

# Repair Manual



**R 1100 S**

**BMW AG Motorcycle Division  
After Sales**

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After Sales  
UX-VS-2

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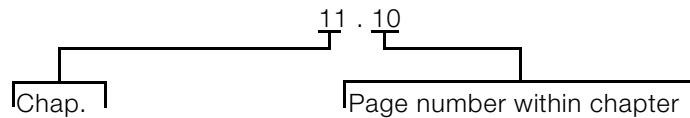
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# Introduction

This repair manual will help you to perform all the main maintenance and repair work correctly and efficiently. It should be consulted regularly by workshop personnel as an addition to the practical and theoretical knowledge obtained in Training School courses. It is a contribution towards achieving even higher Service quality.

All information in both text and illustrations refers to motorcycles in standard condition or with genuine BMW accessories installed, and not to motorcycles which have been modified in any way to depart from the manufacturer's specification.

- The repair manual is structured in the logical sequence of the work to be performed: Removal, Disassembly, Repair, Assembly, Installation.
- The entire contents are divided into individual chapters, corresponding to the Construction Groups.



- Work to be performed during an Inspection is described in Group "00". The various inspection routines are numbered I, II, III and IV. This numbering is repeated in the work descriptions which follow, so that work can take place without interruption.
- Use of the BMW special tools needed for certain tasks is described in the work instructions.

If the need arises, repair instructions are also issued in the form of Service Information. This information is of course incorporated into the next issue of the repair manual. We also recommend you to consult the detailed illustrations on the Parts microfiches as an additional source of information.

BMW AG Motorcycle Division  
After Sales

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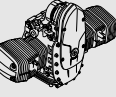
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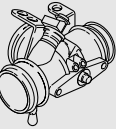
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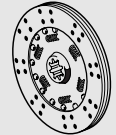
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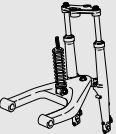
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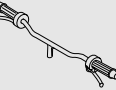
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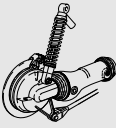
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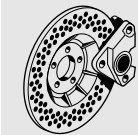


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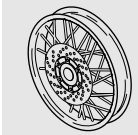


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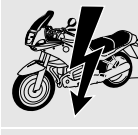
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# BMW AG Motorcycle Division

## Maintenance schedule

### R 1100 S



Customer _____ Licence plate No. _____				
Order No. _____ Mechanic's signature _____				
	BMW Inspection at 1,000 km (600 miles)	BMW Service every 10,000 km (6,000 miles)	BMW Inspection every 20,000 km (12,000 miles)	BMW Annual Service
Read out the fault memory with the BMW MoDiTeC unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change the oil while at regular operating temperature and renew the oil filter element <b>if motorcycle is used only for short journeys or at outside temperatures under 0°C, every 3 months, but at least every 3,000 km (1,800 miles) *)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change the oil in the gearbox while at regular operating temperature <b>at least every 2 years</b>			<input type="checkbox"/>	<input type="checkbox"/> every 2 years
Change the oil in the rear wheel drive while at regular operating temperature Clean the inductive sensor at the rear wheel <b>every 40,000 km (24,000 miles) or at least every 2 years *)</b>	<input type="checkbox"/>		<input type="checkbox"/> 40,000 (24,000)	<input type="checkbox"/> every 2 years
Renew fuel filter *) <b>normally every 40,000 km (24,000 miles), if fuel quality is poor every 20,000 km (12,000 miles)</b>			<input type="checkbox"/> 40,000 (24,000)	
Check battery acid level, if necessary add distilled water Clean/grease battery poles if necessary			<input type="checkbox"/>	<input type="checkbox"/>
Renewing intake air cleaner element <b>in very dusty or dirty operating conditions, renew the intake air cleaner element every 10,000 km (6,000 miles) or even more often if necessary *)</b>			<input type="checkbox"/>	
Renew Poly-V belt *) <b>Renew Poly-V belt every 60,000 km (36,000 miles); do not adjust</b>			<input type="checkbox"/> 60,000 (36,000)	
Check brake fluid level at front/rear and top up if necessary *)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check operation of brake system and freedom from leaks; repair/renew items if necessary *)			<input type="checkbox"/>	
Examine brake pads and discs for wear, renew if necessary *) <b>Renew the brake fluid annually</b>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check clutch operating fluid level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Change clutch fluid <b>every 40,000 km (24,000 miles) or at least every 2 years *)</b>			<input type="checkbox"/> 40,000 (24,000)	<input type="checkbox"/> every 2 years
Check tightness of rear wheel studs	<input type="checkbox"/>			
Check rear wheel bearing play by tilting wheel			<input type="checkbox"/>	
Check swinging arm bearings (zero play); adjust if necessary *)	<input type="checkbox"/>		<input type="checkbox"/>	
Grease the side (prop) stand pivot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check function of side (prop) stand contact switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check condition of spark plugs		<input type="checkbox"/>		
Renew spark plugs *)			<input type="checkbox"/>	
Take up slack at cylinder head nuts	<input type="checkbox"/>			
Check/adjust valve operating clearances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check throttle cable for free movement, abrasion and kinking; renew if necessary *) Check free travel in throttle cable Check synchronisation and eliminate any leaks *)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Final inspection with road safety and functional check: – condition of tyres and wheels, tyre pressures – lights and signalling equipment – telltale and warning lights – clutch, gear shift – handbrake and foot brake, steering – instruments – trial run if necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>*) Charged as an additional item</b>				

# BMW AG Motorcycle Division

## Pre-delivery check

### R 1100 S



_____ Customer	_____ Licence plate No.	<b>BMW</b> <b>Pre-delivery check</b>				
_____ Order No.	_____ Mechanic's signature					
Checking the shipping crate for damage		<input type="checkbox"/>				
Motorcycle: <ul style="list-style-type: none"> <li>- unpack</li> <li>- attach items supplied loose</li> <li>- inspect for damage</li> <li>- check that delivery is complete:             <table style="display: inline-table; vertical-align: middle; margin-left: 20px;"> <tr><td>tools</td></tr> <tr><td>documentation</td></tr> <tr><td>keys</td></tr> <tr><td>correct optional extras</td></tr> </table> </li> </ul>		tools	documentation	keys	correct optional extras	<input type="checkbox"/>
tools						
documentation						
keys						
correct optional extras						
Fill and charge the battery (mark with charging date)		<input type="checkbox"/>				
Check engine oil level when cold; add oil if necessary		<input type="checkbox"/>				
Check clutch operating fluid level and brake fluid levels at front and rear		<input type="checkbox"/>				
Check headlight beam angle and adjust if necessary		<input type="checkbox"/>				
Checking tightness of rear wheel studs (comply with correct tightening torque)		<input type="checkbox"/>				
Check tyre pressures		<input type="checkbox"/>				
Add fuel		<input type="checkbox"/>				
Final inspection and functional check: <ul style="list-style-type: none"> <li>- clutch, gear shift</li> <li>- handbrake, foot brake</li> <li>- lighting and signalling equipment, telltale lights, instruments</li> <li>- check operation of optional extras, ABS</li> <li>- trial run if necessary</li> </ul>		<input type="checkbox"/>				
Confirm pre-delivery check in Service and Technical Booklet		<input type="checkbox"/>				
Final cleaning		<input type="checkbox"/>				
Motorcycle handed over on:						



# 00 Maintenance and general instructions

Tightening torques and Table of consumables  
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Maintenance

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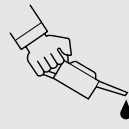




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## Tightening torques

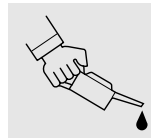
Model	R 1100 S
Connection	Nm
<b>11 Engine</b>	
<b>Cylinder head</b>	
Tightening sequence:	
1. Tighten cylinder head nuts (oiled) in diagonally opposite sequence	
1.1 Tighten all nuts to closing torque	20
1.2 Tighten all nuts to wrench angle	90°
1.3 Tighten all nuts to wrench angle	90°
2. M 10 screw	40
3. M 6 screw	9
After 1000 km (600 miles), tighten cylinder head nuts in diagonally opposite sequence:	
1. Slacken one nut	
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Oil filter	11
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Model		R 1100 S
Connection		Nm
<b>11 Engine</b>		
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Tightening sequence:		
1. M 10 screw (oiled)	Initial torque	25
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Model		R 1100 S
Connection		Nm
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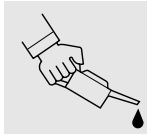




<b>Model</b>	<b>R 1100 S</b>
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<b>Model</b>	<b>R 1100 S</b>
<b>Connection</b>	<b>Nm</b>
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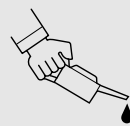




Model	R 1100 S	
Connection	Nm	
<b>46 Frame</b>		
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## Table of consumables

Item	Use	Order number	Quantity
<b>Lubricant</b>			
Optimoly MP 3	High-performance lubricating paste	07 55 9 062 476	100 g tube
Optimoly TA	High-temperature assembly paste	18 21 9 062 599	100 g tube
Silicone grease 300, heavy	Damping grease	07 58 9 058 193	10 g tube
Retinax EP2	Wheel, steering head and taper roller bearing grease	83 22 9 407 845	100 g tube
Contact spray	Contact spray	81 22 9 400 208	300 ml spray
Chain spray	Drive chain	72 60 2 316 676 72 60 2 316 667	50 ml spray 300 ml spray
<b>Sealants</b>			
Staburags NBU 30 PTM	High-performance lubricating paste	07 55 9 056 992	75 g tube
3-Bond 1110 B	Surface sealant	07 58 9 056 998	5 g tube
3-Bond 1209	Surface sealant	07 58 9 062 376	30 g tube
omni VISC 1002	Surface sealant	07 58 1 465 170	90 g tube
Loctite 574	Surface sealant	81 22 9 407 301	50 ml tube
Curil K 2	Heat-conductive sealant	81 22 9 400 243	250 g can
Hylomar SQ 32 M	Permanently elastic sealant	81 22 9 400 339	100 g tube
<b>Adhesives and retaining agents</b>			
Loctite 648	Joint adhesive (low clearance)	07 58 9 067 732	5 g bottle
Loctite 638	Joint adhesive (greater clearance)	07 58 9 056 030	10 ml bottle
Loctite 243	Thread retainer, medium-strength	07 58 9 056 031	10 ml bottle
Loctite 270	Thread retainer, strong	81 22 9 400 086	10 ml bottle
Loctite 2701	Thread retainer, strong	33 17 2 331 095	10 ml bottle
Loctite 454	Cyanacrylate adhesive (gel)	07 58 9 062 157	20 g tube
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Brake cleaner	Brake cleaner	83 11 9 407 848	600 ml spray
Metal polish	Polish for chrome-plated parts	82 14 9 400 890	100 g tube
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Penetrant MR 68	Crack testing agent for aluminium housings	83 19 9 407 855	500 ml spray
Developer MR 70	Crack testing agent for aluminium housings	81 22 9 407 495	500 ml spray
<b>Installation aid</b>			
BMW cooling spray	Cooling spray	83 19 9 407 762	300 ml spray



# Bmw R1100s Service Repair Manual

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