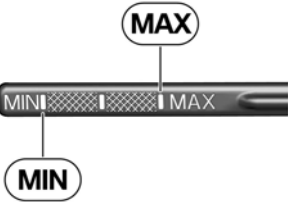



Service data 0229 - F 800 GS

Equipment trim-level variant:

0603 - Anti-theft alarm

0524 - BMW Motorrad ABS

Designation	Condition	Value	Valid
11 - Engine			
Engine oil, capacity	with filter change	2.9 l	
	without filter change	2.7 l	
	additional, if swing-arm shaft cover is removed	0.3 l	
	Fluids and lubricants		
of products recommended by BMW Motorrad and generally admissible viscosity classes			
Engine oil, quantity for topping up	maximum top-up quantity between MIN and MAX marks	0.4 l	
	Fluids and lubricants		
	of products recommended by BMW Motorrad and generally admissible viscosity classes		
Engine oil level 		Between MIN and MAX marks	
1134 - Valves with springs			
Inlet valve clearance	Engine cold max 35 °C	0.18...0.26 mm	
Exhaust valve clearance	Engine cold max 35 °C	0.27...0.35 mm	
1212 - Ignition wiring, spark plugs			
Spark plugs, manufacturer and designation		NGK DCPR 8 E	
16 - Fuel supply			
Usable fuel capacity		approx. 16 l	
Reserve fuel		approx. 4 l	
17 - Cooling			
Coolant, specified level		between MIN and MAX marks on the expansion tank	
	Fluids and lubricants		

	Antifreeze		
Coolant, frost protection		min -25 °C	
	Fluids and lubricants		
	Antifreeze		
2772 - Chain			
Chain deflection	Motorcycle with no weight applied, supported on its side stand	35...45 mm	
31 - Front axle, front-wheel steering			
Fork oil, capacity per fork leg		765 ml	
	Fluids and lubricants		
	Hydraulic fluid SAE 7,5		
Level of fork oil in fork leg (air chamber)	Forks fully compressed, spring removed, spacer installed	60 mm	
	Fluids and lubricants		
	Hydraulic fluid SAE 7,5		
3142 - Telescopic forks			
Projection of fork tube in fork bridge, top with cap		7.8 mm	
3273 - Bowden cables			
Setting, throttle-cable play	at outermost diameter of rubber grip, engine cold max 35 °C	1...2 mm	
Clutch play	Handlebars turned fully left, between handlebar fitting and clutch cable	1 mm	
34 - Brakes			
Brake fluid level, front (visual inspection)		It is impermissible for the brake fluid level to drop below the MIN mark.	
	Fluids and lubricants		

	<p>DOT4 brake fluid</p>		
<p>Brake fluid level, rear (visual inspection)</p> 		<p>Do not permit the brake fluid level to drop below the MIN mark.</p>	
<p>Fluids and lubricants</p>			
<p>DOT4 brake fluid</p>			
<p>3411 - Front brake</p>			
<p>Brake disc thickness, front</p>	<p>When new</p>	<p>5.0 mm</p>	
<p>Wear limit</p>		<p>min 4.5 mm</p>	
<p>Brake-pad wear limit, front</p> 	<p>Friction pad only, without backing plate. The wear indicators (grooves) must be clearly visible.</p>	<p>min 1.0 mm</p>	
<p>3421 - Rear brake</p>			
<p>Brake-pad wear limit, rear</p> 	<p>Friction pad only, without backing plate. The wear indicators must be clearly visible.</p>	<p>min 1.0 mm</p>	
<p>Brake disc thickness, rear</p>	<p>When new</p>	<p>5.0 mm</p>	
<p>Wear limit</p>		<p>min 4.5 mm</p>	
<p>3630 - Motorcycle wheels</p>			
<p>Permissible front-wheel imbalance</p>		<p>max 5 g</p>	
<p>Permissible rear-wheel imbalance</p>		<p>max 45 g</p>	
<p>Balancing weight for front wheel Weight must be divided equally across both sides and weights attached to rim on left and right.</p>		<p>max 80 g</p>	

Balancing weight for rear wheel Weight must be divided equally across both sides and weights attached to rim on left and right.		max 80 g	
3631 - Wheels with bearings			
Vertical runout, front wheel		max 1.7 mm	
Lateral runout, front wheel		max 1.7 mm	
Vertical runout, rear wheel		max 1.7 mm	
Lateral runout, rear wheel		max 1.7 mm	
3632 - Tyres			
Tyre pressure, front	one-up, at tyre temperature 20 °C	2.2 bar	
	two-up and/or with luggage, at tyre temperature 20 °C	2.5 bar	
Tyre pressure, rear	one-up, at tyre temperature 20 °C	2.5 bar	
	two-up and/or with luggage, at tyre temperature 20 °C	2.9 bar	
Tyre tread depth, front and rear	Wear limit, for Germany only	min 1.6 mm	
	Wear limit, outside Germany	Country-specific legal requirements	
Wheel valve test pressure		4 bar	
6575 - Anti-theft alarm			
Battery type and rated voltage		CR123A lithium 3 V	
11 11 - Engine block			
Socket-head screw (hole for TDC locating pin)			
M8 x 16		25 Nm	
11 12 - Cylinder head with cover			
Cylinder head cover for cylinder head			
M6 x 20	tighten in diagonally opposite sequence		
	10 Nm		
Camshaft bearing cap to cylinder head			

M6	Tightening sequence: see Repair Manual	
	Initial torque, tightened uniformly until hand-tight	
	Final torque, 10 Nm	
11 13 - Oil sump		
Oil drain plug		
M24 x 2	40 Nm	
11 31 - Camshaft		
Chain tensioner to cylinder head		
M18 x 1.5	40 Nm	
11 42 - Oil filter and lines		
Oil filter	14 Nm	
12 12 - Ignition wiring, spark plugs		
Spark plugs		
M12 x 1.25	18 Nm	
13 71 - Intake air silencer		
Intake air silencer to frame		
M6 x 25	6 Nm	
23 00 - Gearbox mechanical		
Pinion to gearbox output shaft		
M10 x 1.5 x 35 Loctite 243	50 Nm	
27 72 - Chain		
Chain slide rail to rear wheel swinging arm		
M5 x 12	4 Nm	
31 42 - Telescopic forks		
Fixed fork tube to fork bridge, top		
M8 x 25	2x each side, alternately	
	19 Nm	

Fixed fork tube to fork bridge, bottom		
M8 x 25	2x each side, alternately	
	20 Nm	
Locknut to cover		
M8	20 Nm	
Pinch bolt, steering head		
M8 x 40	19 Nm	
Cover to fixed fork tube		
	20 Nm	
Adjusting screw to steering-head bearing		
M18 x 1	Initial torque, 25 Nm	
	Swing handlebars through 3 full arcs	
	Back off through angle of rotation, 60°	
	Final torque, 10 Nm	
Clamp of quick-release axle		
M8 x 25	2x each side, alternately	
	19 Nm	
32 71 - Motorcycle handlebars		
Handlebars to clamping block		
M8 x 30 - 10.9	tighten the front screws (as viewed in the forward direction of travel) first, then the rear screws.	
	28 Nm	
33 11 - Final-drive unit housing with cover		
Chain sprocket to chain-sprocket carrier		
Replace nuts Mechanical thread lock	Initial torque, 10 Nm	
	Final torque, 90°	
33 17 - Final-drive unit attachment		
Locknut of the final-drive chain tensioning screw		
M8	19 Nm	
Rear wheel swinging arm to frame		

M14 x 1.5, Replace nut Mechanical thread lock	100 Nm	
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33 53 - Springs with mounts**Spring strut to swinging arm**

Fitted-head screw, M12 x 1.5-10.9, Replace the screw, lubricate the side flats of the screw head Optimoly TA , Micro-encapsulated	100 Nm	
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34 11 - Front brake**Brake disc to front wheel**

M6 x 18, Replace screw Micro-encapsulated	8 Nm	
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Brake caliper to fork leg

ISA screw, M10 x 35	38 Nm	
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Bleed screw, brake caliper, front

M10 x 1 - 4.9	14 Nm	
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Bleed screw on handbrake fitting

M5	2 Nm	
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34 21 - Rear brake**Brake disc with sensor ring to rear-wheel hub**

M8 x 18,5, Replace screw Micro-encapsulated	tighten by stages in diagonally opposite sequence	
	19 Nm	

Rear brake caliper bleed screw

M10 x 1 - 4.9	14 Nm	
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34 32 - Brake lines**Brake-hose guide to rear swinging arm**

M6 x 20, Replace screw Micro-encapsulated	6 Nm	
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34 52 - Electronic components**Wheel-speed sensor, front**

M6 x 16	8 Nm	
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Wheel-speed sensor, rear		
M6 x 16	8 Nm	
36 31 - Wheels with bearings		
Quick-release axle, front, in axle holder		
M14 x 1.5	30 Nm	
Rear quick-release axle in swinging arm		
M16 x 1.5	100 Nm	
Nipple on spoke		
M 4.5	3.5 Nm	
46 53 - Side stand		
Side stand to pivot mount		
M10 - 10.9, Replace screw Micro-encapsulated	38 Nm	
Side-stand switch to side-stand screw		
M5	5 Nm	
46 54 - Luggage system		
Grab handle to rear frame at rear		
M8 x 35	19 Nm	
Grab handle to rear frame at front		
M8 x 16	19 Nm	
46 61 - Front-wheel cover		
Front-wheel cover to forks		
M6 x 16	4 Nm	
46 63 - Motorcycle fairing, windscreen		
Windscreen to front panel carrier		
M5 x 18	2.5 Nm	
Chain guard to swinging arm		
M6 x 16	8 Nm	
51 16 - Mirrors, covers, ashtrays, stowage compartments		

Mirror to clamping element		
M14 x 1	20 Nm	
Clamping element to clamping block		
M10	30 Nm	
61 21 - Battery with holder		
Positive lead/earth lead, battery		
M6 x 11	3.5 Nm	