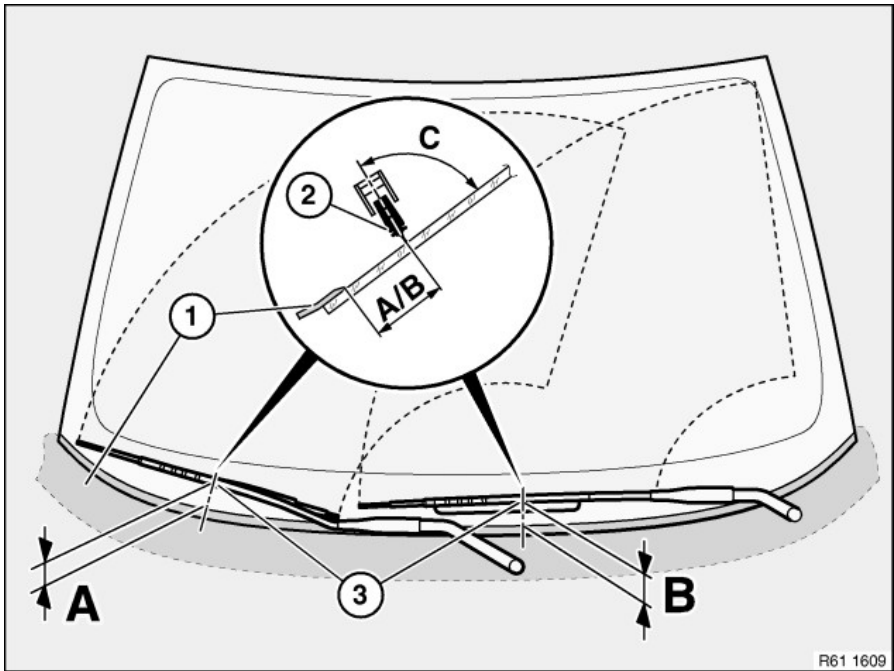


TECHNICAL INFORMATION

The wiper system must be in zero position.

After installing the cowl panel cover and before fitting the wiper arm:

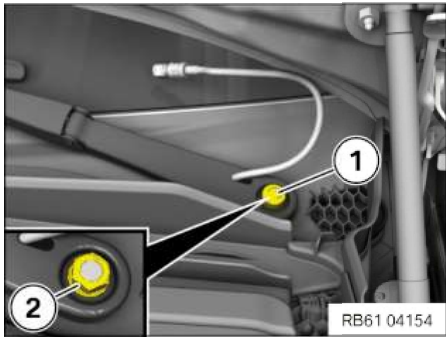
Activate the wiper system once to ensure that it has the correct installation position.



- Connect the wiper arm (3).
- Correctly position the wiper arm (2) in relation to the window edge (1).

Distance from window pane edge to wiper blade

Wiper arm right (A)	57,5 ± 5 mm
Wiper arm left (B)	63,3 ± 4 mm

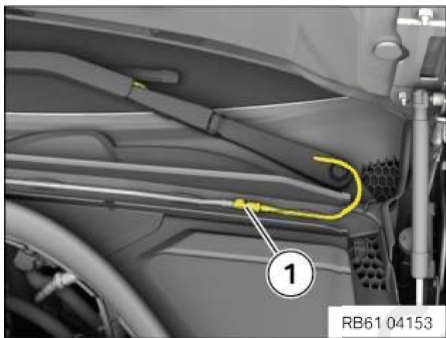


- Tighten nut (2).

Windscreen wiper arm

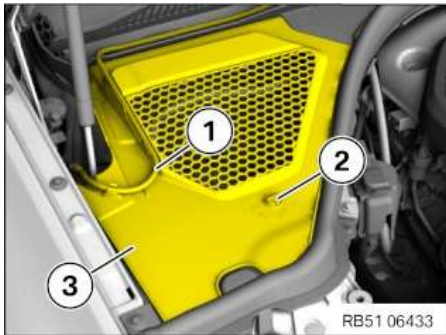
Combination hexagon nut		Tightening torque	35 Nm
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- Connect the protective cap (1).



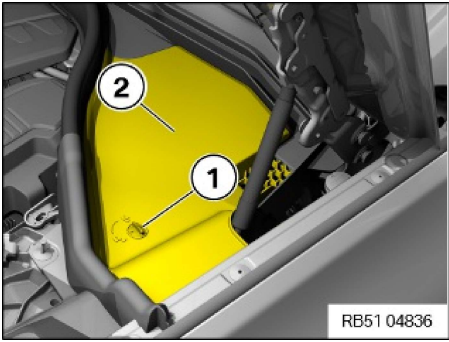
- Insert windscreen wash hose (1) into the cowl and connect at the separating point.

9 – Install the rear right engine compartment cover



- Position the cover of the engine compartment on the rear right (3).
- Close lock (2).
- Insert washer fluid hose (1) into the guides.

10 – Install the cover of the engine compartment on the rear left



- Position the engine compartment cover at the rear left (2) .
- Close lock (1).

Additional Information

Overview of Tightening Torques

Wiper console to body			Used in step	6
Nut M8	Renew nut.	Tightening torque	11,8 Nm	
Windscreen wiper arm			Used in step	8
Combination hexagon nut		Tightening torque	35 Nm	

Overview of Special Tools

Overview Technical Data

Distance from window pane edge to wiper blade		Used in step	8
Wiper arm right (A)		57,5 ± 5 mm	
Wiper arm left (B)		63,3 ± 4 mm	

61 61 041 Replacing both wiper blades



NOTICE

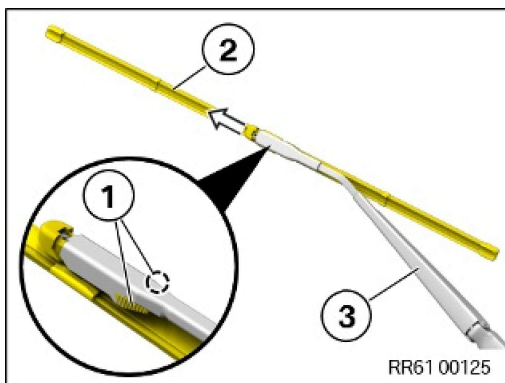
Description is for left component only. Procedure on the right side is identical.

1 – Remove the wiper blade



NOTICE

Description is for left component only. Procedure on the right side is identical.



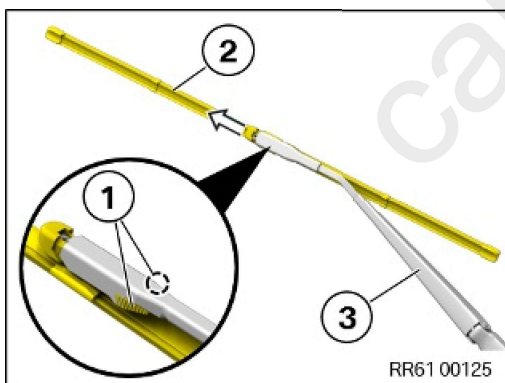
- Prepare for operating readiness.
- Hold the wipe-wash switch down until the windscreen wipers stand still in a roughly vertical position.
- Fold out the windscreen wiper arm (3) and press the locks together (1).
- Remove the wiper blade (2) from the wiper arm (3) in the direction of the arrow.

2 – Install the wiper blade



NOTICE

Description is for left component only. Procedure on the right side is identical.



- Clip in the wiper blade (2) in the direction of the arrow on the wiper arm (3).
- Fold in wiper arm (3) and check locks (1).
- Switch on driving readiness or hold the wash/wipe switch down again.

Windscreen wipers move back to wiper park position and are operational once again.

61 71 063 Removing and installing the washer fluid reservoir for the window washer system



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.

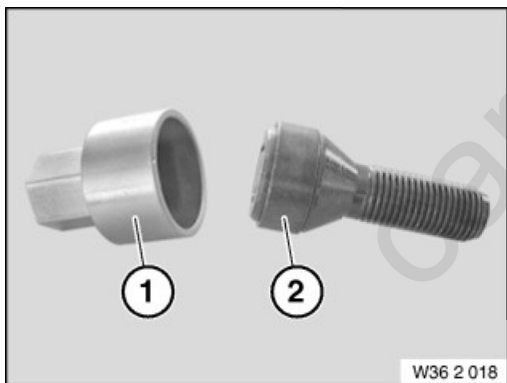
PRELIMINARY WORK

1 – Removing the wheel



- If several wheels are removed simultaneously, mark each tyre with a piece of chalk to show the axle and side on which the corresponding wheel is fitted.
- Release the wheel bolts (arrows) crosswise and remove the wheel.

► If installed: Remove the locking wheel bolt



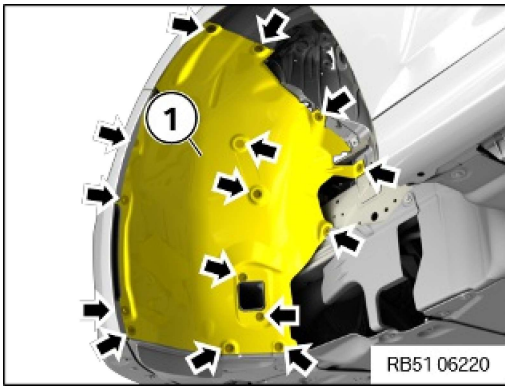
- To unscrew and tighten the wheel bolts with locking wheel bolts (2), use the correct adapter (1) from the set of special tools .

2 – Removing the front section of the front wheel arch cover



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.



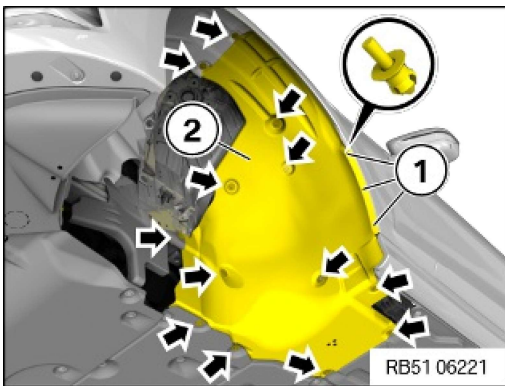
- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

3 – Removing the rear section of the front wheel arch cover front



NOTICE

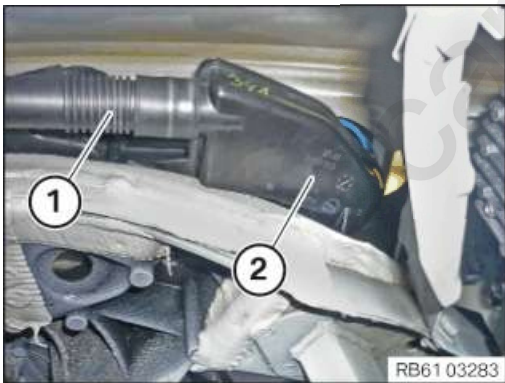
To provide a better overview: Schematic diagram with partially hidden components.



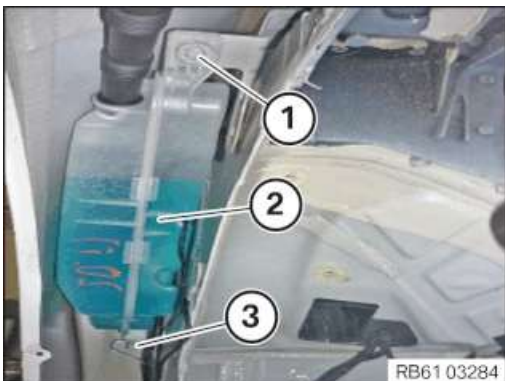
- Loosen the expanding rivet (1).
- Remove screws (arrows).
- Remove the rear section of the front wheel arch cover (2).

MAIN WORK

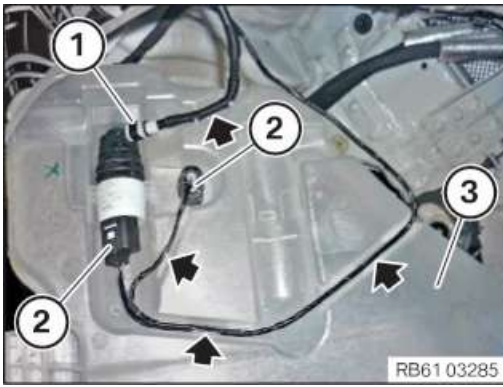
4 – Remove washer fluid reservoir



- Pull off filler channel (1) from fuel filler neck (2).

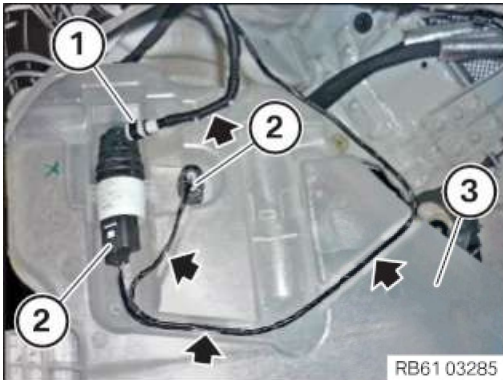


- Loosen screw (1).
- Guide out washer fluid reservoir (2) from holder (3).

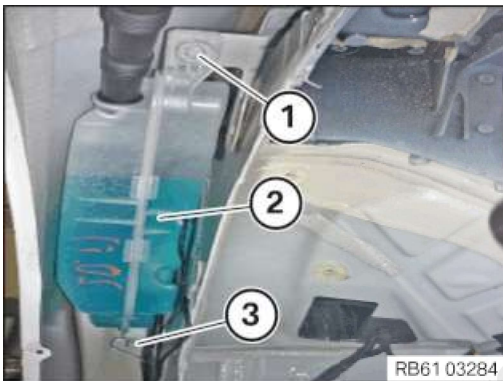


- Unlock hose pipe (1) and disconnect.
- Unclip the hose pipe (1) from the washer fluid hose (3) (arrow).
- Unlock and disconnect connector (2).
- Unclip the cable from the washer fluid reservoir (3) (arrows).

5 – Installing washer fluid reservoir



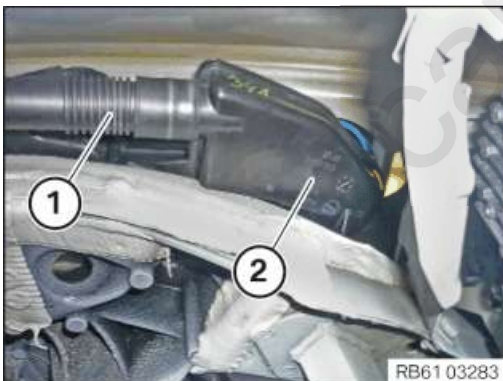
- Connect connector (2).
- Clip the cable into the washer fluid reservoir (3) (arrows).
- Connect and lock hose pipe (2).
- Clip the hose pipe (2) into the washer fluid reservoir (3) (arrow).



- Position the washer fluid reservoir (2) and feed towards the rear into the holder (3).
- Tighten down screw (1).

Washer fluid reservoir

	Tightening torque	8 Nm
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- Connect filler channel (1) with the fuel filler neck (2).

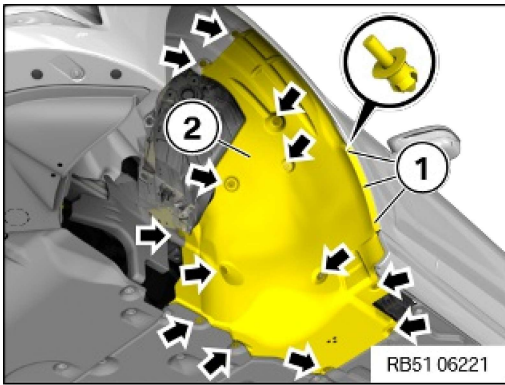
POSTPROCESSES

6 – Install the rear section of the front wheel arch cover



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.



- Install the rear section of the front wheel arch cover(2) .
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm
-----------------------------	--	-------------------	--------

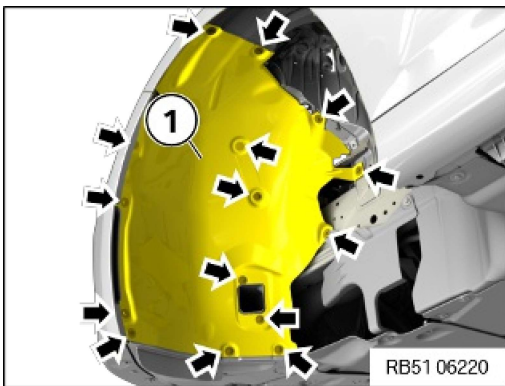
- Secure expanding rivet (1).

7 – Install the front section of the front wheel arch cover



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.

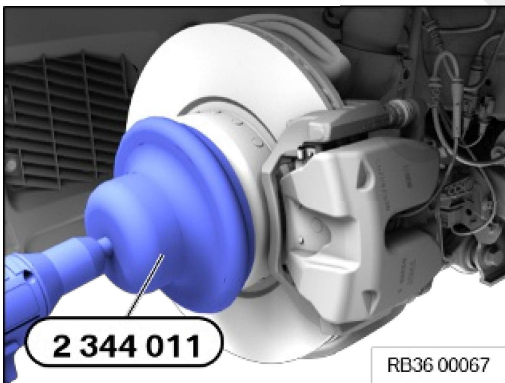


- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm
-----------------------------	--	-------------------	--------

8 – Mounting the wheel



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



TECHNICAL INFORMATION

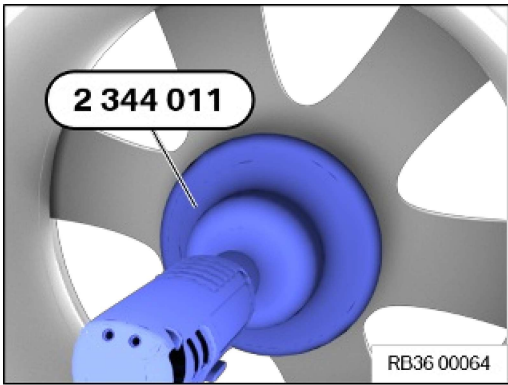
The contact surface between the brake disc and the wheel rim must be clean and free from oil and grease. There is otherwise a risk of the wheel becoming loose at a later time.

- 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 contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981
-------------------	-------------------	-------------

- In the event of grease residue in the area of the wheel bolt holes, remove and clean the brake disc.



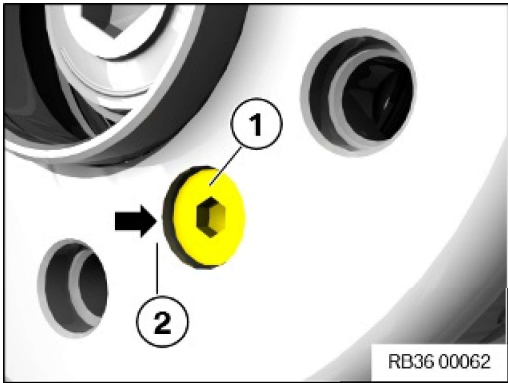
- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool [2 344 011](#).

Do not operate special tool [2 344 011](#) with an impact screwdriver.

- Degrease contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981
-------------------	-------------------	-------------



- 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 wheel hub

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



- Thinly grease the wheel centring (1) in the wheel rim.

Expendable materials

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



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.

- Clean the wheel bolts.
- Check the wheel bolts and threads for damage, renew the wheel bolts if necessary.
- Renew corroded wheel bolts.

Parts: Wheel bolts

- Tighten the wheel bolts (arrows) as follows:
Screw in the wheel bolts crosswise by hand.
Hand-tighten the wheel bolts evenly crosswise to centre the wheel rim.
Use the torque wrench to tighten the wheel bolts crosswise.
Tighten all wheel bolts crosswise again to check.

Wheel bolts

M14 / SW17	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

Additional Information

Overview of Tightening Torques

Washer fluid reservoir

Used in step 5

	Tightening torque	8 Nm
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Wheel arch trim panel, front

Used in step 67

Thermoplastic hexagon screw	Tightening torque	2,6 Nm
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Brake disc to wheel hub

Used in step 8

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

M14 / SW17	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

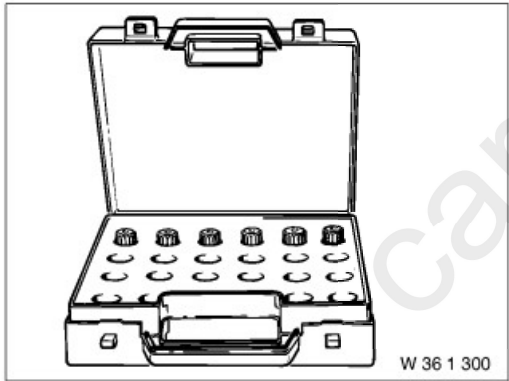
Overview of Special Tools

2 344 011 Tool



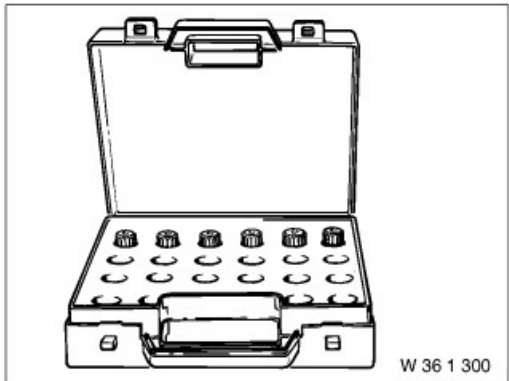
Usage	Tool (wheel hub grinder) for cleaning the connection of the wheel rim (wheel contact face) to the wheel hub.
Included in the tool or work	
Storage location	
Replaced by	
In connection with	
SI-Number	08 08 12 (872)

Replacement tools:
0 495 221 (36 1 323) Wheel stud



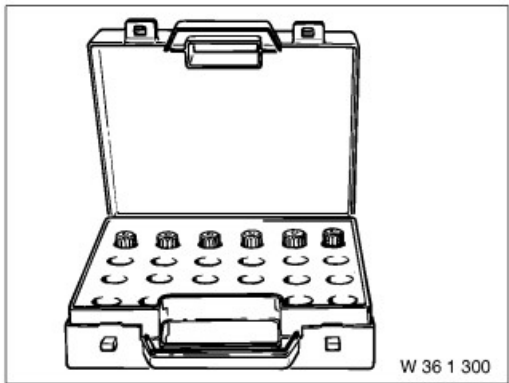
Usage	(Code 30) Code 39 available separately, (see EPC) under 36 13 1 181 259
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 224 (36 1 326) Wheel stud



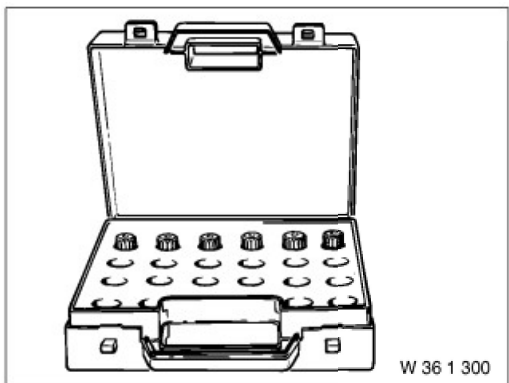
Usage	(Code 33) With centring bore available separately, (see EPC) under 36 13 6 765 546
Included in the tool or work	0 492 518
Storage location	
Replaced by	
In connection with	
SI-Number	

0 495 225 (36 1 327) Wheel stud



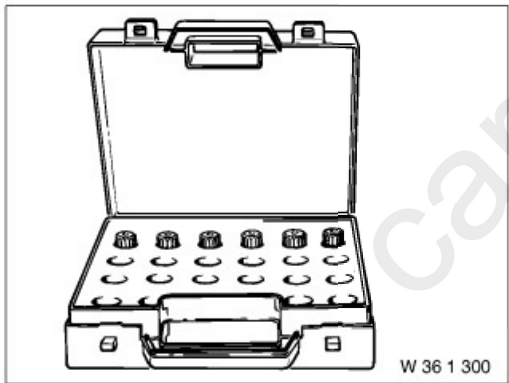
Common		Used in step	1
Usage	(Code 34) With centring bore available separately (see EPC) under 36 13 6 765 547		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 495 226 (36 1 328) Wheel stud



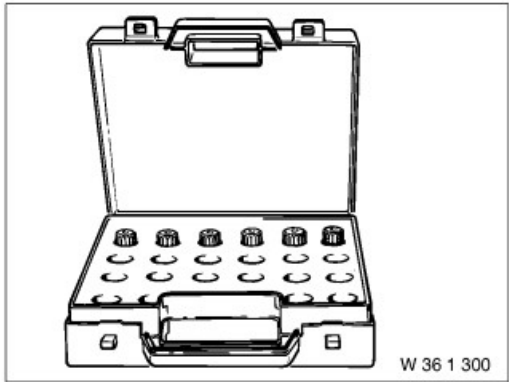
Common		Used in step	1
Usage	(Code 35) With centring bore available separately, (see EPC) under 36 13 6 762 340		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

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



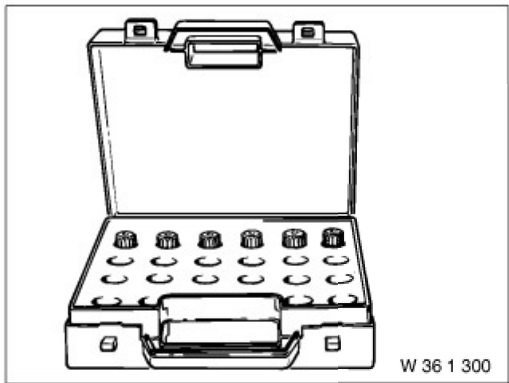
Common		Used in step	1
Usage	(Code 37) With centring bore available separately (see EPC) under 36 13 6 762 342		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

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

Repair instructions	Used in step
00 ... Raising the vehicle using a vehicle hoist	

61 71 100 Removing and installing/replacing window washer pump



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.

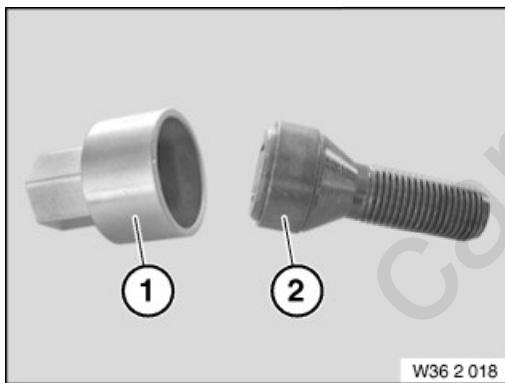
PRELIMINARY WORK

1 – Removing the wheel



- If several wheels are removed simultaneously, mark each tyre with a piece of chalk to show the axle and side on which the corresponding wheel is fitted.
- Release the wheel bolts (arrows) crosswise and remove the wheel.

► If installed: Remove the locking wheel bolt



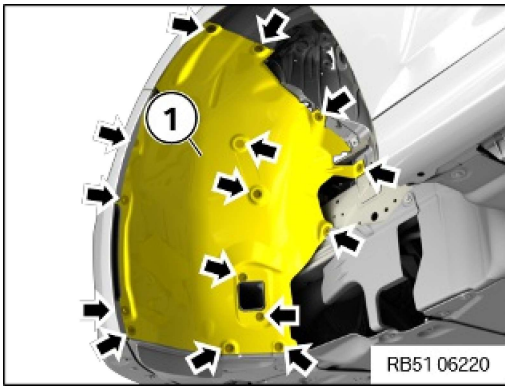
- To unscrew and tighten the wheel bolts with locking wheel bolts (2), use the correct adapter (1) from the set of special tools .

2 – Removing the front section of the front wheel arch cover



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.



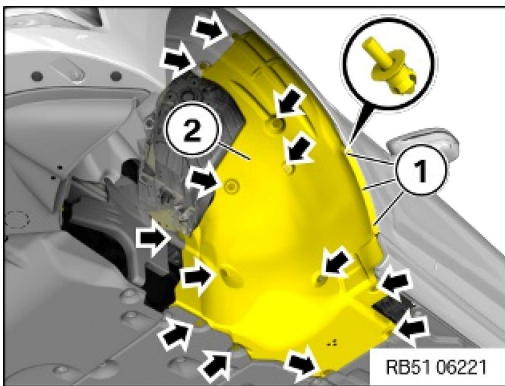
- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

3 – Removing the rear section of the front wheel arch cover front



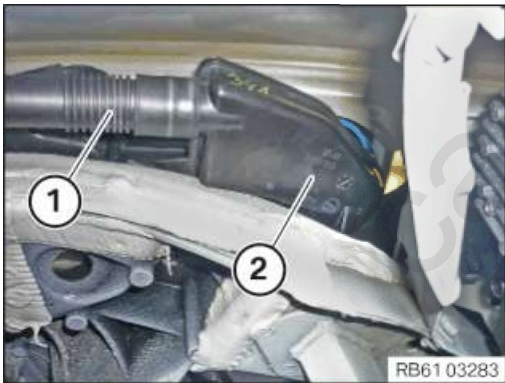
NOTICE

To provide a better overview: Schematic diagram with partially hidden components.

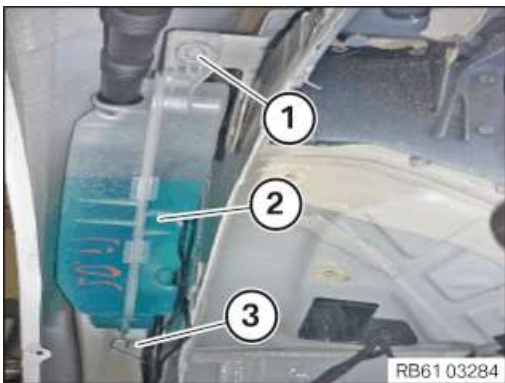


- Loosen the expanding rivet (1).
- Remove screws (arrows).
- Remove the rear section of the front wheel arch cover (2).

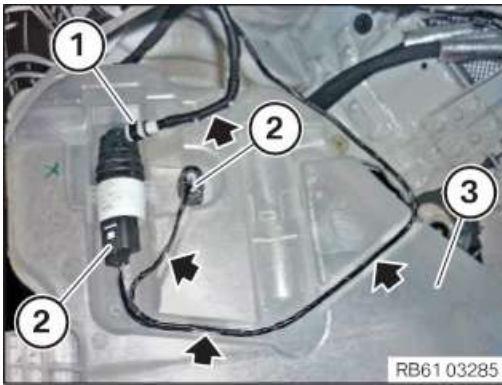
4 – Remove washer fluid reservoir



- Pull off filler channel (1) from fuel filler neck (2).



- Loosen screw (1).
- Guide out washer fluid reservoir (2) from holder (3).

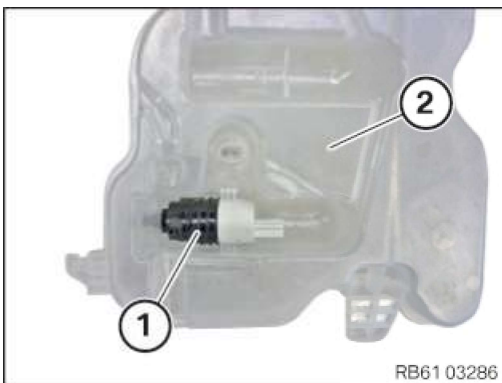


- Unlock hose pipe (1) and disconnect.
- Unclip the hose pipe (1) from the washer fluid hose (3) (arrow).
- Unlock and disconnect connector (2).
- Unclip the cable from the washer fluid reservoir (3) (arrows).

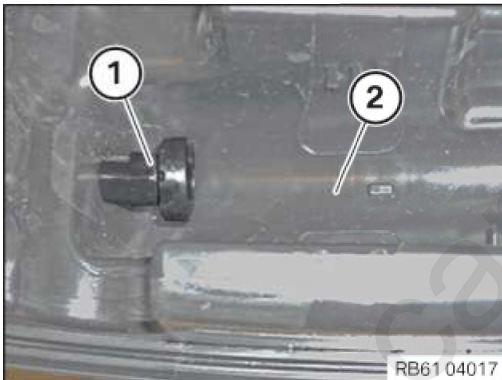
MAIN WORK

5 – Replace windscreen washer pump

► Remove window washer pump



- Pull washer pump relay (1) out of washer fluid hose (2).

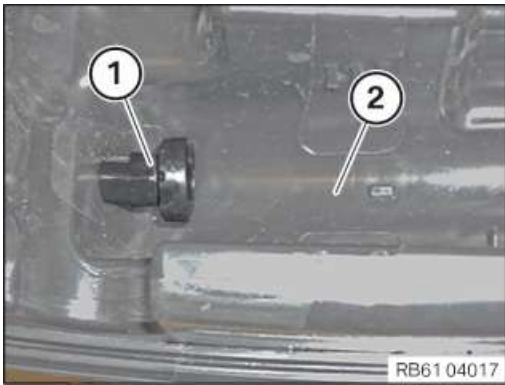


- Pull strainer with gasket (1) out of the washer fluid reservoir (2).

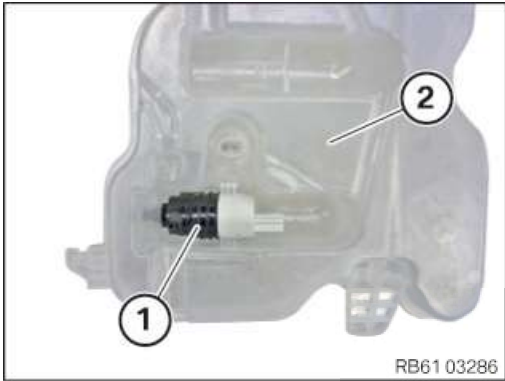
► Installing the window washer pump



- Check the strainer with seal (1) and pump (2) for damage.



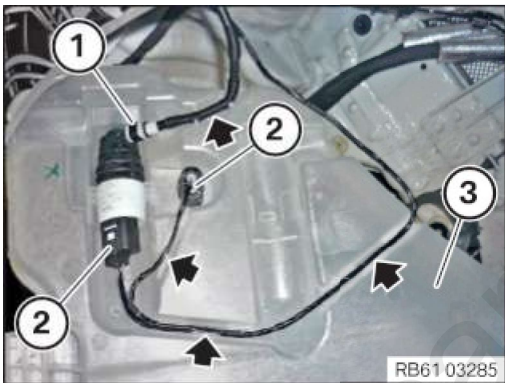
- Join strainer with gasket (1) into the washer fluid reservoir (2).



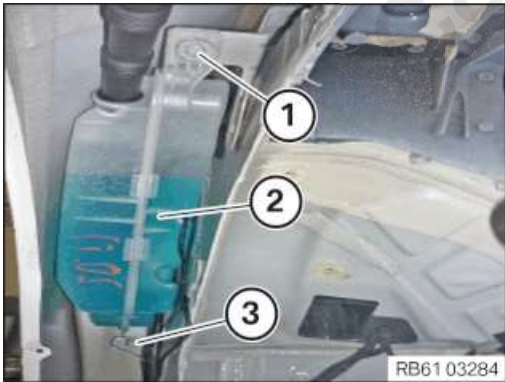
- Join windscreen washer pump (1) into washer fluid reservoir (2).

POSTPROCESSES

6 – Installing washer fluid reservoir



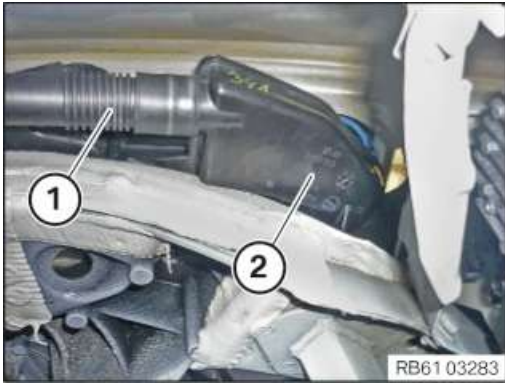
- Connect connector (2).
- Clip the cable into the washer fluid reservoir (3) (arrows).
- Connect and lock hose pipe (2).
- Clip the hose pipe (2) into the washer fluid reservoir (3) (arrow).



- Position the washer fluid reservoir (2) and feed towards the rear into the holder (3).
- Tighten down screw (1).

Washer fluid reservoir

	Tightening torque	8 Nm
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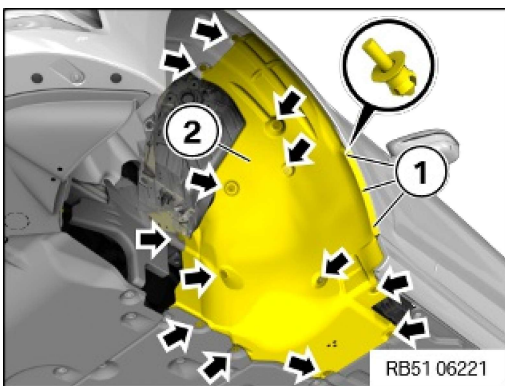
- Connect filler channel (1) with the fuel filler neck (2).

7 – Install the rear section of the front wheel arch cover



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.



- Install the rear section of the front wheel arch cover(2) .
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm
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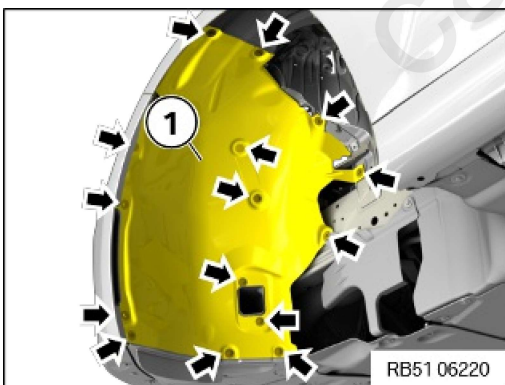
- Secure expanding rivet (1).

8 – Install the front section of the front wheel arch cover



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.



- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm
-----------------------------	--	-------------------	--------

9 – 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 contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981
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- In the event of grease residue in the area of the wheel bolt holes, remove and clean the brake disc.

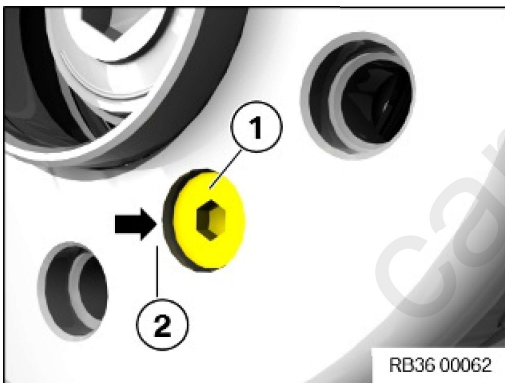
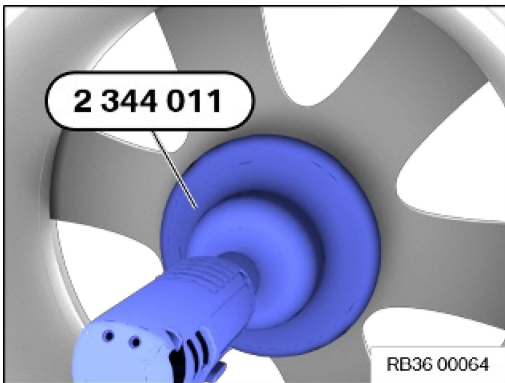
- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool [2 344 011](#).

Do not operate special tool [2 344 011](#) with an impact screwdriver.

- Degrease contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981
-------------------	-------------------	-------------



- 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 wheel hub

M8	Renew screw.	Tightening torque	16 Nm
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- Thinly grease the wheel centring (1) in the wheel rim.

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



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.

- Clean the wheel bolts.
- Check the wheel bolts and threads for damage, renew the wheel bolts if necessary.
- Renew corroded wheel bolts.

Parts: Wheel bolts

- Tighten the wheel bolts (arrows) as follows:
Screw in the wheel bolts crosswise by hand.
Hand-tighten the wheel bolts evenly crosswise to centre the wheel rim.
Use the torque wrench to tighten the wheel bolts crosswise.
Tighten all wheel bolts crosswise again to check.

Wheel bolts

M14 / SW17	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

Additional Information

Overview of Tightening Torques

Washer fluid reservoir

Used in step 6

	Tightening torque	8 Nm
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Wheel arch trim panel, front

Used in step 78

Thermoplastic hexagon screw	Tightening torque	2,6 Nm
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Brake disc to wheel hub			Used in step 9
M8	Renew screw.	Tightening torque	16 Nm

Wheel bolts			Used in step 9
M14 / SW17	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

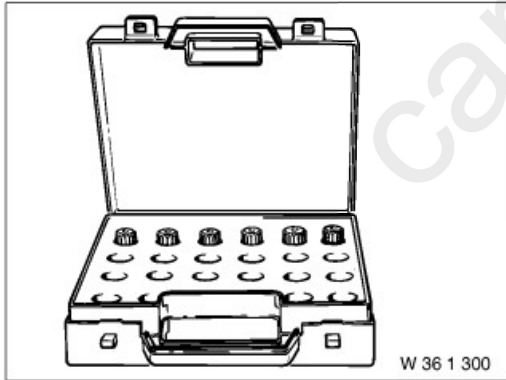
Overview of Special Tools

2 344 011 Tool



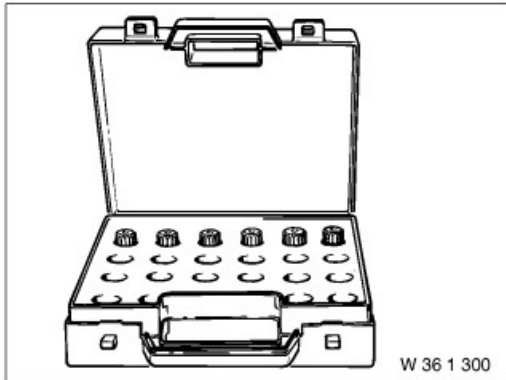
Common		Used in step 9
Usage	Tool (wheel hub grinder) for cleaning the connection of the wheel rim (wheel contact face) to the wheel hub.	
Included in the tool or work		
Storage location		
Replaced by		
In connection with		
SI-Number	08 08 12 (872)	

Replacement tools:
0 495 221 (36 1 323) Wheel stud



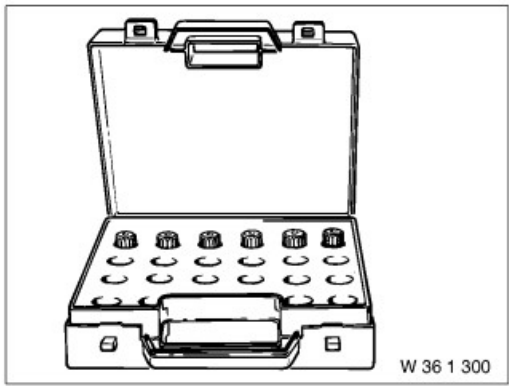
Common		Used in step 1
Usage	(Code 30) Code 39 available separately, (see EPC) under 36 13 1 181 259	
Included in the tool or work	0 492 518	
Storage location		
Replaced by		
In connection with		
SI-Number		

0 495 224 (36 1 326) Wheel stud



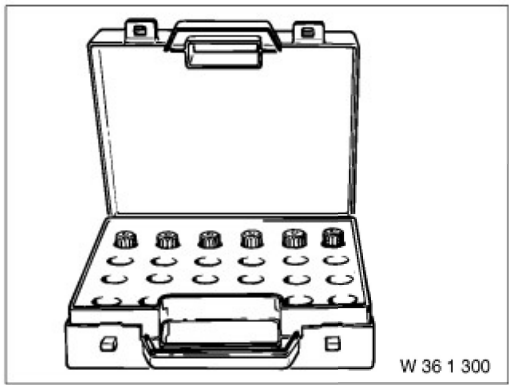
Common		Used in step 1
Usage	(Code 33) With centring bore available separately, (see EPC) under 36 13 6 765 546	
Included in the tool or work	0 492 518	
Storage location		
Replaced by		
In connection with		
SI-Number		

0 495 225 (36 1 327) Wheel stud



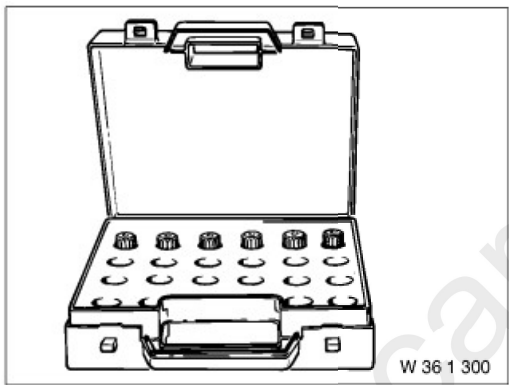
Common		Used in step	1
Usage	(Code 34) With centring bore available separately (see EPC) under 36 13 6 765 547		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 495 226 (36 1 328) Wheel stud



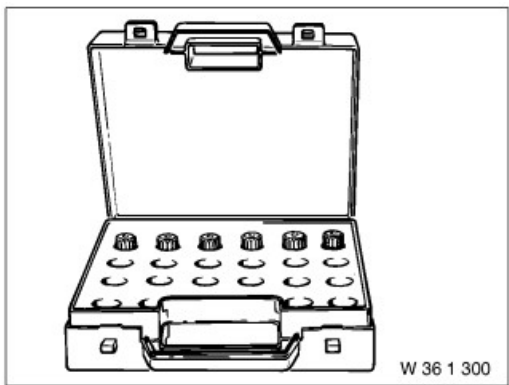
Common		Used in step	1
Usage	(Code 35) With centring bore available separately, (see EPC) under 36 13 6 762 340		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

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

Repair instructions	Used in step
00 ... Raising the vehicle using a vehicle hoist	

61 71 065 Replace the washer fluid reservoir for the window washer system



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.

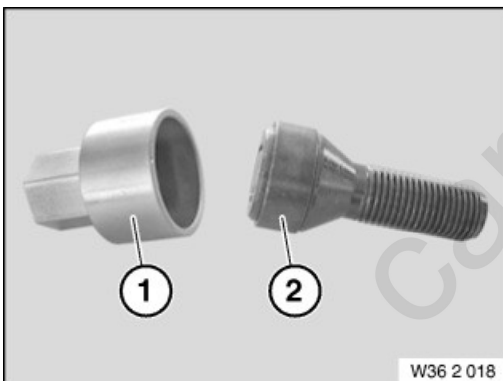
PRELIMINARY WORK

1 – Removing the wheel



- If several wheels are removed simultaneously, mark each tyre with a piece of chalk to show the axle and side on which the corresponding wheel is fitted.
- Release the wheel bolts (arrows) crosswise and remove the wheel.

► If installed: Remove the locking wheel bolt



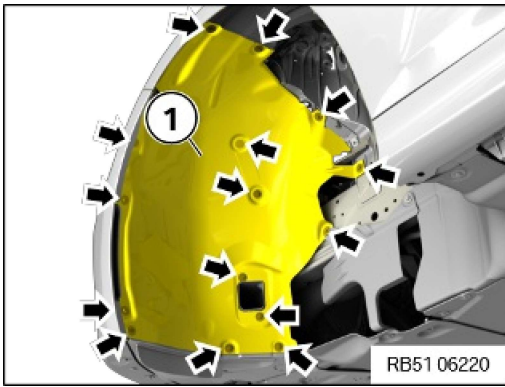
- To unscrew and tighten the wheel bolts with locking wheel bolts (2), use the correct adapter (1) from the set of special tools .

2 – Removing the front section of the front wheel arch cover



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.



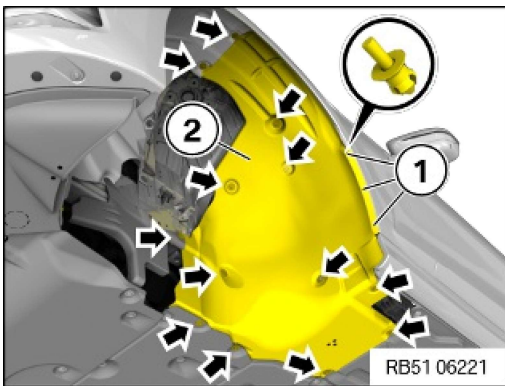
- Remove screws (arrows).
- Remove front section of the front wheel arch cover (1).

3 – Removing the rear section of the front wheel arch cover front



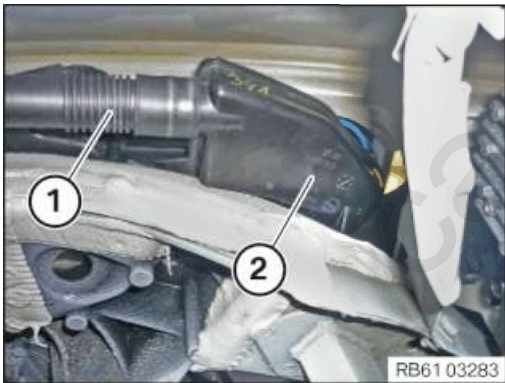
NOTICE

To provide a better overview: Schematic diagram with partially hidden components.

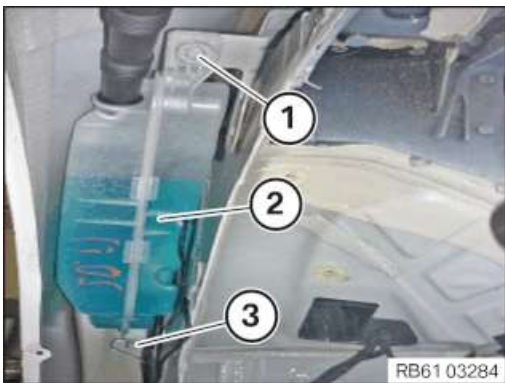


- Loosen the expanding rivet (1).
- Remove screws (arrows).
- Remove the rear section of the front wheel arch cover (2).

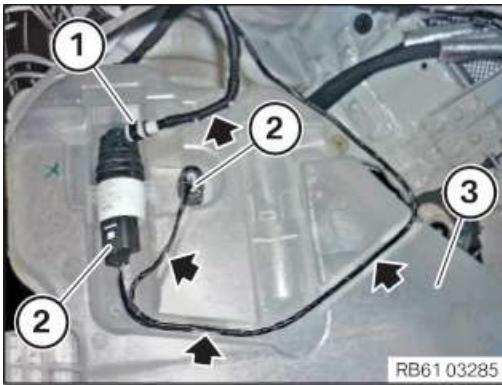
4 – Remove washer fluid reservoir



- Pull off filler channel (1) from fuel filler neck (2).



- Loosen screw (1).
- Guide out washer fluid reservoir (2) from holder (3).

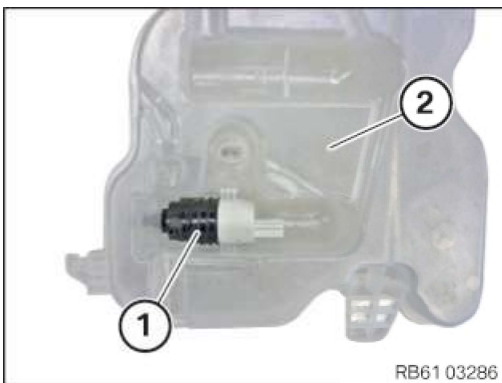


- Unlock hose pipe (1) and disconnect.
- Unclip the hose pipe (1) from the washer fluid hose (3) (arrow).
- Unlock and disconnect connector (2).
- Unclip the cable from the washer fluid reservoir (3) (arrows).

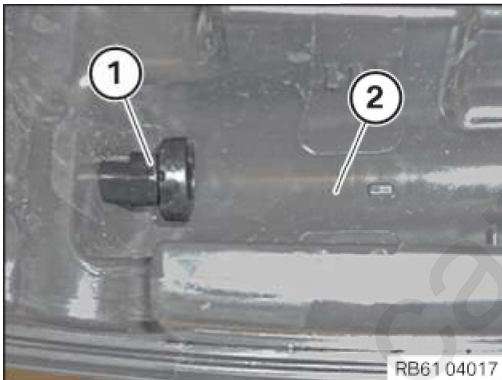
MAIN WORK

5 – Replace washer fluid reservoir

► Remove window washer pump



- Pull washer pump relay (1) out of washer fluid hose (2).

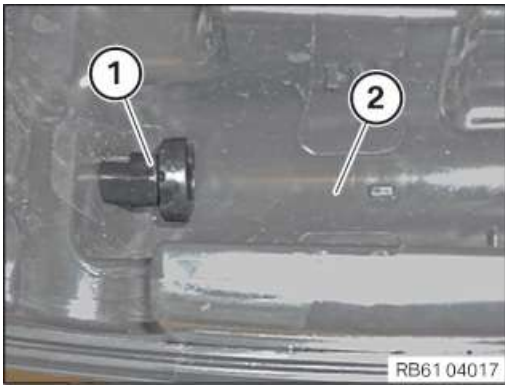


- Pull strainer with gasket (1) out of the washer fluid reservoir (2).

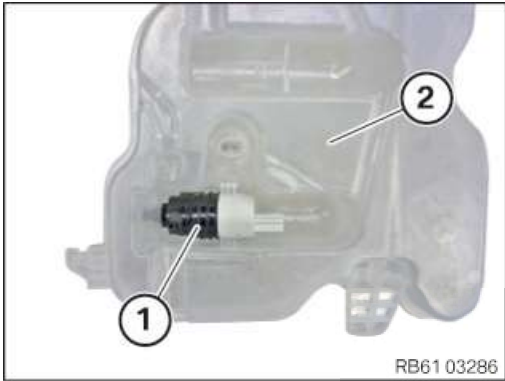
► Installing the window washer pump



- Check the strainer with seal (1) and pump (2) for damage.



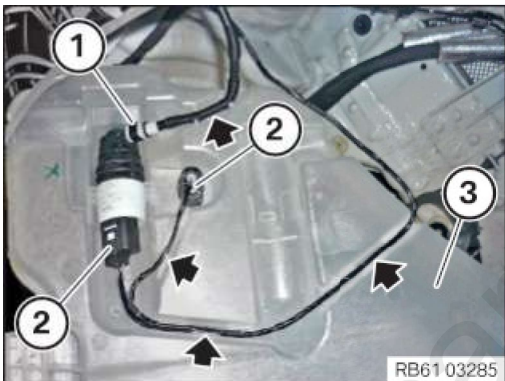
- Join strainer with gasket (1) into the washer fluid reservoir (2).



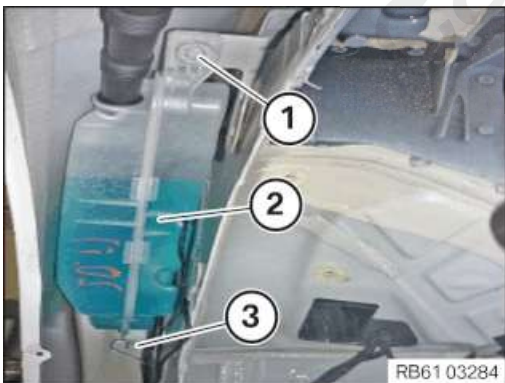
- Join windscreen washer pump (1) into washer fluid reservoir (2).

POSTPROCESSES

6 – Installing washer fluid reservoir



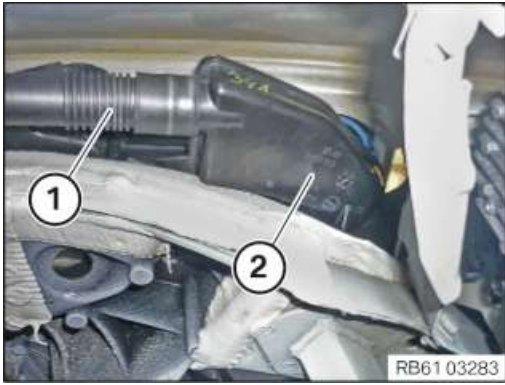
- Connect connector (2).
- Clip the cable into the washer fluid reservoir (3) (arrows).
- Connect and lock hose pipe (2).
- Clip the hose pipe (2) into the washer fluid reservoir (3) (arrow).



- Position the washer fluid reservoir (2) and feed towards the rear into the holder (3).
- Tighten down screw (1).

Washer fluid reservoir

	Tightening torque	8 Nm
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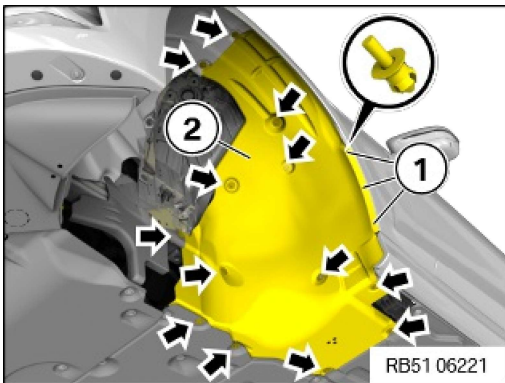
- Connect filler channel (1) with the fuel filler neck (2).

7 – Install the rear section of the front wheel arch cover



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.



- Install the rear section of the front wheel arch cover(2) .
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm
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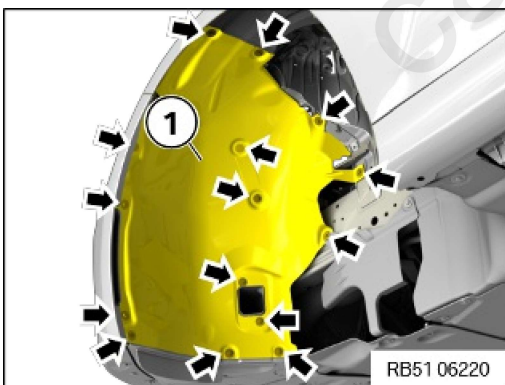
- Secure expanding rivet (1).

8 – Install the front section of the front wheel arch cover



NOTICE

To provide a better overview: Schematic diagram with partially hidden components.



- Install the front section of the front wheel arch cover (1).
- Tighten screws (arrows).

Wheel arch trim panel, front

Thermoplastic hexagon screw		Tightening torque	2,6 Nm
-----------------------------	--	-------------------	--------

9 – 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 contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981
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- In the event of grease residue in the area of the wheel bolt holes, remove and clean the brake disc.

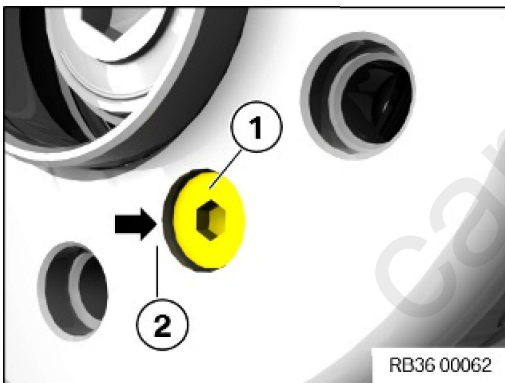
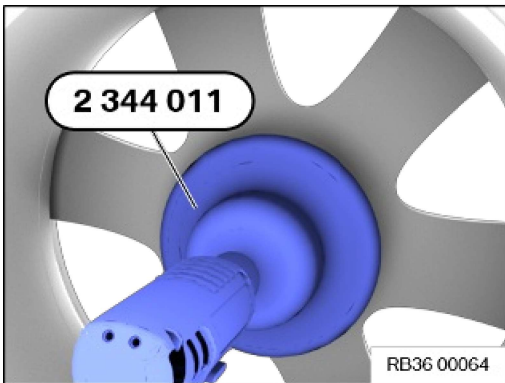
- Remove dirt, grease residues and corrosion from the contact surface with a drill and the special tool [2 344 011](#).

Do not operate special tool [2 344 011](#) with an impact screwdriver.

- Degrease contact surfaces.

Expendable materials

Universal cleaner	20 l, Canister	83192360981
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- 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 wheel hub

M8	Renew screw.	Tightening torque	16 Nm
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- Thinly grease the wheel centring (1) in the wheel rim.

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



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.

- Clean the wheel bolts.
- Check the wheel bolts and threads for damage, renew the wheel bolts if necessary.
- Renew corroded wheel bolts.

Parts: Wheel bolts

- Tighten the wheel bolts (arrows) as follows:

Screw in the wheel bolts crosswise by hand.

Hand-tighten the wheel bolts evenly crosswise to centre the wheel rim.

Use the torque wrench to tighten the wheel bolts crosswise.

Tighten all wheel bolts crosswise again to check.

Wheel bolts

M14 / SW17	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

Additional Information

Overview of Tightening Torques

Washer fluid reservoir

Used in step 6

	Tightening torque	8 Nm
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Wheel arch trim panel, front

Used in step 78

Thermoplastic hexagon screw	Tightening torque	2,6 Nm
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Brake disc to wheel hub			Used in step 9
M8	Renew screw.	Tightening torque	16 Nm

Wheel bolts			Used in step 9
M14 / SW17	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

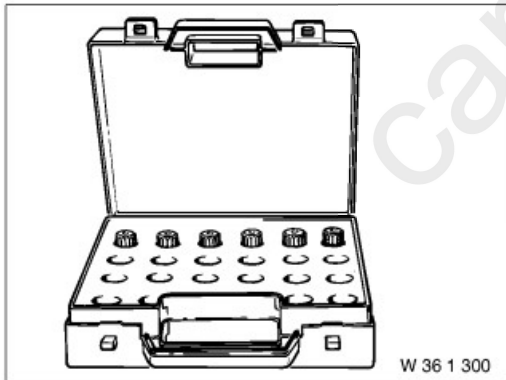
Overview of Special Tools

2 344 011 Tool



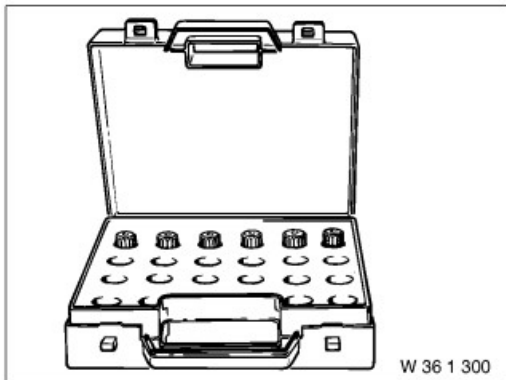
Common		Used in step 9
Usage	Tool (wheel hub grinder) for cleaning the connection of the wheel rim (wheel contact face) to the wheel hub.	
Included in the tool or work		
Storage location		
Replaced by		
In connection with		
SI-Number	08 08 12 (872)	

Replacement tools:
0 495 221 (36 1 323) Wheel stud



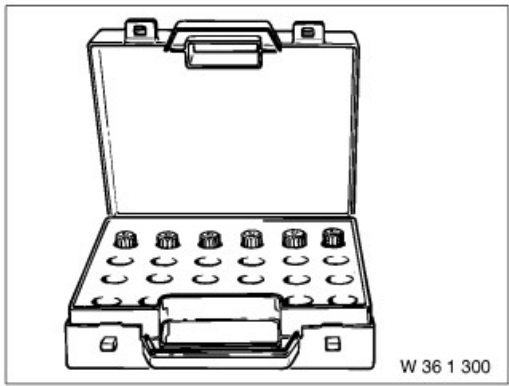
Common		Used in step 1
Usage	(Code 30) Code 39 available separately, (see EPC) under 36 13 1 181 259	
Included in the tool or work	0 492 518	
Storage location		
Replaced by		
In connection with		
SI-Number		

0 495 224 (36 1 326) Wheel stud



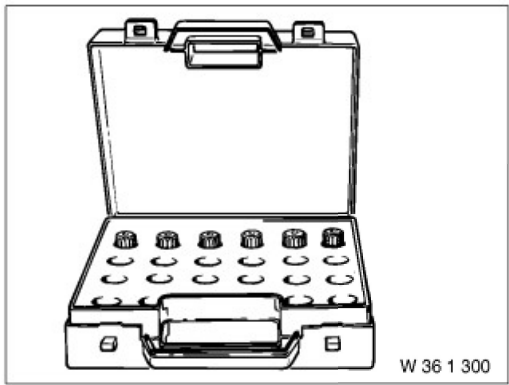
Common		Used in step 1
Usage	(Code 33) With centring bore available separately, (see EPC) under 36 13 6 765 546	
Included in the tool or work	0 492 518	
Storage location		
Replaced by		
In connection with		
SI-Number		

0 495 225 (36 1 327) Wheel stud



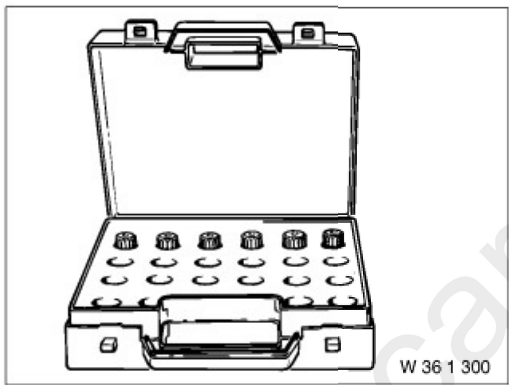
Common		Used in step	1
Usage	(Code 34) With centring bore available separately (see EPC) under 36 13 6 765 547		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 495 226 (36 1 328) Wheel stud



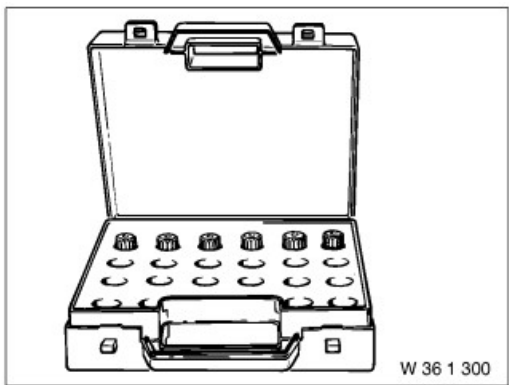
Common		Used in step	1
Usage	(Code 35) With centring bore available separately, (see EPC) under 36 13 6 762 340		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 495 227 (36 1 329) Wheel stud



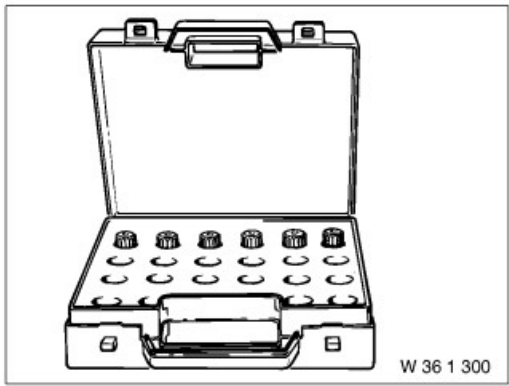
Common		Used in step	1
Usage	(Code 36) With centring bore available separately (see EPC) under 36 13 6 762 341		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

0 495 228 (36 1 331) Wheel stud



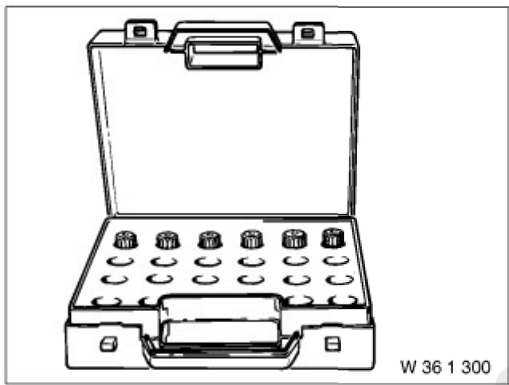
Common		Used in step	1
Usage	(Code 37) With centring bore available separately (see EPC) under 36 13 6 762 342		
Included in the tool or work	0 492 518		
Storage location			
Replaced by			
In connection with			
SI-Number			

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

Repair instructions	Used in step
00 ... Raising the vehicle using a vehicle hoist	