

# R1200GS Torque Values

Source: <http://www.r1200gs.info/misc/torque.html> May 2007

These descriptions and torque values (in Newton-Meters) are taken directly from the BMW REP-ROM for the 2005 model R1200GS (a CD-ROM provided to BMW dealers). The conversions to foot-pounds were done by a Perl script I wrote to multiply the Nm values by 0.738 to produce a ft-lb equivalent (with rounding up or down to the nearest integer value).

Apparently, in the past, BMW has printed some incorrect conversions for Nm to ft-lbs, and some of those have been repeated in other publications (including Clymers and Haynes manuals). If the Nm numbers from the REP-ROM are correct, and I have every reason to believe they are, then the ft-lb conversions shown below are also correct. The safest course, I believe, is to use a torque wrench calibrated in Newton-meters. Then there is no uncertainty.

I have shown the **Nm values in BOLD**, and the **ft-lb values in RED**, so you will be less likely to confuse the two. *"Measure twice, cut once"*

Engine	
Crash bar buffer to crankcase, M6	<b>8 Nm</b> (6 ft-lbs)
Crash bar to engine, front right, M6 x 10, with loose washer	<b>8 Nm</b> (6 ft-lbs)
Silentbloc to engine, M8	<b>19 Nm</b> (14 ft-lbs)
Crash bar to engine, rear left and right, Hex nut M8	<b>19 Nm</b> (14 ft-lbs)
Crash bar to engine, front left, M8 x 16	<b>19 Nm</b> (14 ft-lbs)
Oil drain plug, M16 x 1.5	Initial torque, <b>23 Nm</b> (17 ft-lbs) Final torque, <b>32 Nm</b> (24 ft-lbs)
Engine block, M6 x 35	<b>8 Nm</b> (6 ft-lbs)
Engine block, M6 x 50	<b>8 Nm</b> (6 ft-lbs)
Engine block, M6 x 25	<b>8 Nm</b> (6 ft-lbs)
Engine block, M8 x 60	<b>19 Nm</b> (14 ft-lbs)
Engine block, M8 x 35	<b>19 Nm</b> (14 ft-lbs)
Engine block, M10 x 110/130	Initial torque, <b>25 Nm</b> (18 ft-lbs) Final torque, 90°
Cylinder to crankcase, left/right M8 x 55	<b>19 Nm</b> (14 ft-lbs)
Cylinder to crankcase, left/right, M6 x 35	<b>8 Nm</b> (6 ft-lbs)
Cylinder head cover to cylinder head tighten in diagonally opposite sequence	<b>10 Nm</b> (7 ft-lbs)
Cylinder head to cylinder Nuts of tie bolts, M10 tighten in diagonally opposite sequence	Oil screw threads lightly Initial torque, <b>20 Nm</b> (15 ft-lbs)

	Initial torque, 90° Final torque, 90°
Screw, M10 x 85	<b>40 Nm (30 ft-lbs)</b>
Screw, M6 x 30	<b>9 Nm (7 ft-lbs)</b>
Tightening cylinder head Nuts of tie bolts, M10 In diagonally opposite sequence slacken and retighten each nut in turn	Initial torque <b>20 Nm (15 ft-lbs)</b> Final torque 180°
Screw, M10 x 85, Slacken and retighten screw	<b>40 Nm (30 ft-lbs)</b>
Starter cover to gearbox housing, M6 x 16	<b>8 Nm (6 ft-lbs)</b>
Belt cover to engine, M5 x 14	<b>5 Nm (4 ft-lbs)</b>
Belt cover to engine, M5 x 20	<b>5 Nm (4 ft-lbs)</b>
Gearcase cover to crankcase, M6	<b>8 Nm (6 ft-lbs)</b>
Belt cover to alternator, M5 x 16	<b>5 Nm (4 ft-lbs)</b>
Clutch cover to engine, M6 x 16	<b>8 Nm (6 ft-lbs)</b>
Crankcase breather Vent connector to cylinder head, M6 x 16	<b>8 Nm (6 ft-lbs)</b>
Belt pulley to crankshaft, M22 x 1.5	<b>140 Nm (103 ft-lbs)</b>
Compensating weight to balancing shaft Neck-down screw, M8 x 70	Replace screws Initial torque <b>10 Nm (7 ft-lbs)</b> Final torque, 90°
Gear wheel to balancing shaft, M8 x 50	<b>19 Nm (14 ft-lbs)</b>
Camshaft Sprocket to auxiliary shaft, M5 x 16	Replace screws <b>8 Nm (6 ft-lbs)</b>
Pinion to camshaft, M10 x 1.25 x 25	<b>65 Nm (48 ft-lbs)</b>
Chain sprocket to crankshaft, M6 x 16	<b>8 Nm (6 ft-lbs)</b>
Housing for chain tensioner to crankcase, M6 x 25	<b>8 Nm (6 ft-lbs)</b>
Chain tensioner to cylinder left and right, M18 x 1.5	<b>32 Nm (24 ft-lbs)</b>
Fastener of timing-chain slider rail engine block, right, M10	<b>18 Nm (13 ft-lbs)</b>
Rocker/follower with bearing Locknut, valve adjusting screw, M6 x 0.5	<b>8 Nm (6 ft-lbs)</b>
Timing-gear carrier, camshaft bearing, bearing cap left/right, M8 x 30	<b>19 Nm (14 ft-lbs)</b>
Timing-gear carrier, camshaft bearing, bearing cap left/right, M8 x 40	<b>18 Nm (13 ft-lbs)</b>
Timing-gear carrier, camshaft bearing, bearing cap	<b>15 Nm (11 ft-lbs)</b>

left/right, M8 x 65	
Timing-gear carrier to cylinder head left/right, M6 x30	<b>8 Nm (6 ft-lbs)</b>
Timing-gear carrier to cylinder head left/right, M6 x 60	<b>8 Nm (6 ft-lbs)</b>
Oil supply Cooling oil line (inside engine) to crankcase, right Banjo bolt, M14 x 4.5	<b>25 Nm (18 ft-lbs)</b>
Cooling oil line (inside engine) to crankcase, left, M6 x 16	<b>8 Nm (6 ft-lbs)</b>
Oil pump to crankcase, M6 x 40	Initial torque, <b>4 Nm (3 ft-lbs)</b> Final torque, 90°
Oil intake in crankcase, right, M6 x 25	<b>8 Nm (6 ft-lbs)</b>
Pressure relief valve in crankcase, right Screw plug, M20 x 1.5	<b>42 Nm (31 ft-lbs)</b>
Oil filter, Sealing ring wetted with engine oil	<b>11 Nm (8 ft-lbs)</b>
Air intake to cylinder head left/right, M6 x20	<b>8 Nm (6 ft-lbs)</b>
<b>Engine Electrical System</b>	
Primary spark plug to cylinder head Bosch YR 5 LDE, M12 x 1.25	Thread free of oil and grease <b>23 Nm (17 ft-lbs)</b>
Secondary spark plug to cylinder head Bosch YR 5 LDE, M12 x 1.25	Thread free of oil and grease <b>23 Nm (17 ft-lbs)</b>
Cover, secondary spark plug coil to cylinder head, M6 x 12	<b>8 Nm (6 ft-lbs)</b>
Alternator to crankcase, M8	<b>18 Nm (13 ft-lbs)</b>
Belt pulley to alternator Flange nut, M14 x 1.5	<b>50 Nm (37 ft-lbs)</b>
Wiring harness to alternator Flange nut, M6	<b>6 Nm (4 ft-lbs)</b>
Wiring harness to starter Hex nut, M8	<b>10 Nm (7 ft-lbs)</b>
Starter with gearing to engine, M8 x 60	<b>19 Nm (14 ft-lbs)</b>
Oil temperature sensor, M14 x 1.5	<b>30 Nm (22 ft-lbs)</b>
Oil pressure switch	<b>30 Nm (22 ft-lbs)</b>
Transmitter for control unit Knock sensor to cylinder, left/right, M8 x 30	<b>19 Nm (14 ft-lbs)</b>
Speed sensor, camshaft, to cylinder head, M6 x 20	<b>8 Nm (6 ft-lbs)</b>
Temperature sensor in cylinder head, outside, M 10	<b>10 Nm (7 ft-lbs)</b>
<b>Exhaust system</b>	

Exhaust manifold to cylinder head, Acorn nut M8	<b>19 Nm (14 ft-lbs)</b>
Rear silencer to rear frame section, M8 x 45	<b>19 Nm (14 ft-lbs)</b>
Torca clamp to silencer and elbow, M6 x 20 <small>Note: some versions of the REP-ROM say this is an M8 bolt and requires 55Nm (41 ft-lbs) -- which is too much for an 8mm bolt.</small>	Optimoly TA <b>8 Nm (6 ft-lbs)</b>
Oxygen sensor to exhaust elbow, M18 x 1.5	Optimoly TA <b>45 Nm (33 ft-lbs)</b>
Clamp, elbow, rear, M6 x 20	Optimoly TA <b>8 Nm (6 ft-lbs)</b>
<b>Fuel preparation</b>	
Holder for injection nozzle to throttle-valve stub, M5 x 16	<b>5 Nm (4 ft-lbs)</b>
Intake air silencer Airbox to rear frame, M6	<b>8 Nm (6 ft-lbs)</b>
<b>Fuel tank and lines</b>	
Fuel tank to front frame rear left with bracket fuel tank cover, M8 x 40	<b>19 Nm (14 ft-lbs)</b>
rear right with bracket fuel tank cover, M8 x 40	<b>19 Nm (14 ft-lbs)</b>
Holder, fuel tank to fairing bracket, M8 x 35	<b>19 Nm (14 ft-lbs)</b>
Fuel filler cap to fuel tank, M5 x 30	<b>2 Nm (1 ft-lbs)</b>
Fuel vent Bracket activated charcoal filter to rear frame, M6 x 16	<b>8 Nm (6 ft-lbs)</b>
Fuel pump unit to fuel tank Sheet-metal screw cap	<b>35 Nm (26 ft-lbs)</b>
<b>Radiator</b>	
Oil cooler to fairing bracket, M6 x 30	<b>8 Nm (6 ft-lbs)</b>
Oil cooler line, flow line, to crankcase, M6 x 16	<b>8 Nm (6 ft-lbs)</b>
Oil cooler line, return line, to crankcase Banjo bolt	<b>35 Nm (26 ft-lbs)</b>
Fastener for oil cooler line, flow line, M6 x 12	<b>8 Nm (6 ft-lbs)</b>
Fastener for oil cooler line, return line, M5 x 16	<b>5 Nm (4 ft-lbs)</b>
<b>Exhaust system</b>	
Manifold to cylinder head, Acorn nut M8	<b>19 Nm (14 ft-lbs)</b>
Rear silencer to rear frame section, M8 x 45	<b>19 Nm (14 ft-lbs)</b>
Torca clamp to silencer and elbow, M6 x 20	Optimoly TA <b>8 Nm (6 ft-lbs)</b>
Oxygen sensor to exhaust elbow, M18 x 1.5	Optimoly TA <b>45 Nm (33 ft-lbs)</b>
Clamp, elbow, rear, M6 x 20	Optimoly TA

	<b>8 Nm (6 ft-lbs)</b>
<b>Clutch</b>	
Clutch housing to crankshaft Never re-use the original screws, M11 x 1.5	Initial torque, <b>40 Nm (30 ft-lbs)</b> Final torque, 40°
Clutch housing cover to clutch housing, M6 x 20	<b>12 Nm (9 ft-lbs)</b>
Clutch slave cylinder to gearbox, M6 x 18	<b>8 Nm (6 ft-lbs)</b>
<b>Gearbox mechanical</b>	
Oil filler plug, gearbox	<b>30 Nm (22 ft-lbs)</b>
Oil drain plug, gearbox	<b>30 Nm (22 ft-lbs)</b>
Gearbox to engine block, M8 x 55	<b>20 Nm (15 ft-lbs)</b>
Gearbox to engine block, M8 x 35	<b>19 Nm (14 ft-lbs)</b>
Gearbox to engine block, M8 x 70	<b>19 Nm (14 ft-lbs)</b>
Gearbox to engine block, M8 x 50	<b>19 Nm (14 ft-lbs)</b>
Gearbox cover to gearbox housing	<b>9 Nm (7 ft-lbs)</b>
Gear potentiometer to gearbox	<b>9 Nm (7 ft-lbs)</b>
Selector lever to selector shaft, M6 x 25	<b>8 Nm (6 ft-lbs)</b>
Locknut, ball socket on selector rod, Nut M6	<b>8 Nm (6 ft-lbs)</b>
Foot-operated shift lever to selector shaft, M6 x 25	<b>8 Nm (6 ft-lbs)</b>
Ball end to selector lever, Ball end M8	<b>10 Nm (7 ft-lbs)</b>
Locknut, ball end to selector shaft, Hex nut M8	<b>10 Nm (7 ft-lbs)</b>
Ball end to selector shaft, Ball end M8	<b>10 Nm (7 ft-lbs)</b>
<b>Front forks</b>	
Telescopic fork, ball-joint fork Leading link to engine, M12 x 20	Initial torque, <b>45 Nm (33 ft-lbs)</b> Final torque, <b>73 Nm (54 ft-lbs)</b>
Threaded cap, leading link to engine, M42 x 1.5	Lightly grease threads with Never Seez compound <b>6 Nm (4 ft-lbs)</b>
Spring strut to front frame, Hex nut M10 x 1.25	Loctite 243 <b>34 Nm (25 ft-lbs)</b>
Spring strut, front, to leading link, M10 x 1.25	Optimoly TA <b>40 Nm (30 ft-lbs)</b>
Ball joint to leading link, M14 x 1.5	Replace nut Micro-encapsulated <b>130 Nm (96 ft-lbs)</b>
Ball joint in slider-tube bridge, M34 x 1.5	Lightly grease threads Optimoly TA <b>230 Nm (170 ft-lbs)</b>

Fork bridge, lower, to slider tube, M8 x 1.25	<b>25 Nm (18 ft-lbs)</b>
Sealing screw in fork plug, M4 x 0.7	Always fit a new O-ring <b>3 Nm (2 ft-lbs)</b>
Fork bridge to front frame, M14 x 1.5	Replace nut Micro-encapsulated <b>130 Nm (96 ft-lbs)</b>
Fork bridge, top, with fork fixed tube, M10 x 1.25	Replace nut Mechanical thread lock <b>40 Nm (30 ft-lbs)</b>
Quick-release axle clamp screws, M8 x 1.25	<b>19 Nm (14 ft-lbs)</b>
<b>Steering</b>	
Steel handlebars to fork bridge, M8 x 30	1st front, 2nd rear -> gap at rear only (as viewed in forward direction of travel) <b>21 Nm (15 ft-lbs)</b>
Handlebar weight to handlebar, M12 x 1.5 x 80	Micro-encapsulated <b>21 Nm (15 ft-lbs)</b>
Handlebar fitting to handlebar (perch), M5 x 20	<b>8 Nm (6 ft-lbs)</b>
Pivot screw, handlebar-fitting lever, M5 x 30	<b>5 Nm (4 ft-lbs)</b>
<b>Rear-wheel drive</b>	
Cover to final drive housing, M8	Loctite 542 <b>30 Nm (22 ft-lbs)</b>
Hex nut, drive bevel gear, M24 x 1.5	Replace screws Micro-encapsulated <b>200 Nm (148 ft-lbs)</b>
Threaded ring, M65 x 1.5	<b>160 Nm (118 ft-lbs)</b>
Oil filler plug in rear wheel drive, M12 x 1, with O-ring 11.2 x 1.8	<b>20 Nm (15 ft-lbs)</b>
Rear wheel drive to swinging arm, M12 x 1.5	<b>100 Nm (74 ft-lbs)</b>
Strut to final drive housing, M10 x 55	<b>43 Nm (32 ft-lbs)</b>
Reaction link to frame, M10	<b>43 Nm (32 ft-lbs)</b>
Lock nut, swinging arm to main frame, left, M24 x 1.5	<b>145 Nm (107 ft-lbs)</b>
Bearing stud, swinging arm to main frame, left, M24 x 1.25	<b>7 Nm (5 ft-lbs)</b>
Swinging arm to main frame, right, M6	<b>9 Nm (7 ft-lbs)</b>
Strut left to strut right, M6 x 16	Micro-encapsulated <b>8 Nm (6 ft-lbs)</b>
Spring strut to rear swinging arm, M10 x 80	Loctite 243 <b>58 Nm (43 ft-lbs)</b>
Spring strut to main frame, M10 x 1.25	Replace nut

	Mechanical thread lock <b>50 Nm (37 ft-lbs)</b>
<b>Brakes (w/ABS)</b>	
Brake caliper to slider tube, M8 x 32	<b>30 Nm (22 ft-lbs)</b>
Brake disc to front wheel, M8 x 20	Replace screws Micro-encapsulated 24 Nm
Front brake caliper bleed screw	<b>5 Nm (4 ft-lbs)</b>
Brake caliper, rear, to cover of final drive housing, M8 x 25	<b>24 Nm (18 ft-lbs)</b>
Brake disc to wheel carrier, M8 x 15.5	Micro-encapsulated Initial torque, <b>12 Nm (9 ft-lbs)</b> Final torque, <b>30 Nm (22 ft-lbs)</b>
Rear brake caliper bleed screw, counter-hold w/f 12 banjo bolt, if necessary	<b>5 Nm (4 ft-lbs)</b>
Brake master cylinder to rear frame, M6 x 20	<b>8 Nm (6 ft-lbs)</b>
Brake-fluid reservoir to rear frame, M6 x 10	Replace screws Micro-encapsulated <b>8 Nm (6 ft-lbs)</b>
Brake lines -- Connecting piece to rear frame, M6 x 16	<b>8 Nm (6 ft-lbs)</b>
Brake pipes and hoses to components, M10 x 1	<b>18 Nm (13 ft-lbs)</b>
Brake pipes and hoses to components, M12 x 1	<b>18 Nm (13 ft-lbs)</b>
Distributor to front frame, M6 x 12	<b>8 Nm (6 ft-lbs)</b>
Brake hose cover to strut, M6 x 16	<b>8 Nm (6 ft-lbs)</b>
Vibration damper to ABS pressure modulator, M6	<b>5 Nm (4 ft-lbs)</b> <i>Variant, BMW Integral ABS (partially integral), can be deactivated</i>
Vibration damper to bracket, Nut M6	<b>8 Nm (6 ft-lbs)</b> <i>Variant, BMW Integral ABS (partially integral), can be deactivated</i>
ABS pressure modulator with bracket to engine, M6 x 16	<b>8 Nm (6 ft-lbs)</b> <i>Variant, BMW Integral ABS (partially integral), can be deactivated</i>
ABS pressure modulator with bracket and clutch cover to engine, M6 x 20	<b>8 Nm (6 ft-lbs)</b> <i>Variant, BMW Integral ABS (partially integral), can be deactivated</i>
Speed sensor to final drive housing cover, M5 x 10	<b>4 Nm (3 ft-lbs)</b>
Speed sensor to fork leg, M5 x 10	<b>4 Nm (3 ft-lbs)</b>
<b>Foot operation</b>	

Brake pedal stop, M6 x 20	<b>9 Nm (7 ft-lbs)</b>
Brake pedal to rear frame, M8 x 40	Micro-encapsulated <b>21 Nm (15 ft-lbs)</b>
<b>Wheels and tyres</b>	
Quick-release axle in axle holder, M24 x 1.5	<b>50 Nm (37 ft-lbs)</b>
Rear wheel to wheel carrier, M10 x 1.25	in diagonally opposite sequence <b>60 Nm (44 ft-lbs)</b>
Nipple on spoke, M4	<b>4 Nm (3 ft-lbs)</b> <i>Variant, Cross-spoked wheels</i>
Initial torque, spokes, M4	<b>1 Nm (1 ft-lbs)</b> <i>Variant, Cross-spoked wheels</i>
Counter-hold spokes, M4	<b>1 Nm (1 ft-lbs)</b> <i>Variant, Cross-spoked wheels</i>
<b>Motorcycle frame</b>	
Rear frame to engine, bottom, M12 x 50	<b>55 Nm (41 ft-lbs)</b>
Rear frame to engine, top, M10 x 40	<b>38 Nm (28 ft-lbs)</b>
Rear frame to gearbox, M8 x 55	1. Hand-tighten all screws; 2. Tighten gearbox screw first; 3. Tighten remaining screws <b>28 Nm (21 ft-lbs)</b>
Front frame to engine, M12 bolt	Replace nuts Micro-encapsulated <b>82 Nm (61 ft-lbs)</b>
Frame strut to engine, M10 x 40	Replace screws Micro-encapsulated <b>38 Nm (28 ft-lbs)</b>
Frame strut to front frame, M10 bolt	Replace nuts Micro-encapsulated <b>38 Nm (28 ft-lbs)</b>
<b>Center and Side stands</b>	
Center stand to main frame, M10 x 30	<b>40 Nm (30 ft-lbs)</b>
Center-stand stop to rear silencer, M6 x 16	<b>6 Nm (4 ft-lbs)</b>
Side stand to pivot mount, M10 x 1	Micro-encapsulated <b>56 Nm (41 ft-lbs)</b>
<b>Luggage carrier</b>	
Luggage rack to rear frame, center, M6 x 25	Replace screws Mechanical thread lock <b>8 Nm (6 ft-lbs)</b>
Luggage rack to rear frame, at sides, M6 x 30	Mechanical thread lock <b>8 Nm (6 ft-lbs)</b>



Rear carrier to rear frame section, M6 x 20	<b>8 Nm (6 ft-lbs)</b>
Luggage carrier to rear carrier, M5 x 16	<b>2 Nm (1 ft-lbs)</b>
Lock, seat latch, to rear carrier	<b>2 Nm (1 ft-lbs)</b>
Clamp, case holder to rear frame, M6 x 50	<b>12 Nm (9 ft-lbs)</b>
Case holder through rear carrier to rear frame at top, M6 x 35	<b>12 Nm (9 ft-lbs)</b>
Adapter plate to luggage rack, M6 x 40	<b>8 Nm (6 ft-lbs)</b>
Adapter plate to topcase support, M6 x 14	<b>8 Nm (6 ft-lbs)</b>
Topcase support to rear frame, M6 x 20	<b>8 Nm (6 ft-lbs)</b>
Hook retainer to adapter plate, M6 x 14	<b>8 Nm (6 ft-lbs)</b>
Retaining pin for seat, rear, M6	<b>8 Nm (6 ft-lbs)</b>
<b>Mudguard and splash guard</b>	
Mudguard, top, to fairing bracket, M5 x 16	<b>2 Nm (1 ft-lbs)</b>
Mudguard, bottom, to fork slider tube bridge, M5 x 12	<b>2 Nm (1 ft-lbs)</b>
License-plate carrier to rear frame, M5 x 16	<b>2 Nm (1 ft-lbs)</b>
Mudguard to frame, rear, M5 x 14	<b>2 Nm (1 ft-lbs)</b>
Spray guard to rear wheel drive, M6 x 20	Loctite 2701 <b>8 Nm (6 ft-lbs)</b>
Threaded bush for spray guard to rear wheel drive cover, M6	Loctite 2701 <b>10 Nm (7 ft-lbs)</b>
Spray guard to threaded bush, rear wheel drive, M6 x 20	Loctite 2701 <b>8 Nm (6 ft-lbs)</b>
<b>Motorcycle trim panels</b>	
Fairing bracket to frame front section, M6 x 16	<b>11 Nm (8 ft-lbs)</b>
Lug to fairing bracket left and right, M5 x 16	<b>5 Nm (4 ft-lbs)</b>
Bracket, fairing, to bracket, tank cover left and right, M5 x 16	<b>2 Nm (1 ft-lbs)</b>
Tank cover to tank cover, center left and right, M5 x 14	<b>2 Nm (1 ft-lbs)</b>
Tank cover to bracket, tank cover left and right, M5 x 14	<b>5 Nm (4 ft-lbs)</b>
Tank cover, center, to mudguard, front, top left and right, M5 x 16	<b>2 Nm (1 ft-lbs)</b>
Headlight carrier to fairing bracket, M5 x 16	<b>5 Nm (4 ft-lbs)</b>
<b>Windscreen and footrests</b>	
Windscreen to windscreen holder, M5 x 12	Replace screws Mechanical thread lock <b>2 Nm (1 ft-lbs)</b>

Hand protector to mirror base, M5 x 12	<b>2 Nm (1 ft-lbs)</b>
Footrest plate to rear frame section, M8 x 40	<b>19 Nm (14 ft-lbs)</b>
<b>Mirrors and ignition</b>	
Mirror to clamping piece, M10	<b>25 Nm (18 ft-lbs)</b>
Clamping piece to clamping block, M10	<b>30 Nm (22 ft-lbs)</b>
Ignition/steering lock to fork bridge, M8 non-removable screw	Micro-encapsulated <b>20 Nm (15 ft-lbs)</b>
<b>Seat</b>	
Seat mount, front, to frame, Hex nut M5	<b>4 Nm (3 ft-lbs)</b>
<b>Wiring harness</b>	
Wiring harness with cable duct to rear frame, M5 x 10	<b>2 Nm (1 ft-lbs)</b>
Wiring harness with cable duct to front frame, PT screw K35 x 12	<b>1 Nm (1 ft-lbs)</b>
Earth cable, wiring harness, to engine, M6 x 10	<b>8 Nm (6 ft-lbs)</b>
Wiring harness earth to crankcase, M6 x 12	<b>8 Nm (6 ft-lbs)</b>
Wiring harness earth to cylinder head left and right, M6 x 10	<b>8 Nm (6 ft-lbs)</b>
Starter relay with relay socket to rear mudguard, Combination cheese-head screw K35 x 12	<b>1 Nm (1 ft-lbs)</b>
<b>Battery with holder</b>	
Wiring harness +/- to battery, M6 x 12	<b>7 Nm (5 ft-lbs)</b>
Battery retainer to air filter housing, PT screw	<b>2 Nm (1 ft-lbs)</b>
<b>Switches and relays</b>	
Handlebar grip, left, to handlebar, Self-tapping screw M4	<b>1 Nm (1 ft-lbs)</b>
Throttle twistgrip to handlebar, M5	<b>6 Nm (4 ft-lbs)</b>
Multifunction switch to handlebar left / right, PT screw K30 x 10	<b>1 Nm (1 ft-lbs)</b>
Cover for multifunction switch to multifunction switch left / right, PT screw K30 x 10	<b>1 Nm (1 ft-lbs)</b>
Brake-light switch, footbrake, to footrest plate, M5 x 8	<b>5 Nm (4 ft-lbs)</b>
Cover for side-stand switch to rear frame, M5 x 8	<b>6 Nm (4 ft-lbs)</b>
Cap to throttle twistgrip unit, M4 x 30	<b>1 Nm (1 ft-lbs)</b>
Cover for Bowden-cable relay, M4 x 30	<b>3 Nm (2 ft-lbs)</b>
Clamp, M5 x 16	<b>5 Nm (4 ft-lbs)</b>
Multifunction switch handlebar fitting to handlebar left /	<b>1 Nm (1 ft-lbs)</b>

right, PT screw K30 x 10	
<b>Horn</b>	
Holder for horn to fairing bracket, Hex nut M6	<b>9 Nm (7 ft-lbs)</b>
Horn to holder for horn, M8	<b>19 Nm (14 ft-lbs)</b>
<b>Instruments</b>	
Bracket for instrument panel to headlight housing, PT screw 3.5 x 12	<b>1 Nm (1 ft-lbs)</b>
<b>Lights and turn signals</b>	
Headlight to fairing bracket, M6 x 30	<b>5 Nm (4 ft-lbs)</b>
Flashing turn indicator to headlight housing, M6 x 16	<b>5 Nm (4 ft-lbs)</b>
Rear light to license-plate carrier, Hex nut M6	<b>4 Nm (3 ft-lbs)</b>
Flashing turn indicator to license-plate carrier left / right, M6	<b>3 Nm (2 ft-lbs)</b>
<b>Anti-theft alarm</b>	
Anti-theft alarm to rear mudguard, M4 x 12	<b>8 Nm (6 ft-lbs)</b>
<b>Crash bar</b>	
Screws, top, M6	<b>9 Nm (7 ft-lbs)</b>
Screw, bottom, M10	<b>25 Nm (18 ft-lbs)</b>

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