Update: Reworking Cross-Spoked Wheels

R 1200 GS (K50/11)
R 1200 GS Adventure (K51)
R nineT Scrambler (K23)
R nineT Urban G/S (K33)

Leadership circle

Marketing

Sale
New motorcycles

Sale
Used motorcycles

Aftersales

Administration

Service Information No. SI 36 001 18R2

04/2019

Service Information No. SI 36 001 18R2

R Models K5x, K23, K33 Update: Reworking Cross-Spoked Wheels

Details
During the course of quality analysis, it was determined by BMW Motorrad that in the production period from February 2018 to end of June 2018, cross-spoked wheels with reduced spoke tension have been produced.

Vehicles affected
In order to determine if a specific vehicle is affected by this Technical Campaign, it will be necessary to verify all VIN's through AIR (Aftersales Information Research). Based on the response of the system, either proceed with the repair or take no further action. Please note, VIN's in DCS Vehicle History Check may not appear until 24-72 hours after the release of this bulletin, therefore AIR is the recommended method for determining open campaigns.

Production Solution
As of 06/03/2018 (R1200-models), 06/23/2018 (R nineT-models) vehicles are delivered in which the cross-spoked wheels have been produced with correct tension.

Service Solution
For the affected vehicles, the cross-spoked wheels are to be reworked **before delivery** or at the next workshop visit. This service action should be performed for those vehicles, in which the cross-spoked wheel had been previously reworked or replaced.

NOTICE

Create a **TSARA** case if there are missing spokes or other noticeable problems in the cross spoke wheel.

NOTICE

Extremely dirty wheels must be cleaned before reworking. Additional worktime can be billed by specifying the reason.

Special tool
A special tool kit is now offered for reworking cross spoke wheels. This tool kit makes retightening the spoke nipple easier.

The description of reworking in combination with the tool kit can be found in the attached repair manual 00 60 190.

Figure 1: Tool kit for cross spoke wheels

Special Tool Kit Part Number

83 30 2 468 869	**1x Tool kit for cross spoke wheels**

NOTICE

Note: One Special Tool set 83 30 2 468 869 will be autoshipped to all dealers. This one tool set can be claimed one time per dealer by adding the part number to a single warranty claim related to thiscampaign

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Parts
No parts are required for the reworking

Warranty processing
Covered by the normal terms of the BMW New Motorcycle Limited Warranty.

Defect code

00 36 08 00 00	Reworking cross-spoked wheels

FRU number

*00 60 190	Cross spoked Wheels Rework, 17 FRU's
+00 60 702	Cross spoked Wheels Rework, 16 FRU's

*Main Work: These main labor operations include all repair procedures to complete the task with allowance for necessary ancillary tasks (e.g. visual inspection, lubrication, cleaning parts etc.) and administrative tasks. Only one main labor operation can be claimed per repair visit. All other labor operations for any other line(s) must be claimed using plus code labor operations. Please refer to the Warranty Policy and Procedures Manual regarding add-ons, proper support, documentation, claims submission and archiving requirements as applicable.

Questions regarding this bulletin?

For technical inquires in relation to this bulletin	Please contact Motorrad Technical Support Group
For warranty inquires in relation to this bulletin.	Submit an IDS ticket to the Warranty Department
For parts inquires in relation to this bulletin	Submit an IDS ticket to the Motorrad Parts Department

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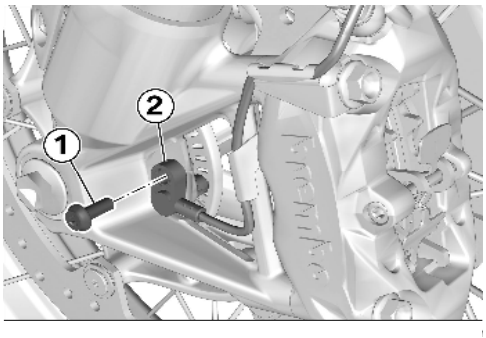
R Models K5x, K23, K33 Update: Reworking Cross-Spoked Wheels

0A01 - R 1200 GS

00 60 190 Rework cross-spoked wheel

1

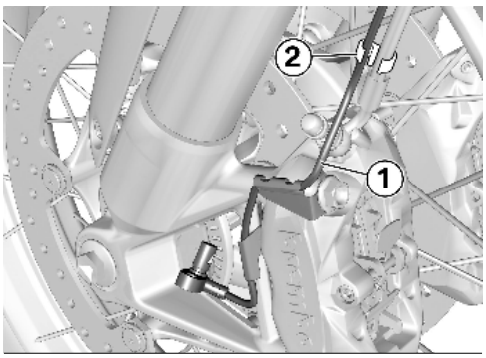


▶ **Releasing front wheel-speed sensor**

– With cross-spoked wheels^{OE} (0771)
- Remove screws **(1)**.
- Release wheel-speed sensor **(2)**.

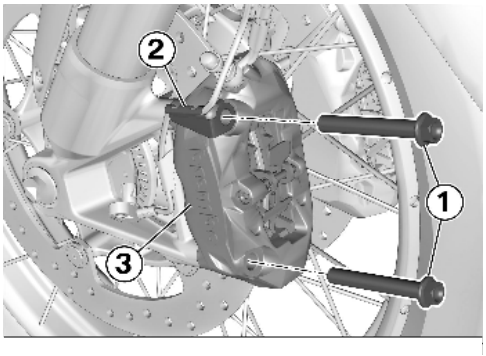
◀

2



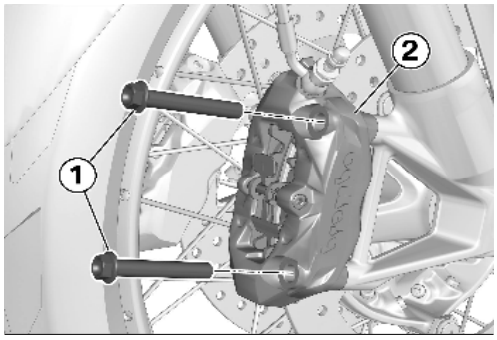
▶ **Removing left brake caliper**

– With cross-spoked wheels^{OE} (0771)
- Disengage line **(1)** from holder **(2)**.



– With cross-spoked wheels^{OE} (0771)
- Remove screws **(1)**.
- Disengage bracket **(2)**.
- Release brake caliper **(3)**.

3

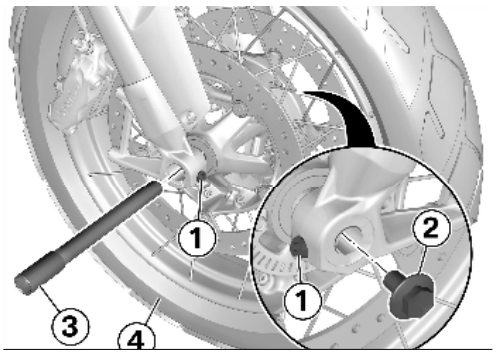


▶ Removing right brake caliper

– With cross-spoked wheels[OE] (0771)

- Remove screws **(1)**.
- Release brake caliper **(2)**.

4

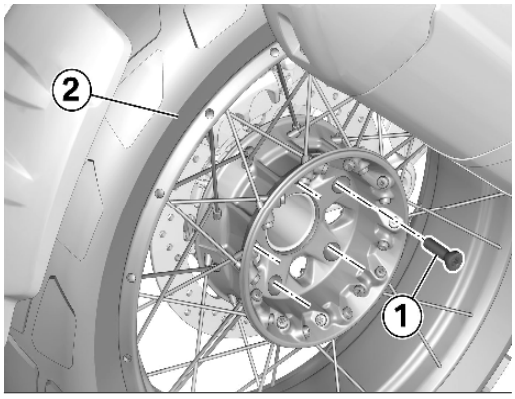


▶ Removing front wheel

– With cross-spoked wheels[OE] (0771)

- Slacken axle clamping screws **(1)**.
- Remove screw **(2)**.
- Remove quick-release axle **(3)**.
- Roll front wheel **(4)** forward to remove.

5



Removing rear wheel

– With cross-spoked wheels[OE] (0771)

- Remove wheel studs **(1)**.
- Remove rear wheel **(2)**.

6

Check spoke tension

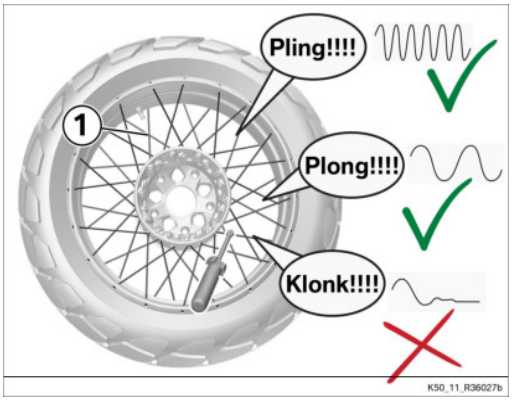
NOTICE

The procedure described for the check and for adjustment of the spoke tension is the same for front wheel and rear wheel.

- Adjust tire pressure for check.

Technical data		
Tire pressure, front	tire cold	2.5 bar
Tire pressure, rear	tire cold	2.9 bar

- Clean wheels, especially wheel hubs, in case of strong contamination.



Check

- Tap the spokes with a screwdriver and listen for the correct ringing sound.

Result

- Tone of the spoke is not present, spoke does not vibrate

Measure

- Mark spoke.

Check

- More than 7 spokes with a loss of tension

Measure

- Replace the wheel rim.

Check

- 7 or less spokes with a loss of tension

Measure

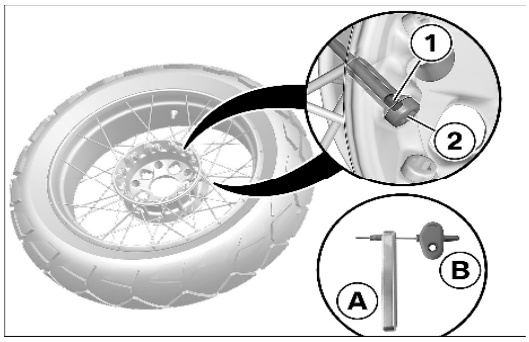
- Adjust spoke tension.

Adjust spoke tension

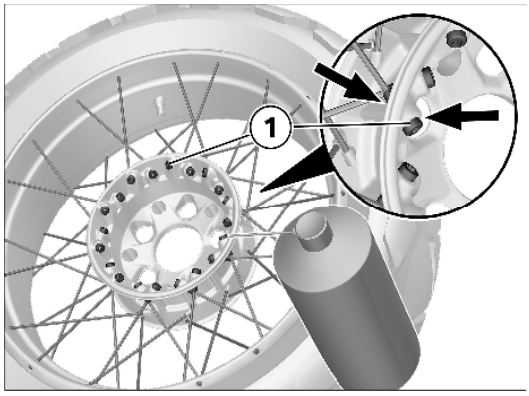
- Use the cross-spoke tool kit to adjust the spoke tension.

Workshop equipment

- Tool kit cross-spoke 83 30 2 468 869

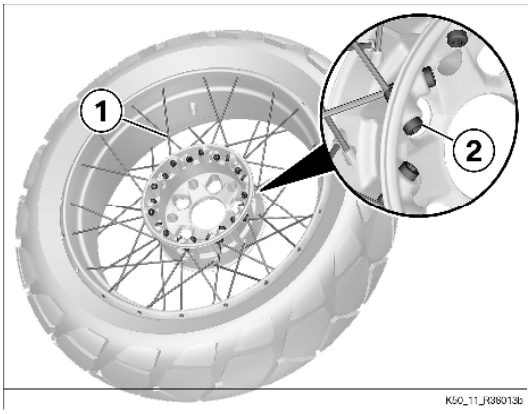


- On both sides, slacken all set screws **(1)** in spoke nipples **(2)** with hexagon socket **(B)** and unscrew four revolutions while counter- holding with spoke nipple holder **(A)**.



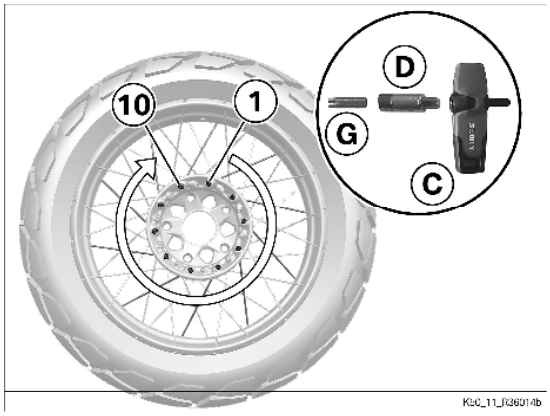
- On both sides lubricate spoke nipples **(1)** on head and spokes side.

Lubricant	
Multifunction spray	83 23 0 418 567



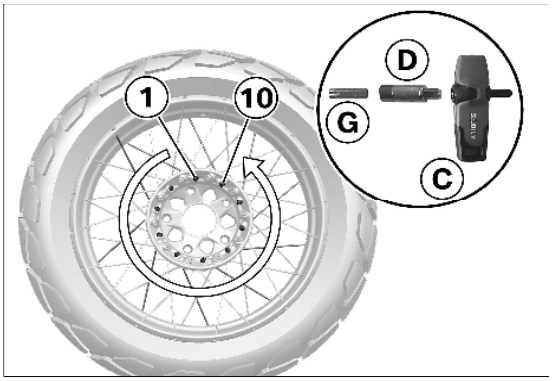
- Adjust spokes tension **mark** spokes **(1)** on spokes nipples **(2)**.

» Same clear sound in the sound test, as for the adjacent spokes.



- Tighten spoke nipple in the upper row in tightening sequence from **(1)** to **(10)** with grip **(C)**, torque socket **(D)** and Torx socket **(G)**.

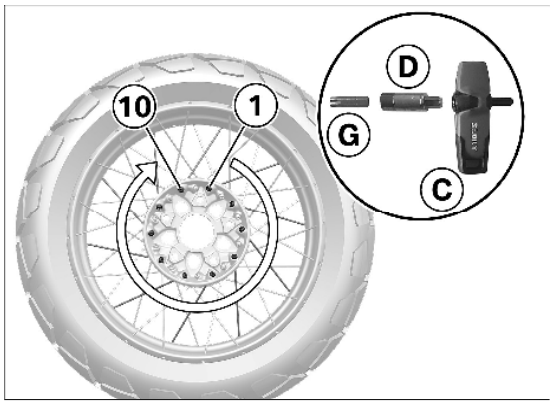
Tightening torques		
Nipple on spoke of pre-torqueing		
M4	3 Nm	– with cross-spoked wheels[OE] (0771)



- Tighten spoke nipple in the lower row in tightening sequence from **(1)** to **(10)** with grip **(C)**, torque socket **(D)** and Torx socket **(G)**.

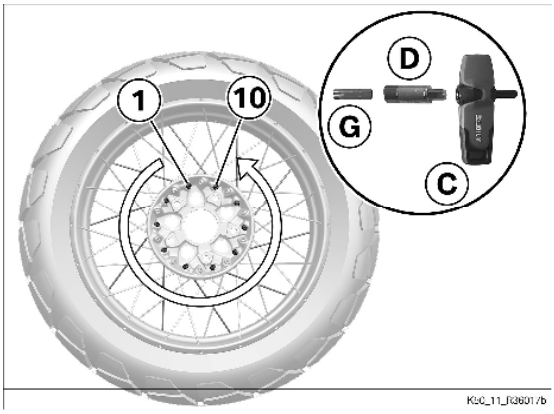
Tightening torques		
Nipple on spoke of pre-torqueing		
M4	3 Nm	– with cross-spoked wheels[OE] (0771)

Turn the wheel.



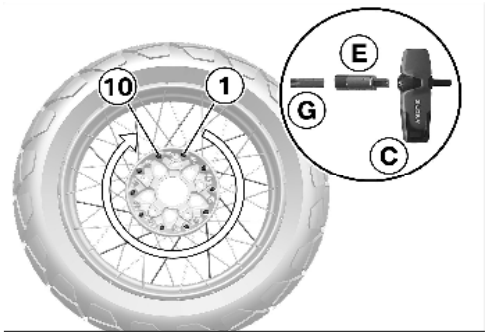
- Tighten spoke nipple in the upper row in tightening sequence from **(1)** to **(10)** with grip **(C)**, torque socket **(D)** and Torx socket **(G)**.

Tightening torques		
Nipple on spoke of pre-torqueing		
M4	3 Nm	– with cross-spoked wheels[OE] (0771)



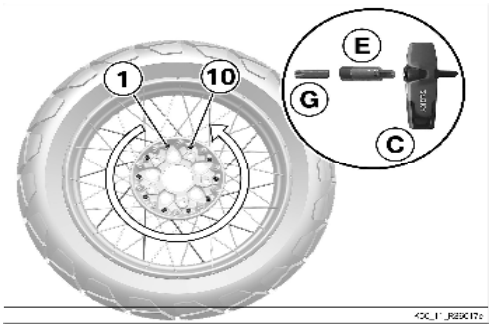
- Tighten spoke nipple in the lower row in tightening sequence from **(1)** to **(10)** with grip **(C)**, torque socket **(D)** and Torx socket **(G)**.

Tightening torques		
Nipple on spoke of pre-torqueing		
M4	3 Nm	– with cross-spoked wheels[OE] (0771)



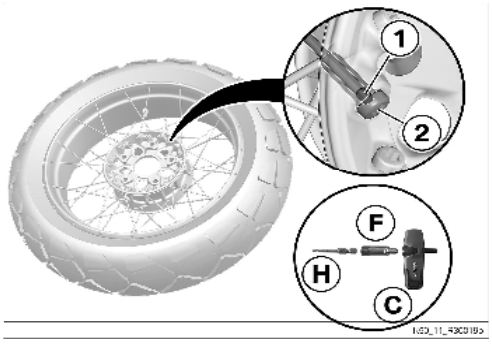
- Tighten spoke nipple in the upper row in tightening sequence from **(1)** to **(10)** with grip **(C)**, torque socket **(E)** and Torx socket **(G)**.

Tightening torques		
Nipple on spoke tightening torque		
M4	5 Nm	– with cross-spoked wheels[OE] (0771)



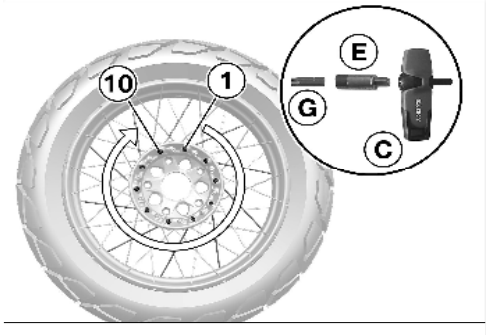
- Tighten spoke nipple in the lower row in tightening sequence from **(1)** to **(10)** with grip **(C)**, torque socket **(E)** and Torx socket **(G)**.

Tightening torques		
Nipple on spoke tightening torque		
M4	5 Nm	– with cross -spoked wheels[OE] (0771)



- Tighten set screws **(1)** in spoke nipples **(2)** with suitable torque wrench with handle **(C)**, torque socket **(F)** and hexagon socket **(H)**.

Tightening torques	
Screw lock for spoke nipple	
Set screw, M4	2 Nm



Turn the wheel once again.

- Tighten spoke nipple in the upper row in tightening sequence from **(1)** to **(10)** with grip **(C)**, torque socket **(E)** and Torx socket **(G)**.

Tightening torques		
Nipple on spoke tightening torque		
M4	5 Nm	– with cross-spoked wheels[OE] (0771)

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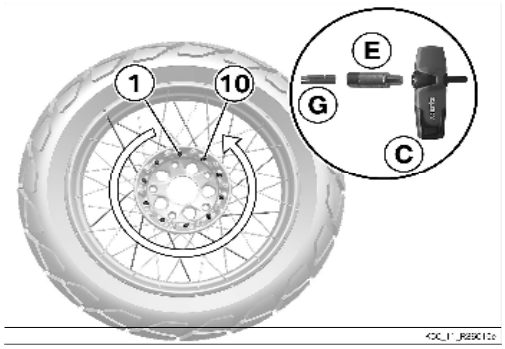
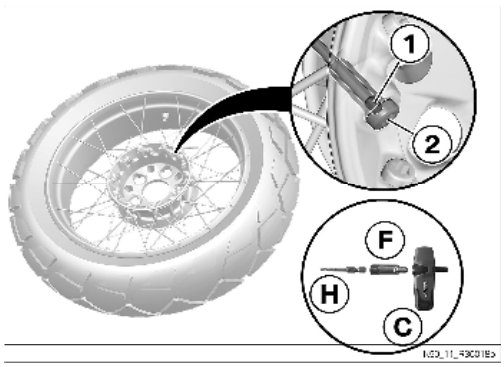


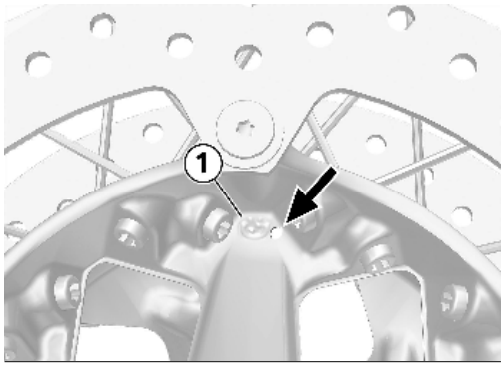
- Tighten spoke nipple in the lower row in tightening sequence from **(1)** to **(10)** with grip **(C)**, torque socket **(E)** and Torx socket **(G)**.

Tightening torques		
Nipple on spoke tightening torque		
M4	5 Nm	– with cross-spoked wheels[OE] (0771)



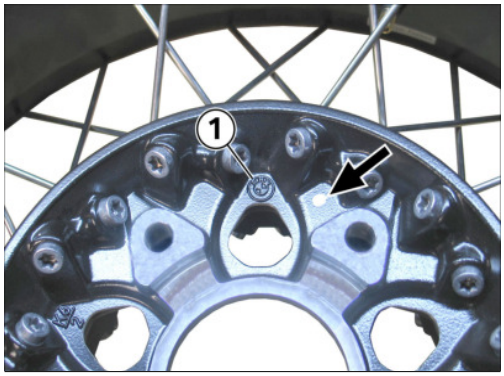
- Tighten set screws **(1)** in spoke nipples **(2)** with handle **(C)**, torque socket **(F)** and hexagon socket **(H)**.

Tightening torques	
Screw lock for spoke nipple	
Set screw, M4	2 Nm



Affix mark on the front side

- Put a **White** point **(arrow) on right near** BMW brand.



Affix mark on the rear side

- Put a **White** point **(arrow) on right near** BMW brand.

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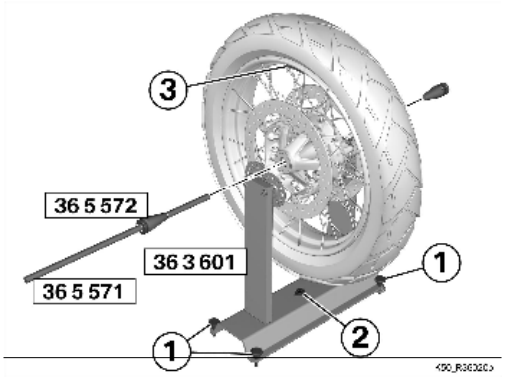
R Models K5x, K23, K33 Update: Reworking Cross-Spoked Wheels

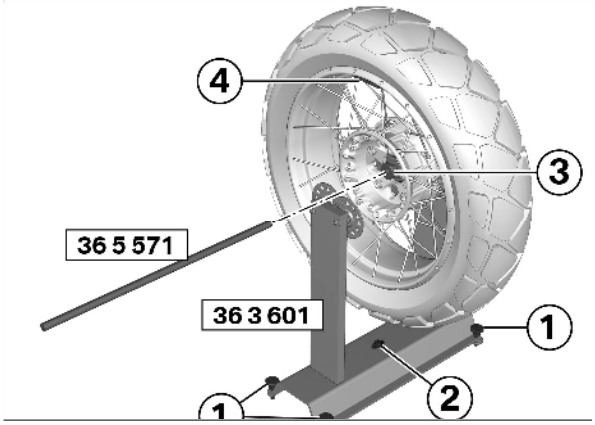


Statically balancing front wheel

- Align balancing jig (36 3 601) with knurled screws **(1)** and bubble level **(2)**.
- Insert balancing shaft (36 5 571) in front-wheel bearing and secure it with tensioner (36 5 572), making sure that front- wheel bearing is **lightly** preloaded.
- Remove old adhesive weights **(3)**.
- Place the front wheel on the balancing jig and allow it to come to rest.
- Clean the attachment points for the adhesive weights.
- Affix **new** adhesive weights **(3)** opposite the heaviest point of the wheel.

Technical data	
Permissible front-wheel imbalance	max 5 g
Balance weight for front wheel One half of the weights must be attached to the left and the other half to the right of the wheel rim	max 80 g

- Repeat the balancing procedure as a check.



Statically balancing rear wheel

- Align balancing jig (36 3 601) with knurled screws **(1)** and bubble level **(2)**.
- Introduce balancing shaft (36 5 571) into the rear wheel and secure it with tensioning device **(3)**.
- Place the rear wheel on the balancer and allow it to come to rest.
- Clean the attachment points for the adhesive weights.
- Affix adhesive weights **(4) opposite the heaviest point of the wheel**.

Technical data	
Permissible front-wheel imbalance	max 45 g
Balance weight for the rear wheel One half of the weights must be attached to the left and the other half to the right of the wheel rim	max 80 g

- Repeat the balancing procedure as a check.

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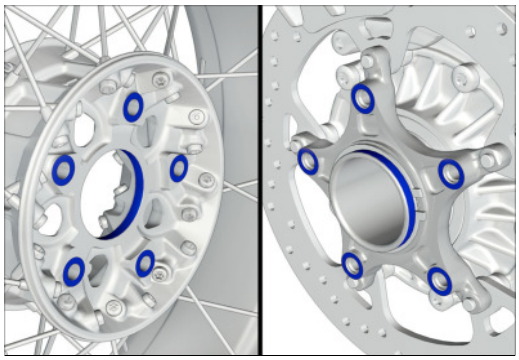
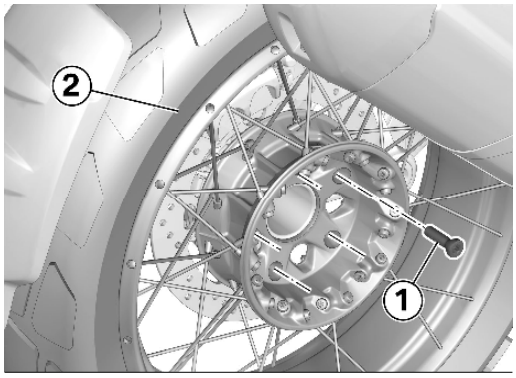


Install the rear wheel

– With cross-spoked wheels[OE] (0771)

- Clean the wheel centering spigot and the contact surfaces of the wheel hub.



– With cross-spoked wheels[OE] (0771)

- Hold rear wheel **(2)** in position.
- Engage all wheel studs **(1)** on their threads, then tighten uniformly.

Tightening torques	
Rear wheel to wheel flange	
M10 x 1.25 x 40	**Tightening sequence: tighten in diagonally opposite sequence**
	60 Nm

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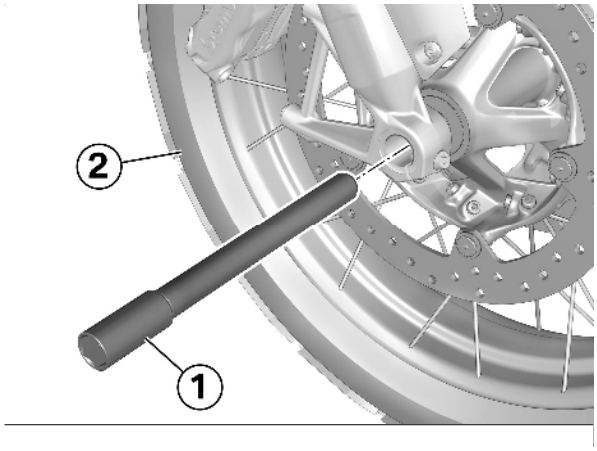


Install the front wheel

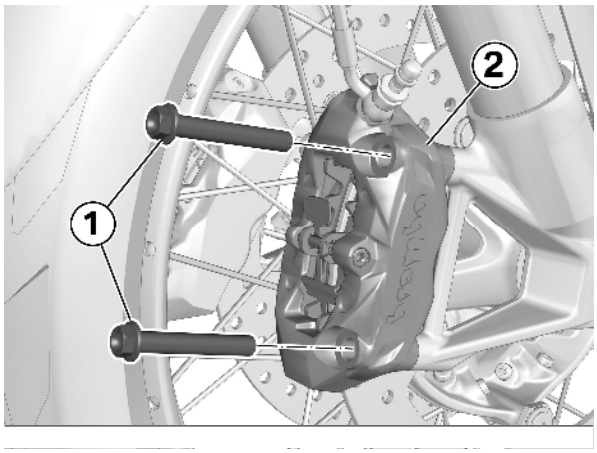
– With cross-spoked wheels[OE] (0771)

- Clean and lubricate quick-release axle **(1)**.

Lubricant	
Optimoly TA	18 21 9 062 599

- Hold front wheel **(2)** in position.
- Install quick-release axle **(1)**.

Securing right brake caliper

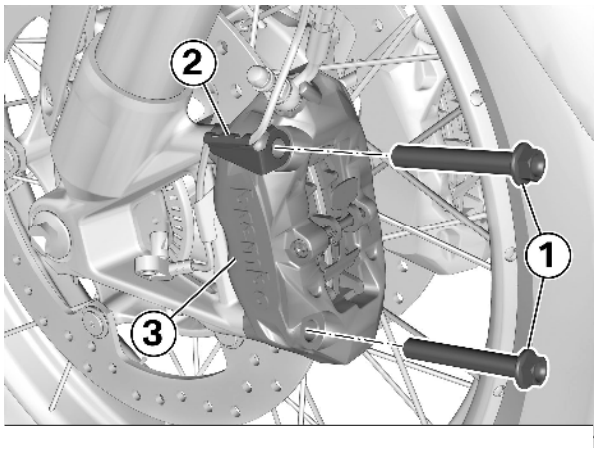


– With cross-spoked wheels[OE] (0771)

- Hold brake caliper **(2)** in position.
- Install screws **(1)**.

Tightening torques	
Brake caliper on telescopic fork	
M10 x 65	38 Nm

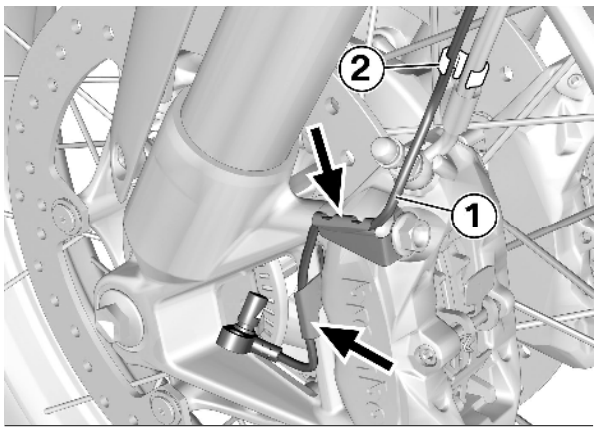
Securing left brake caliper



– With cross-spoked wheels[OE] (0771)

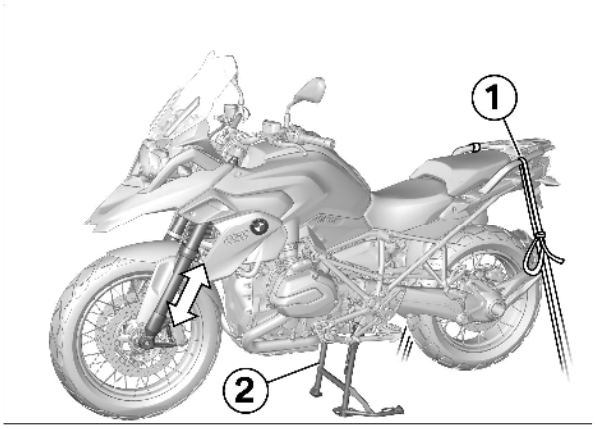
- Hold brake caliper **(3)** in position with bracket **(2)**.
- Install screws **(1)**.

Tightening torques	
Brake caliper on telescopic fork	
M10 x 65	38 Nm



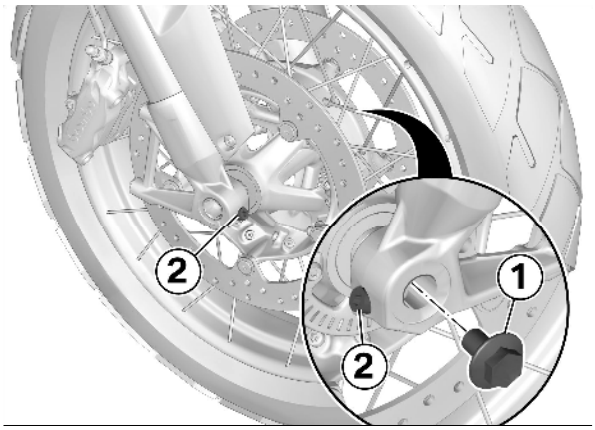
– With cross-spoked wheels[OE] (0771)

- Secure line **(1)** in holder **(2)**.
- Check that line **(1)** is correctly routed in the holders **(arrows)**.



– With cross-spoked wheels[OE] (0771)

- Disengage ratchet straps **(1)** at the rear.
- Retract center stand **(2)**.
- Firmly compress the front forks several times.
- Place the motorcycle on center stand **(2)**.



– With cross-spoked wheels[OE] (0771)

- Install screw **(1)**.

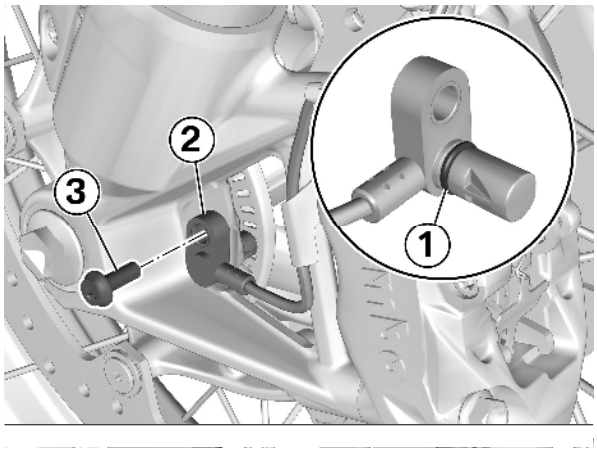
Tightening torques	
Quick-release axle in telescopic forks	
M12 x 20	30 Nm

- Tighten clamping screws **(2)**.

Tightening torques	
Clamping screw for quick-release axle in telescopic fork	
M8 x 35	19 Nm

9

Securing front wheel-speed sensor



– With cross-spoked wheels[OE] (0771)

- Check O-ring **(1)** for damage; replace if necessary. Hold
- wheel-speed sensor **(2)** in position.
- Install screw **(3)**.

Tightening torques	
Wheel-speed sensor to bevel gears	
M6 x 16	8 Nm

10

Final check of work performed

- Check the following:
  - The work as performed achieved the intended purpose.
  - All reservoirs and containers have been filled and all fluids and lubricants are at their correct levels.
  - All threaded fasteners released beforehand have been correctly retightened.
  - The fuel system is free of leaks.
  - The lights and signaling equipment are fully operational and the vehicle is roadworthy.
  - The brake pads of the front and rear brakes are bedded against the brake discs.

Function test, engine start suppression

Check

- Set kill switch to centered position.
- Select neutral.
- Switch on the ignition.
- ➢ Neutral indicator light "N" lights up.
- Select a gear.
- ➢ Neutral indicator light "N" goes out.
- ➢ Operate the starter switch.
- Starter does not operate.
- Extend the side stand.
- Pull the clutch lever.
- Operate the starter switch.
- ➢ Starter does not operate.
- Retract the side stand.
- Operate the starter switch without releasing the clutch lever.
- ➢ Starter operates.

Result:

Not all test steps completed successfully.

Measure:

- Check the appropriate parts with the **BMW Motorrad** diagnostic system.