

# Repair Manual



**R 1150 GS**

**BMW Motorrad  
After Sales**

Publisher

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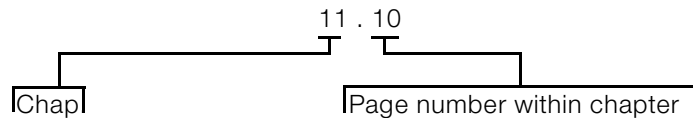
# Introduction

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.

A new issue of this repair manual will be published if amendments or additions (supplements) are needed. The latest issue date is shown in the header of the microfiche. Microfiches rendered invalid by the new issue should be destroyed without delay.

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 Motorrad  
After Sales

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## Maintenance schedule

### R 1100 S / R 850/1200 C / R 1150 GS



Customer _____ Licence plate No. _____		BMW Inspection at 1000 km (600 miles)	BMW Service every 10 000 km (6 000 miles)	BMW Inspection every 20 000 km (12 000 miles)	BMW Annual Service
Order No. _____ Mechanic's signature _____					
Read the fault code memory with the MoDiTeC		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change 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 (32 °F), 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 oil in gearbox while at operating temperature <b>at least every 2 years*)</b>				<input type="checkbox"/>	<input type="checkbox"/> every 2 years
Change oil in rear wheel drive while at regular operating temperature; if necessary, clean inductive sensor on 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 and grease the battery terminals, if necessary				<input type="checkbox"/>	<input type="checkbox"/>
Renew intake air filter element <b>in very dusty or dirty operating conditions, renew the intake air filter 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 and rear			<input type="checkbox"/>	<input type="checkbox"/>	
Check operation of brake system and freedom from leaks; repair/replace items if nec. *)				<input type="checkbox"/>	
Examine brake pads and discs for wear, renew if necessary *)			<input type="checkbox"/>	<input type="checkbox"/>	
<b>Change the brake fluid annually</b>					<input type="checkbox"/>
Check clutch fluid level			<input type="checkbox"/>	<input type="checkbox"/>	
Change the clutch fluid <b>at least every 2 years *)</b>					<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 stand pivot		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check function of side 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"/>	
Check security of cylinder head nuts		<input type="checkbox"/>			
Check/adjust valve clearances		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check throttle cable for free movement, abrasion and kinking; renew if necessary *) Check cable play Check synchronisation and eliminate leaks *)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Final inspection with road safety and functional check: – Condition of tyres and wheels, rims and spokes if applicable, tyre pressures – Lights and signalling equipment – Telltale and warning lights – Clutch, gear shift – Front and rear brakes, steering – Instruments – If necessary, test ride		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*) **Charged as an additional item**

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## Pre-delivery check

### R 1100 S / R 850/1200 C / R 1150 GS



<p>_____</p> <p>Customer</p>	<p>_____</p> <p>Licence plate No.</p>	<p><b>BMW</b> <b>Pre-delivery check</b></p>
<p>_____</p> <p>Order No.</p>	<p>_____</p> <p>Mechanic's signature</p>	
<p>Check the shipping crate for damage</p>		<input type="checkbox"/>
<p>Motorcycle:</p> <ul style="list-style-type: none"> <li>- unpack</li> <li>- install remaining items</li> <li>- inspect for damage</li> <li>- check that delivery is complete: <ul style="list-style-type: none"> <li>tools</li> <li>documentation</li> <li>keys</li> <li>correct optional extras</li> </ul> </li> </ul>		<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 headlight beam angle, adjust if necessary</p>		<input type="checkbox"/>
<p>Check security of rear wheel studs (comply with correct tightening torque)</p>		<input type="checkbox"/>
<p>Check tyre pressures</p>		<input type="checkbox"/>
<p>Fill fuel tank</p>		<input type="checkbox"/>
<p>Final inspection as functional check:</p> <ul style="list-style-type: none"> <li>- Clutch, gear shift</li> <li>- Front and rear brakes</li> <li>- Lights and signalling equipment, telltale and warning lights, instruments</li> <li>- Check operation of optional extras, ABS</li> <li>- If necessary, test ride</li> </ul>		<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>		

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## Service data

### R 1150 GS

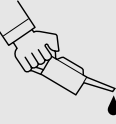


Item	Desired value	Unit of measurement/ specification
<b>Oil capacities</b>		
Engine (with filter) (without filter)	3.75 (6.60) 3.50 (6.16)	litres (Imp. pints) litres (Imp. pints) [SI 11 048 90] Engine oil grade: brand-name HD oil for four-stroke spark-ignition engines, API classes SE, SF, SG; combination with CC or CD specification
Gearbox Initial filling/oil changes	approx. 1.0 (1.76) up to lower edge of filler hole	litres (Imp. pints) Brand-name hypoid gear oil, SAE class GL 5 SAE 90
Rear wheel drive Initial filling/oil changes	approx. 0.25 (0.44) oil level with bottom of filler neck	litres (Imp. pints) Brand-name hypoid gear oil, SAE class GL 5 SAE 90
<b>Valve clearances</b>		
Measured cold (max. 35 °C/95 °F)	Inlet: 0.15 (0.006) Exhaust: 0.30 (0.011)	mm (in) mm (in)
<b>Ignition timing</b>		
Static setting	adjust at TDC	
<b>Spark plugs</b>		
Electrode gap	0.8 (0.03)	mm (in)
Wear limit	1.0 (0.04)	mm (in)
<b>Idle speed</b>		
	1100± <sup>50</sup>	min <sup>-1</sup>
<b>Throttle cable setting</b>		
for cold-start (increased idle) speed for throttle (twistgrip) cable for divider cable	zero play app. 0.5 (0.02) zero play	mm (in) free travel
<b>Brakes</b>		
Minimum front pad thickness	1.0 (0.04)	DOT 4 brake fluid mm (in)
Minimum rear pad thickness	wear mark	
Minimum front disc thickness	4.5 (0.18)	mm (in)
Minimum rear disc thickness	4.5 (0.18)	mm (in)
<b>Tyre pressures</b>		
depending on load	front: 2.2 – 2.5 (31.3 – 35.6) rear: 2.5 – 2.9 (35.6 – 41.2)	bar (psi) bar (psi)
<b>Tightening torques:</b>		
Oil filter	11	Nm
Engine oil drain plug	32	Nm
Gearbox oil filler plug	30	Nm
Gearbox oil drain plug	30	Nm
Rear wheel drive oil filler/drain plug	23	Nm
Fuel tank to rear frame	21	Nm
Fuel pump unit to tank	6	Nm
Poly-V belt preload	8	Nm
Alternator to alternator carrier cover	20	Nm
Brake calliper mounting, front/rear	40	Nm
Rear wheel studs	initial torque 72 105	Nm Nm
Tightening cylinder heads Nut	slacken/20 180	Nm ° tightening angle
M 10 screw	slacken/40	Nm
Locknut, valve adjusting screw	8	Nm
Cylinder head cover	8	Nm
Spark plugs	20	Nm

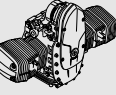
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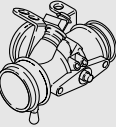
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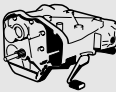
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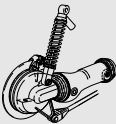
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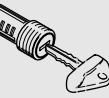
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