



Motorcycle
2013 Model: RM-Z250L3
Date: July 2012

MSRP \$7,599



New Features

1. Through feedback from factory racing, the piston and piston pin were developed using Finite Element Method (FEM) analysis. The new piston is 3% lighter without any compromise to strength or rigidity.
2. The internal shape of the passage in the crank pin was changed to capture the sludge in the engine oil and enhance the durability of the bearing at the big end.
3. The new crankcase reed valve has been made thinner for more efficient lubrication. The new oil strainer has a stronger magnet to capture more sludge from the engine oil. Both contribute to better throttle response and smoother power delivery.
4. The intake camshaft profile and the exhaust camshaft timing were changed to adjust the overall output characteristic resulting in both high output and controllability.
5. The volume of the air cleaner outlet tube has been increased to enhance the throttle response.
6. The generator specifications were reviewed and the generation and charging performance enhanced to improve ease of starting.

7. Redesigned Exhaust system: The muffler body and the internal structure were redesigned to enhance mid-to-high rpm range output and controllability without sacrificing low rpm performance.
8. The change in the radiator hose layout and in the radiator fin pitch enhanced the cooling performance. Also, features new by-pass hose routing to simplify radiator maintenance.
9. The completely new transmission design achieves a smooth yet solid shift feel. The method of fastening the sprocket has been changed to attain a quick shift feel.
10. The change in the clutch release cam shape reduces the force required to operate the clutch and enhances the clutch feel.
11. The new fuel pump uses different materials for lighter weight. The hose lock mechanism was also revised. This makes fuel hose installation and removal precise and simple.
12. The new muffler body uses conventional bolts in end cap instead of rivets to simplify the replacement of the glass wool packing in the muffler.
13. The all new Separate Function front Fork (SFF) from Showa, separates the spring and damping tasks. The right leg holds the spring, while the left leg incorporates the cartridge assembly to manage damping. This results in reduced friction, increased absorption performance, and weight savings.
14. The front fork inner tube diameter has been increased from 47mm to 48mm for optimized stability and absorption. The spring pre-load is now adjustable, which allows a wider setting range.
15. The frame and seat rail have been reviewed and refined for optimized rigidity balance. The result is an ideal balance of nimble handling and stability.
16. The link lever ratio for the rear suspension was changed to make the suspension damping characteristic progressive.
17. The steering head dust cover has been changed to plastic with sealed bearings (from steel caps and rubber seals). These lighter components still keep out water and mud just as well.
18. The change to the newest Dunlop MX51 series tires for the front and rear tires enhanced the traction performance.
19. The new ECM has higher processing performance with optimized settings. The new ignition coil has higher power. Both these changes provide optimized combustion efficiency and enhanced roll-on performance.
20. A self-diagnosis function is incorporated in the ECM. It can be accessed by using the optional FI indicator light (Part No. 36380-28H00). For 2013 model, the FI indicator has engine hour-meter function as well. So riders can track engine-operating time and better manage maintenance intervals.

Key Features

1. 249cc, 4-stroke, fuel-injected, DOHC engine, designed compact and lightweight, powers the RM-Z250's Championship-winning performance.
2. Advanced, battery-less fuel-injection (FI) system, featuring a 44mm throttle body with progressive throttle linkage and a 16-bit computer.
3. The fuel injection system uses a unique capacitor-assisted starting system, and is powered by a durable, lightweight magneto-generator after starting.
4. Aluminum cylinder with Suzuki Composite Electrochemical Material (SCEM) coating, built for durability, light weight and efficient heat transfer.
5. A sturdy connecting rod and mirror finishing permits a stunning 13,500 rpm maximum engine speed.
6. Tuned to offer superb handling for a wide range of riders, the suspension delivers excellent traction without sacrificing quick-turning ability.
7. Smart chassis design details include footpeg brackets shaped to help prevent mud clogging.
8. Race-inspired disc rotors offer enhanced cooling performance and efficient mud slinging.
9. High-quality Renthal handlebars featuring a tapered design and fixed to the triple clamp on a rubber mount.
10. Gripper seat, with projected cross-shaped patterns on top surface to provide additional grip.
11. Fuel setting can be easily changed without using tools. Two electrical couplers are included for quickly adjusting the fuel setting to suit the riding conditions.



SPECIFICATIONS:**MODEL: RM-Z250L3****DIMENSIONS AND CURB MASS**

Overall length.....	2170 mm (85.4 in)
Overall width	830 mm (32.7 in)
Overall height.....	1270 mm (50.0 in)
Wheelbase.....	1475 mm (58.1 in)
Ground clearance	345 mm (13.6 in)
Seat height.....	955 mm (37.6 in)
Curb mass	106.5 kg (235 lbs)

ENGINE

Type.....	4-stroke, liquid-cooled, DOHC
Number of cylinders	1
Bore	77.0 mm (3.03 in)
Stroke	53.6 mm (2.11 in)
Displacement	249 cc (15.2 cu. in)
Compression ratio.....	13.5 : 1
Fuel system	Fuel injection
Air cleaner.....	Polyurethane foam element
Starter system.....	Primary kick
Lubrication system.....	Semi-dry sump
Idle speed	2100 ± 50 r/min

DRIVE TRAIN

Clutch.....	Wet multi disc
Transmission.....	5-speed constant mesh
Gearshift pattern	1-down, 4-up
Primary reduction ratio.....	3.316 (63/19)
Gear ratios, Low	2.153 (28/13)
2nd.....	1.764 (30/17)
3rd.....	1.470 (25/17)
4th.....	1.238 (26/21)
Top.....	1.090 (24/22)
Final reduction ratio	3.769 (49/13)
Drive chain.....	DID520DMA4, 114 links

CHASSIS

Front suspension	Upside-down telescopic fork
Rear suspension.....	Swingarm type
Front suspension stroke.....	310mm (12.2 in)
Rear wheel travel	310mm (12.2 in)
Caster	29°20'
Trail.....	130 mm (5.1 in)
Steering angle.....	45° (right & left)
Front brake	Disc brake
Rear brake	Disc brake
Front tire size	80/100-21 51M, tube type
Rear tire size.....	100/90-19 57M, tube type

ELECTRICAL

Ignition type	Electronic ignition (CDI)
Ignition timing.....	12° B.T.D.C. at 2100 r/min
Spark plug.....	NGK CR8EIB-10

CAPACITIES

Fuel tank, including reserve	6.5 L (1.7/1.4 US/Imp gal)
Engine oil, oil change.....	950 ml (1.0/0.8 US/Imp qt)
with filter change	1000 ml (1.1/0.9 US/Imp qt)
overhaul	1100 ml (1.2/1.0 US/Imp qt)
Coolant	950 ml (1.0/0.8 US/Imp qt)

SERVICE DATA

VALVE + GUIDE

Unit: mm (in)

ITEM	STANDARD		LIMIT
Valve diam.	IN.	31 (1.22)	—
	EX.	25 (0.98)	—
Tappet clearance (when cold)	IN.	0.09 – 0.16 (0.004 – 0.006)	—
	EX.	0.17 – 0.24 (0.007 – 0.009)	—
Valve guide to valve stem clearance	IN.	0.010 – 0.037 (0.0004 – 0.0015)	—
	EX.	0.030 – 0.057 (0.0012 – 0.0022)	—
Valve stem deflection	IN. & EX.	—	0.25 (0.010)
Valve guide I.D.	IN. & EX.	4.500 – 4.512 (0.1772 – 0.1176)	—
Valve stem O.D.	IN.	4.475 – 4.490 (0.1762 – 0.1768)	—
	EX.	4.455 – 4.470 (0.1754 – 0.1760)	—
Valve stem runout	IN. & EX.	—	0.05 (0.002)
Valve seat width	IN. & EX.	0.9 – 1.1 (0.035 – 0.043)	—
Valve head radial runout	IN. & EX.	—	0.03 (0.001)
Valve spring free length	IN.	—	37.1 (1.46)
	EX.	—	37.5 (1.48)
Valve spring tension	IN.	142 – 157 N (14.5 – 16.0 kgf, 31.9 – 35.3 lbs) at length 33.55 mm (1.321 in)	—
	EX.	137 – 157 N (14.0 – 16.0 kgf, 30.8 – 35.3 lbs) at length 33.55 mm (1.321 in)	—

CAMSHAFT + CYLINDER HEAD

Unit: mm (in)

ITEM	STANDARD		LIMIT
Cam height	IN. (For E-03, 28)	35.18 – 35.23 (1.385 – 1.387)	34.88 (1.373)
	IN. (For E-19)	34.98 – 35.03 (1.377 – 1.379)	34.68 (1.365)
	EX.	34.18 – 34.23 (1.346 – 1.348)	33.88 (1.334)
Camshaft journal oil clearance	IN. & EX.	0.023 – 0.066 (0.0013 – 0.0026)	0.150 (0.0059)
Camshaft journal holder I.D.	IN. & EX.	22.003 – 22.025 (0.8663 – 0.8671)	—
Camshaft journal O.D.	IN. & EX.	21.959 – 21.980 (0.8645 – 0.8654)	—
Camshaft runout	—		0.10 (0.004)
Cam chain pin	13th pin		—
Cylinder head distortion	—		0.05 (0.002)

CYLINDER + PISTON + PISTON RING

Unit: mm (in)

ITEM	STANDARD		LIMIT
Compression pressure (Automatic decomp. actuated)	400 – 800 kPa (4.0 – 8.0 kgf/cm ² , 57 – 114 psi)		—
Piston to cylinder clearance	0.030 – 0.040 (0.0012 – 0.0016)		0.120 (0.0047)
Cylinder bore	77.000 – 77.015 (3.0315 – 3.0321)		Nicks or scratches
Piston diam.	76.965 – 76.980 (3.0301 – 3.0307) Measure at 8.0 mm (0.31 in) from the skirt end.		76.880 (3.0268)
Cylinder distortion	—		0.05 (0.002)
Piston ring free end gap	1st	IR Approx. 7.1 (0.28)	5.7 (0.22)
Piston ring end gap	1st	0.15 – 0.25 (0.006 – 0.010)	0.50 (0.020)
Piston ring to groove clearance	1st	—	0.180 (0.0071)
Piston ring groove width	1st	1.01 – 1.03 (0.0398 – 0.0406)	—
	Oil	1.51 – 1.53 (0.0594 – 0.0602)	—
Piston ring thickness	1st	0.97 – 0.99 (0.0382 – 0.0390)	—
Piston pin bore	16.002 – 16.008 (0.6300 – 0.6302)		16.030 (0.6311)
Piston pin O.D.	15.995 – 16.000 (0.6297 – 0.6299)		15.980 (0.6291)

CONROD + CRANKSHAFT

Unit: mm (in)

ITEM	STANDARD	LIMIT
Conrod small end I.D.	16.010 – 16.018 (0.6303 – 0.6306)	16.040 (0.6315)
Conrod deflection	—	3.0 (0.12)
Conrod big end side clearance	0.20 – 0.65 (0.008 – 0.026)	1.0 (0.04)
Conrod big end width	17.75 – 17.80 (0.699 – 0.701)	—
Crank web to web width	55.9 – 56.1 (2.20 – 2.21)	—
Crankshaft runout	—	0.08 (0.003)

OIL PUMP

ITEM	STANDARD	LIMIT
Oil pressure (at 50 °C, 122 °F)	25 kPa (0.25 kgf/cm ² , 3.6 psi) at 6 000 r/min	—

CLUTCH

Unit: mm (in)

ITEM	STANDARD	LIMIT
Clutch cable play	2 – 3 (0.08 – 0.16)	—
Drive plate thickness	2.72 – 2.88 (0.107 – 0.113)	2.42 (0.095)
Drive plate claw width	13.85 – 13.96 (0.545 – 0.550)	13.05 (0.514)
Driven plate distortion	—	0.10 (0.004)
Clutch spring free length	50.74 (1.998)	48.2 (1.90)

RADIATOR + ENGINE COOLANT

ITEM	STANDARD/SPECIFICATION	LIMIT
Radiator cap valve opening pressure	95 – 125 kPa (0.95 – 1.25 kgf/cm ² , 14 – 18 psi)	—
Engine coolant type	Use an anti-freeze/coolant compatible with aluminum radiator.	—
Engine coolant capacity	950 ml (1.0/0.8 US/lmp qt)	—

TRANSMISSION + DRIVE CHAIN

Unit: mm (in) Except ratio

ITEM		STANDARD	LIMIT
Primary reduction ratio		3.315 (63/19)	—
Final reduction ratio		3.769 (49/13)	—
Gear ratios	Low	2.153 (28/13)	—
	2nd	1.764 (30/17)	—
	3rd	1.470 (25/17)	—
	4th	1.238 (26/21)	—
	Top	1.090 (24/22)	—
Shift fork to groove clearance	No.1, 2 & 3	0.10 – 0.30 (0.004 – 0.012)	0.50 (0.020)
Shift fork groove width	No.1, 2 & 3	5.00 – 5.10 (0.197 – 0.201)	—
Shift fork thickness	No.1, 2 & 3	4.80 – 4.90 (0.189 – 0.193)	—
Drive chain	Type	DID 520 DMA4	—
	Links	114 links	—
	20-pitch length	—	323.8 (12.75)
Drive chain slack		35 – 45 (1.4 – 1.8)	—
Gearshift lever height		10 – 15 (0.4 – 0.6) (Above the top face of the foot rest)	—

INJECTOR + FUEL PUMP + FUEL PRESSURE REGULATOR

ITEM	SPECIFICATION	NOTE
Injector resistance	10 – 11 Ω at 24 °C (75 °F)	
Fuel pump discharge amount	89 ml (3.0/3.1 US/Imp oz) or more /10 sec.	
Fuel pressure regulator operating set pressure	Approx. 294 kPa (2.94 kgf/cm ² , 41.81 psi)	

FI SENSORS

ITEM	STANDARD/SPECIFICATION	NOTE
CKP sensor resistance	80 – 120 Ω	
CKP sensor peak voltage	2.8 V or more	
IAP sensor input voltage	4.5 – 5.5 V	
IAP sensor output voltage	0.30 – 4.03 V at idle speed	
TP sensor input voltage	4.5 – 5.5 V	
TP sensor output voltage	Closed	0.58 – 0.62 V
	Opened	3.60 – 4.00 V
ECT sensor input voltage	4.5 – 5.5 V	
ECT sensor resistance	Approx. 2.58 k Ω at 20 °C (68 °F)	
IAT sensor input voltage	4.5 – 5.5 V	

ITEM	STANDARD/SPECIFICATION		NOTE
IAT sensor resistance	Approx. 2.58 k Ω at 20 °C (68 °F)		
TO sensor resistance	16.5 – 22.3 k Ω		
TO sensor voltage	Normal	0.4 – 1.4 V	When leaning 65°
	Leaning	3.7 – 4.4 V	
GP switch voltage	0.88 V or more		From 1st to Top
Injector voltage	Battery voltage		

THROTTLE BODY

ITEM	SPECIFICATION
Bore size	44 mm (1.73 in)
I.D. No.	49H1
Idle r/min	2 100 \pm 50 r/min
Idle screw	5 – 6 turns counterclockwise
Throttle cable play	2 – 4 mm (0.08 – 0.16 in)
Hot starter lever clearance	2 – 3 mm (0.08 – 0.12 in)

ELECTRICAL

Unit: mm (in)

ITEM	STANDARD/SPECIFICATION		NOTE
Ignition timing	12° B.T.D.C. at 2 100 r/min.		
Spark plug	Type	NGK: CR8EIB10	
	Gap	0.9 – 1.0 (0.035 – 0.039)	
Spark performance	Over 8 (0.3) at 1 atm.		
CKP sensor resistance	80 – 120 Ω		R – G
Charge coil resistance	1.2 – 2.5 Ω		Y – Y
CKP sensor peak voltage	2.8 V or more		⊕ R – ⊖ G
Ignition coil resistance	Primary	0.17 – 0.70 Ω	W/BI – B/W
	Secondary	9 – 14 k Ω	Plug cap – B/W
Ignition coil primary peak voltage	170 V or more		B/W – ⊖ W/BI
Magneto no-load voltage (When engine is cold)	100 V (AC) or more at 5 000 r/min		
Regulated voltage	*13.5 V at 5 000 r/min		
Engine stop switch resistance	Under 1 Ω		B/Y – B/W

BRAKE + WHEEL

Unit: mm (in)

ITEM	STANDARD		LIMIT
Brake lever adjuster length	11 – 15 (0.4 – 0.6)		—
Rear brake pedal height	0 – 10 (0 – 0.4) (Below the top face of the foot rest)		—
Brake disc thickness	Front	2.8 – 3.2 (0.11 – 0.13)	2.5 (0.10)
	Rear	3.85 – 4.15 (0.152 – 0.163)	3.5 (0.14)
Brake disc distortion	Front & Rear	—	0.3 (0.012)
Master cylinder bore	Front	11.000 – 11.043 (0.4331 – 0.4348)	—
	Rear	11.000 – 11.043 (0.4331 – 0.4348)	—
Master cylinder piston diam.	Front	10.957 – 10.984 (0.4314 – 0.4324)	—
	Rear	10.957 – 10.984 (0.4314 – 0.4324)	—
Brake caliper cylinder bore	Front	27.000 – 27.050 (1.0630 – 1.0650)	—
	Rear	25.400 – 25.450 (1.0000 – 1.0020)	—
Brake caliper piston diam.	Front	26.900 – 26.950 (1.0591 – 1.0610)	—
	Rear	25.335 – 25.368 (0.9974 – 0.9987)	—
Brake fluid type	DOT 4		—
Wheel rim runout	Axial	—	2.0 (0.08)
	Radial	—	2.0 (0.08)
Wheel rim size	Front	1.60 × 21	—
	Rear	1.85 × 19	—
Wheel axle runout	Front	—	0.25 (0.010)
	Rear	—	0.25 (0.010)

TIRE

ITEM	STD/SPEC.		LIMIT
Cold inflation tire pressure	Front & Rear	70 – 110 kPa (0.7 – 1.1 kgf/cm ² , 10 – 16 psi)	—
Tire size	Front	80/100-21 51M	—
	Rear	100/90-19 57M	—
Tire type	Front	MX51F	—
	Rear	MX51	—
Tire tread depth (Recommend depth)	Front & Rear	—	4.0 mm (0.16 in)

SUSPENSION

Unit: mm (in)

ITEM		STANDARD	LIMIT	NOTE
Front fork stroke		310 (12.2)	—	
Front fork inner tube O.D.		48 (1.9)	—	
Front fork spring free length		660 (26.0)	653.5 (25.73)	
Front fork spring adjuster (Right front fork)		MIN – 6 clicks turn clockwise	—	
Front fork damping force adjuster (Left front fork)	Rebound	MAX – 9 clicks turn counterclockwise	—	
	Compression	MAX – 11 clicks turn counterclockwise	—	
Front fork air pressure		0 kPa (0 kgf/cm ² , 0 psi)	—	
Front fork spring rate (Right front fork)		9.8 N/mm (1.00 kgf/mm)	—	
Rear shock absorber gas pressure		784 – 980 kPa (7.8 kgf/cm ² , 111.5 psi – 9.8 kgf/cm ² , 139.4 psi)	—	
Rear shock absorber spring set length		5.0 (0.20)	—	5.0 mm (0.20 in) compressed from spring free length
Rear shock absorber spring rate		53.9 N/mm (5.50 kgf/mm)	—	
Rear shock absorber damping force adjuster	Rebound	MAX – 14 clicks turn counterclockwise	—	
	Compression (High speed)	MAX – 2 turn counterclockwise	—	
	Compression (Low speed)	MAX – 14 clicks turn counterclockwise	—	
Rear wheel travel		310 (12.2)	—	
Swingarm pivot shaft runout		—	0.3 (0.01)	

FUEL + OIL

ITEM	SPECIFICATION		NOTE
Fuel type	Use only unleaded gasoline of at least 90 pump octane (R/2 + M/2 method).		E-03, 28
	Use only unleaded gasoline of at least 95 octane. (Research method)		The others
Fuel tank capacity	6.5 L (1.7/1.4 US/Imp gal)		
Engine oil type	SAE 10W-40, API SG/SH/SJ/SL with JASO MA/MA1/MA2		E-03
	MOTUL 300V 10W-40 (Recommendation oil) or SAE 10W-40, API SG/SH/SJ/SL with JASO MA/MA1/MA2		The others
Engine oil capacity	Change	950 ml (1.0/0.8 US/Imp qt)	
	Filter change	1 000 ml (1.1/0.9 US/Imp qt)	
	Overhaul	1 100 ml (1.2/1.0 US/Imp qt)	
Air cleaner element oil type	MOTUL AIR FILTER OIL or equivalent		
Front fork oil type	SHOWA SUSPENSION FLUID SS-19 or equivalent		
Left front fork oil capacity	318 ml (10.7/11.2 US/Imp oz)		Outer tube oil quantity
	326 ml (11.0/11.5 US/Imp oz)		Fork cylinder unit oil quantity
Right front fork oil capacity (When standard fork spring is used)	340 ml (11.5/12.0 US/Imp oz)		Outer tube oil quantity
Rear shock absorber oil type	SHOWA SUSPENSION FLUID SS-25 or equivalent		
Rear shock absorber oil capacity	383 ml (12.9/13.5 US/Imp oz)		

TIGHTENING TORQUE

ENGINE

PART		N·m	kgf-m	lbf-ft
Cylinder head cover bolt		14	1.4	10.0
Spark plug		11	1.1	8.0
Spark plug cap retainer bolt		11	1.1	8.0
Cylinder head bolt	(Initial)	25	2.5	18.0
	(Final)	51	5.1	37.0
Cylinder head base nut		10	1.0	7.0
Cylinder base bolt		12	1.2	8.5
Camshaft journal holder bolt		10	1.0	7.0
Primary drive gear nut		110	11.0	79.5
Magneto rotor nut		80	8.0	58.0
Clutch sleeve hub nut		90	9.0	65.0
Clutch spring set bolt		10	1.0	7.0
Gearshift arm stopper bolt		23	2.3	16.5
Gearshift cam driven gear pin		24	2.4	17.5
Gearshift cam stopper bolt		10	1.0	7.0
Pawl lifter screw		8.5	0.85	6.0
Kick starter guide bolt		10	1.0	7.0
Cam chain tension adjuster mounting bolt		10	1.0	7.0
Cam chain tension adjuster cap bolt		23	2.3	16.5
Cam chain tensioner bolt		10	1.0	7.0
Cam chain guide retainer mounting bolt		10	1.0	7.0
Right crankcase cover bolt		11	1.1	8.0
Bearing retainer screw		8.5	0.85	6.0
Reed valve guide bolt		4.5	0.45	3.0
Engine oil drain plug		21	2.1	15.0
Engine oil drain No.2 plug		12	1.2	8.5
Engine oil check bolt		11	1.1	8.0
Engine oil strainer cap		21	2.1	15.0
Oil filter cap bolt		11	1.1	8.0
Oil gallery plug		10	1.0	7.0
Oil pump No.1 bolt		5.5	0.55	4.0
Oil pump No.2 bolt		11	1.1	8.0
Oil strainer No.2 bolt		5.5	0.55	4.0
Crankcase bolt		11	1.1	8.0
Clutch cover bolt		11	1.1	8.0
TDC plug		14	1.4	10.0
Magneto cover bolt		11	1.1	8.0
Magneto stator bolt		5.5	0.55	4.0
Crankshaft hole plug		11	1.1	8.0
Ignition coil mounting bolt		10	1.0	7.0
Condenser bracket bolt		10	1.0	7.0

PART	N·m	kgf·m	lbf·ft
Engine mounting bolt (upper)	45	4.5	32.5
Engine mounting nut (lower)	66	6.6	47.5
Engine mounting nut (front)	66	6.6	47.5
Engine mounting bracket nut (upper)	40	4.0	29.0
Engine mounting bracket nut (front)	40	4.0	29.0
Engine sprocket bolt	36	3.6	26.0
Engine sprocket cover bolt	11	1.1	8.0
Kick starter lever bolt	29	2.9	21.0
Kick starter lever screw	10	1.0	7.0
Intake pipe bolt	10	1.0	7.0
Exhaust pipe nut	18	1.8	13.0
Muffler connector clamp bolt	18	1.8	13.0
Muffler mounting bolt (front & rear)	23	2.3	16.5
Exhaust pipe cover bolt	11	1.1	8.0
Rear muffler body mounting bolt	10	1.0	7.0

FI SYSTEM AND INTAKE AIR SYSTEM

ITEM	N·m	kgf·m	lbf·ft
CKP sensor bolt	5.5	0.55	4.0
IAT sensor mounting screw	1.3	0.13	0.95
GP switch mounting bolt	6.5	0.65	4.7
Fuel delivery pipe mounting screw	3.5	0.35	2.5
Fuel pipe mounting screw	3.5	0.35	2.5
Fuel pump mounting bolt	10	1.0	7.0
TP sensor mounting screw	3.5	0.35	2.5
ECT sensor	12	1.2	8.5
TO sensor bracket bolt	8.5	0.85	6.0
Air cleaner mounting bolt	5	0.5	3.5

COOLING SYSTEM

ITEM	N·m	kgf·m	lbf·ft
Water pump impeller	8	0.8	6.0
Water pump case bolt	11	1.1	8.0
Water pump joint bolt	10	1.0	7.0
Engine coolant drain bolt	11	1.1	8.0
Radiator air bleeder bolt	6	0.6	4.5
Water hose clamp screw	1.5	0.15	1.0

CHASSIS

PART	N·m	kgf-m	lbf-ft
Handlebar clamp bolt	25	2.5	18.0
Handlebar holder set nut	44	4.4	32.0
Front fork upper clamp bolt (right and left)	23	2.3	16.5
Front fork lower clamp bolt (right and left)	23	2.3	16.5
Steering stem head nut	100	10.0	72.5
Front fork cap bolt (fork cylinder unit and spring adjust unit)	34	3.4	24.5
Lock-nut/center bolt	22	2.2	16.0
Front fork center bolt	69	6.9	50.0
Fork cylinder compression damper unit	30	3.0	21.5
Fork spring adjust	30	3.0	21.5
Fork air bleeder valve	1.3	0.13	1.0
Fork protector bolt	4.9	0.49	3.5
Front brake master cylinder holder bolt (upper)	10	1.0	7.0
Front brake master cylinder holder bolt (lower)	12	1.2	8.5
Rear brake master cylinder mounting bolt	10	1.0	7.0
Rear brake master cylinder rod lock-nut	6	0.6	4.5
Brake lever pivot bolt	6	0.6	4.5
Brake lever pivot bolt lock-nut	6	0.6	4.5
Brake pedal pivot bolt	29	2.9	21.0
Brake hose union bolt (front and rear)	23	2.3	16.5
Front brake hose guide bolt	3	0.3	2.0
Front brake caliper mounting bolt	26	2.6	19.0
Brake pad mounting pin (front and rear)	18	1.8	13.0
Front brake caliper axle bolt (caliper)	25	2.5	18.0
Front brake caliper axle bolt (bracket)	28	2.8	20.0
Rear brake caliper axle bolt (caliper)	27	2.7	19.5
Rear brake caliper axle bolt (bracket)	13	1.3	9.5
Brake air bleeder valve (front and rear)	6	0.6	4.5
Disc plate bolt (front)	11	1.1	8.0
Disc plate bolt (rear)	26	2.6	19.0
Front axle nut	35	3.5	25.5
Front axle holder bolt	21	2.1	15.0
Rear axle nut	100	10.0	72.5
Rear sprocket nut	30	3.0	21.5
Chain roller bolt/nut	23	2.3	16.5
Spoke nipple	6	0.6	4.5
Front wheel rim lock	14	1.4	10.0
Rear wheel rim lock	17	1.7	12.5
Swingarm pivot nut (engine mounting)	70	7.0	50.5
Rear shock absorber mounting nut (upper and lower)	50	5.0	36.0
Compression adjuster assembly	30	3.0	21.5
Cushion lever nut	80	8.0	58.0

PART	N·m	kgf-m	lbf-ft
Cushion rod nut (front and rear)	80	8.0	58.0
Spring adjuster lock-nut	70	7.0	50.5
Seat rail bolt and nut (upper and lower)	23	2.3	16.5
Footrest bolt	35	3.5	25.5
Cable adjuster lock-nut (throttle)	4.5	0.45	3.25
Cable adjuster lock-nut (clutch and hot starter)	4.5	0.45	3.25
Clutch cable bracket bolt	7	0.7	5.0
Radiator cover upper bolt	6	0.6	4.5
Radiator cover bolt	10	1.0	7.0