

Repair Manual



R 1100 S

**BMW AG Motorcycle Division
After Sales**

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After Sales
UX-VS-2

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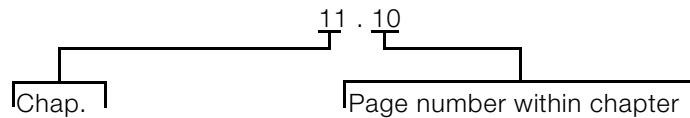
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Introduction

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.

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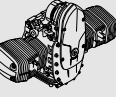
Contents

Group / Chapter

00 Maintenance and general instructions



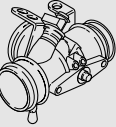
11 Engine



12 Engine electrics



13 Fuel preparation and control



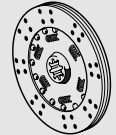
16 Fuel tank and lines



18 Exhaust system



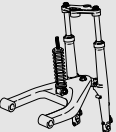
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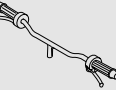
23 Gearbox



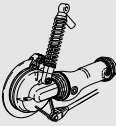
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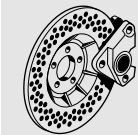


33 Rear wheel drive

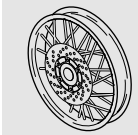


Group / Chapter

34 Brakes



36 Wheels and tyres



46 Frame



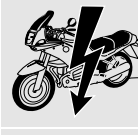
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52 Seat



61 General electrical equipment



62 Instruments



63 Lights



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Maintenance schedule

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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 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) *)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change the oil in the gearbox while at regular operating temperature at least every 2 years			<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 every 40,000 km (24,000 miles) or at least every 2 years *)	<input type="checkbox"/>		<input type="checkbox"/> 40,000 (24,000)	<input type="checkbox"/> every 2 years
Renew fuel filter *) normally every 40,000 km (24,000 miles), if fuel quality is poor every 20,000 km (12,000 miles)			<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 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 *)			<input type="checkbox"/>	
Renew Poly-V belt *) Renew Poly-V belt every 60,000 km (36,000 miles); do not adjust			<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 *) Renew the brake fluid annually		<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 every 40,000 km (24,000 miles) or at least every 2 years *)			<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"/>
*) Charged as an additional item				

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Pre-delivery check

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