Features & Specifications
2017 GSX-R1000

GSX-R1000L7

YKV: Metallic Mat Black No. 2 / Glass Sparkle Black

Key Features

- **All new 999.8cc liquid-cooled DOHC inline-four cylinder engine produces exceptionally high top-end power without sacrificing low to mid-range power thanks to a Variable Valve Train (VVT) system, Ride-by-Wire Throttle Bodies and more.**
- **Advanced electronics such as an Inertia Measurement Unit (IMU), S-DMS adjustable power output, and traction control, plus other performance features, increase racetrack and street performance.**
- **New design, twin-spar type aluminum frame is 10% lighter and more compact, with optimized rigidity for nimble handling and a high level of grip when cornering.**
- **Advanced suspension uses a SHOWA BPF fork and rear shock that combine with new BREMBO T-drive 320mm dual front brake rotors and Monobloc 4-piston calipers for extraordinary handling and stopping performance.**
- **Aerodynamic bodywork is sleek and stylish while housing a new, bright LED headlight and Suzuki Ram Air Direct (SRAD) ducts that feed a high volume of intake air for astonishing top speed muscle.**

Overview

It has been three decades, with more than a million editions sold, since the GSX-R line was born. And a decade and a half has elapsed since the first GSX-R1000 transformed the open sportbike class forever. Now, the 2017 GSX-R1000 is redefining what it means to be The King of Sportbikes.

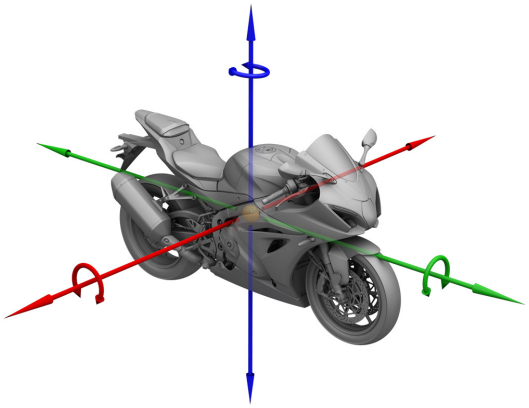
This motorcycle's chassis forms the lightest, the most compact, the most aerodynamic and the best-handling GSX-R1000 ever. Cradled in the new aluminum frame is an all-new engine that uses an exclusive Variable Valve Train and Ride-by-Wire throttle bodies for a wide spread of power while delivering smooth and precise throttle response

Using an Inertial Measuring Unit (IMU) the GSX-R1000's advanced electronics package includes selectable performance modes so the motorcycle enhances and fine tunes rider inputs. The six-axis IMU lets the GSX-R1000 recognize its position on the street or race track to help the rider achieve an extraordinary level of riding performance.

Up front, new style BREMBO T-drive brake rotors grasped by Monobloc calipers provide strong, controlled braking, while the precise and smooth SHOWA suspension keeps the sticky Bridgestone RS10 tires in touch with the road. All of this forward-looking motorcycle technology is covered in all-new, wind tunnel-developed bodywork that's uniquely GSX-R.

The King of Sportbikes is back, bow to the King.

Advanced Electronics Features

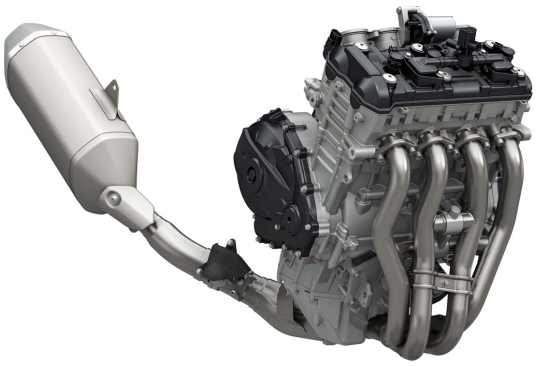


- New 32-bit Dual Processor Engine Control Module (ECM) blends Suzuki's vast street-going EFI knowledge with the intelligence from Suzuki's race-winning MotoGP program. GSX-R1000 riders will get sportbike performance without peer while simultaneously receiving polished street manners.
- Using MotoGP knowledge, Suzuki has fitted an Inertial Measurement Unit (IMU) on the new GSX-R1000. The IMU provides six direction, three axis motion and position information to the ECM so instantaneous adjustments can be made electronically to the engine and chassis components that influence performance.
- The new LCD Multi-function Instrument Panel was inspired by the GSX-RR MotoGP dash. This panel is laid out so the rider can easily see the tachometer bar, speedometer digits, and other essential operational information. This effective display is critical as it is the rider's interface to the GSX-R1000's advanced electronics.
- New Ride-by-Wire electronic throttle bodies are precisely opened by the ECM to match the throttle grip rotation of the rider's hand and the refinement from the IMU-influenced electronics. The result is a strong, seamless engine power delivery from idle to red-line.
- A new version of the three mode, Suzuki Drive Mode Selector (S-DMS) system lets the rider select the power output levels of the engine to match riding ability and conditions.
- The new and exclusive ten-mode, Motion Track Traction Control System (MT-TCS), with IMU influence, increases rider confidence by allowing adjustments to amount of intervention to match riding ability and surface conditions.
- The Suzuki Easy Start System simplifies start up for the GSX-R1000 rider as the ECM automatically cranks the engine for 1.5 seconds (or until it starts) with a momentary press of the starter button. There is no need to pull in the clutch lever if the transmission is in neutral. Once started, the ECM will control the electronic throttle bodies to maintain a consistent engine idle speed, whether the engine is cold or warm.
- The innovative Suzuki Low RPM Assist System smooths take-offs and reduces the chance of the rider stalling the motorcycle. If necessary, the ECM raises engine RPM slightly for a smoother start when the clutch is released so it's easier to ride away from a stop or navigate at very low speeds in traffic.
- OPTIONAL – The new Suzuki Launch Control System provides GSX-R1000 riders a competitive advantage when launching their motorcycle at the start of the race. This system will modulate power so the rider can concentrate on clutch operation.
- OPTIONAL – The new Suzuki Bi-directional Quick-shift System lets riders using their motorcycle in competition shift faster than ever before. By ignition timing manipulation on upshifts and electronic throttle body manipulation on downshifts; clutch-less shifting helps deliver faster and more consistent lap times.

Engine Features

- The all-new, four-stroke, liquid-cooled, DOHC, 999.8cc inline-four cylinder engine is designed with a high level of top end performance plus strong low to mid-range power.
- The crankshaft retains Suzuki's Even Firing Order Engine legacy. Uneven firing order engines used in other motorcycles vibrate more while the GSX-R1000 makes good power at all engine speeds, runs smoother and reliably while emitting a screamer exhaust note.
- The short stroke engine has a 76.0 mm bore versus a 55.1mm stroke, yet is narrower than the prior generation GSX-R1000 thanks to effective design.
- The fresh-design engine has been rotated back and positioned in the frame to create optimal chassis dimensions for precise handling and to balance the motorcycle's weight.

Engine Features (continued)



- The new and exclusive Suzuki Racing Variable Valve Timing System (SR-VVT) uses a centrifugal actuated mechanism on the intake camshaft sprocket to increase high engine RPM power without losing low-to mid-range power.
- The new design Suzuki Racing Finger Follower valve train weights less than a tappet-style valve train for reduced friction and increased valve response at higher engine speeds.
- Titanium valves, two 31.5mm intake and two 24mm exhaust valves, are used for each cylinder. The lighter valves respond well to the finger follower's arms and permit a 14,500 RPM red-line that helps produce very high peak horsepower.
- Aluminum pistons, 76.0 mm in diameter, were engineered with use of FEM (Finite Element Method) analysis, and are cast for optimal rigidity and weight.
- Suzuki Composite Electrochemical Material (SCEM) coated cylinders are integrated into the upper crankcase to reduce friction and improve heat transfer and durability.
- The high 13.2:1 compression ratio helps produce high horsepower. The cylinder head's shallow combustion chamber minimize heat produced during operation.
- The EFI system uses Suzuki's new Ride-by-Wire Electronic Throttle Bodies where the throttle valves are controlled by a servo motor for fast response to rider throttle grip input while delivering precise and smooth power delivery.
- The automatic Idle Speed Control (ISC) improves cold starting and stabilizes the engine idle regardless of engine temperature.
- • Complementing the four primary fuel injectors in the throttle bodies are four Suzuki Top Feed Injectors (S-TFI) that spray fuel from the top of the air box directly into the intake funnels. This results in higher peak power, more efficient combustion, and a higher level of fueling control.
- To increase top end power without losing lower RPM performance, the air box is equipped with Staked Air Intake Funnels for the #1 and #4 cylinders. This simple design allows good air flow at all intake speeds without requiring a mechanism that adds weight or complexity.
- New design Suzuki Ram Air Direct (SRAD) intake ducts are used to exponentially increase the volumetric flow of air amount coming in the air box as road speed increases.
- The digital ignition fires iridium type spark plugs that increase spark strength and combustion efficiency. These quality components also last longer than conventional spark plugs.
- The 4-2-1 exhaust system with titanium muffler is designed helps the engine deliver a wide range of performance with an exciting rush up to red-line.
- The Suzuki Exhaust Tuning (SET) system valve in the mid-pipe helps control back-pressure and flow to the muffler to widen power delivery and reduce exhaust sounds without needing a larger silencer.
- New design SET-Alpha exhaust valves are in the balance tubes between the #1 and #4, and the #2 and #3 head pipes. Actuated by a cable from the main SET-valve, the Alpha valves open at higher engine speeds and close at lower RPM to help the engine create high peak power without losing low and mid-range horsepower.
- The titanium muffler has a pleasing appearance while creating an exciting, distinctive sound.
- The cooling system was designed using advanced analysis design so the coolant flows through the engine and radiator more efficiently. This design uses 400cc less coolant than the prior GSX-R1000, but the new system has better cooling efficiency while being more compact and lighter.
- The fairing lowers efficiently guide cooling air to the high-capacity curved radiator. Twin cooling fans ensure good cooling at lower road speeds.
- Additional heat is removed from the engine via the use of an air-cooled, radiator-style oil cooler mounted directly below the main radiator.

Transmission Features

- New cassette-style, 6-speed transmission lets riders precisely match the gear ratio to the riding condition. A cassette-style transmission can be easily removed from crankcase as an assembly with the engine still in the frame, facilitating race track gear changes and simplified service.
- Based on Suzuki's race-proven six-speed close-ratio transmissions, the new GSX-R1000 features vertically staggered shafts to reduce overall engine length.
- The primary gear ratio is lower compared to the prior GSX-R1000 for stronger acceleration.
- A programmable shift light is on the main panel to provide a visual alert to the rider to shift when a certain engine RPM is reached.
- An optional quick-shift system is available to use during competition for clutch-less gear selection.
- The shift linkage can be easily set-up for reverse pattern, GP-style shifting (even with the optional quick-shifter installed).
- A new version of the Suzuki Clutch Assist System (SCAS) multi-plate, wet clutch is used. SCAS works like a slipper clutch during downshifts, while increasing pressure on the plates during acceleration. This smooths engine braking and lightens the clutch lever pull.
- To reduce weight, a new 525-size drive chain is used with a 45/17 final sprocket ratio that complement the larger, rear tire dimensions.

GSX-R1000L7

YVZ: Pearl Mira Red

GSX-R1000L7

YSF: Metallic Triton Blue

Chassis Features

- Using lessons learning from Suzuki MotoGP chassis development, the engine angle of the GSX-R1000 was rotated backwards 6-degrees. This had the joint effect of reducing the distance of the fork to the center of the chassis by 20mm and increase the swingarm length by 40mm. This increased chassis stability and improves aerodynamics.
- The new, aluminum twin-spar style frame was designed using FEM analysis technology to place strength is the proper places, the new frame is also 10% lighter than the prior generation GSX-R1000. The spars of the frame are set 20mm closer to help improve aerodynamics, looks and comfort.
- All-new Aluminum Superbike-braced Swingarm has equalized bracing to the main beams to provide balanced support and movement to the shock absorber to improves racetrack handling while conveying a consistent suspension feel to the rider,
- Racetrack-developed links connect the single SHOWA Remote Reservoir Shock Absorber to the braced swingarm. With spring preload, rebound damping, plus high and low-speed compression damping force adjustment the rider can tune the motorcycle to respond to riding style and weight.
- Superb suspension action is delivered by the fully adjustable SHOWA Big Piston Fork (BPF) which is renowned for damping force control that maintains front tire contact with the surface so the rider gets good sensory feedback while riding at a variety of speeds.

Chassis Features (continued)

- BREMBO Radial Mount Brake Calipers provide the rider with strong braking performance combined with superb feel.
- The new BREMBO T-drive Brake Rotors feature two methods of attaching the 320mm floating disc to the carrier. There are five conventional floating rotor spools that maintain the rotor's relationship to the caliper and five new-design T-drive fasteners. This combed attachment technique allows the rotor to absorb more energy so more braking force is available to a GSX-R1000 rider than ever before.
- The front brakes are complemented by a 240mm rear disc brake with a NISSIN single-piston caliper to help make sure you can have controlled stops.
- Exclusive to Suzuki, new lightweight six-spoke wheels reduce unsprung mass and have been designed to handle the braking and drive forces that a GSX-R1000 can create.
- The wheel rims have pin stripes punctuated by "R" logos that highlight the bike's identity.
- The track-day ready Bridgestone RS10 low mass tires, with a new higher 55% profile in the back, are premium high-grip radials that achieve excellent handling and stability.
- NEW Aerodynamic Bodywork was created by Suzuki styling designers and engineers using numerous wind tunnel tests to achieve a slippery shape and compelling appearance. Narrower than ever before, the GSX-R1000's shape directly aids performance by improved handling and top speed on the racetrack.
- The new SRAD intake ducts are positioned closer to the center of the fairing nose, where air pressure is highest. The intake ducts are also larger, thanks to the compact LED headlight.
- The reasonable sport riding position is created by a carefully crafted relationship between the clip-on's, footrests and seat. The top of the fuel tank is lowered 21mm to make it easier for the rider to tuck in on a racetrack straightaway.
- The reasonable seat height contributes to the good rider interface that aids in guiding the motorcycle on the road or race track.
- The passenger seat can be removed and exchanged with an optional, color-matched solo tail cowl.
- The shifter and rear brake pedal are adjustable in relationship to the footrests, and the hand controls are adjustable in relation to the grips. The front brake lever has a slot machined in the end to prevent wind pressure from applying the front brake.

Electrical Features

- **Controller Area Network wire harness (CAN Bus) allows for fast and precise communications between all of the GSX-R1000's Electronic Systems. With a CAN Bus system, riders will experience swift and trouble-free electronic system operation while the size and complexity of the wiring is simplified.**
- **The new LCD Multi-function Instrument Panel has an adjustable intensity, white-color back light for great nighttime visibility and is flanked by LED indicators that include the turn signals, high beam, traction control, shift light, plus coolant temperature and oil pressure alerts.**
- **The new LED headlight is lightweight, bright and distinctive. This low-electric draw light has a narrow, stacked shape to allow the SRAD ducts at the nose of the fair access to the high pressure air created at higher speeds.**
- **LED Combination Tail & Brake Light has a very low electrical draw and the vertically stacked shape permits the tail section to be narrow for better air flow at the back of the motorcycle.**
- **The Turn Signals are lightweight and use incandescent bulbs with amber lenses so the motorcycle's turn indication is highly visible to other traffic.**
- **New poly-function Start/Stop Switch combines the engine stop and start functions. The switch is a fine complement to the Suzuki Easy Start system fitted to the GSX-R1000.**

Additional Features

- **Stylized Suzuki "S" 3-D emblems on the fuel tank and the fork upper bracket denotes the quality, sophistication and performance legacy of the brand.**
- **Optional single seat cowl can replace the passenger seat for an even more aggressive look or for use on solo rides, or track days.**
- **A variety of Genuine Suzuki Accessories for GSX-R owners are available including a large selection of Suzuki logo apparel.**
- **12-month limited warranty**

  Coverage can be increased via Suzuki Extended Protection
- **For more details, please visit www.suzukicycles.com.**

** The Traction Control System is not a substitute for the rider's throttle control. It cannot prevent loss of traction due to excessive speed when the rider enters a turn and/or applies the brakes. Neither can it prevent the front wheel from losing grip.*

Specifications GSX-R1000L7
E-03: USA, E-33: California

Dimensions and curb mass

Item	Specification	Remark
Overall length	2075 mm (81.69 in)	—
Overall width	705 mm (27.76 in)	—
Overall height	1145 mm (45.08 in)	—
Wheelbase	1420 mm (55.91 in)	—
Ground clearance	130 mm (5.12 in)	—
Seat height	825 mm (32.5 in)	—
Curb mass	200 kg (441 lbs)	(Except for California State)
	201 kg (443 lbs)	(For California State)

Engine

Item	Specification	Remark
Type	Four-stroke, liquid-cooled, DOHC	—
Number of cylinders	4	—
Bore	76.0 mm (2.992 in)	—
Stroke	55.1 mm (2.169 in)	—
Displacement	1000 cm^3 (61.0 cu. in)	—
Compression ratio	13.2 : 1	—
Fuel system	Fuel injection	—
Air cleaner	Paper element	—
Starter system	Electric	—
Lubrication system	Wet sump	—
Idle speed	1250 ± 100 r/min	—

Drive train

Item		Specification	Remark
Clutch		Mechanical, wet multi-plate type	—
Transmission		6-speed constant mesh	—
Gearshift pattern		1-down, 5-up	—
Primary reduction ratio		1.652 (76/46)	—
Gear ratios	Low	2.562 (41/16)	—
	2nd	2.052 (39/19)	—
	3rd	1.714 (36/21)	—
	4th	1.500 (36/24)	—
	5th	1.360 (34/25)	—
	Top	1.269 (33/26)	—
Final reduction ratio		2.647 (45/17)	—
Drive chain		DID525HV3, 120 links	—

Specifications GSX-R1000L7
E-03: USA, E-33: California

Chassis

Item	Specification	Remark
Front suspension	Inverted telescopic, coil spring, oil damped	—
Rear suspension	Swingarm, coil spring, oil damped	—
Front fork stroke	120 mm (4.7 in)	—
Rear wheel travel	135 mm (5.31 in)	—
Steering angle	27° (right and left)	—
Caster	23° 20’	—
Trail	95 mm (3.7 in)	—
Turning radius	3.5 m (11.5 ft)	—
Front brake	Double disc	—
Rear brake	Single disc	—
Front tire size	120/70ZR17M/C (58W), tubeless	—
Rear tire size	190/55ZR17M/C (75W), tubeless	—

Electrical

Item	Specification	Remark
Ignition type	Electronic ignition (Transistorized)	—
Spark plug	NGK CR9EIA-9 or DENSO IU27D	—
Battery	12 V 36.0 kC (10 Ah)/10 HR	—
Generator	Three-phase A.C. generator	—
Main fuse	30 A	—
Fuse	7.5/7.5/10/10/10/10/15/15 A	—
Headlight	LED	—
Brake light/Tail light	LED	—
Turn signal light	12 V 21 W x 4	—
License plate light	LED	—
Instrument panel light	LED	—
Neutral indicator light	LED	—
High beam indicator light	LED	—
Turn signal indicator light	LED	—
Engine coolant temperature indicator light/Oil pressure indicator light	LED	—
MIL	LED	—
Traction control system indicator light	LED	—
Freeze indicator light	LED	—
Engine rpm indicator light	LED	—

Capacities

Item		Specification	Remark
Fuel tank		16.0 L (4.2 US gal, 3.5 Imp gal)	—
Engine oil	Oil change	3100 ml (3.28 US qt, 2.73 Imp qt)	—
	With filter change	3300 ml (3.49 US qt, 2.90 Imp qt)	—
Engine coolant		2.45 L (2.59 US qt, 2.16 Imp qt)	—

Emission Control Devices

Item	Specification	Standard	Limit
EVAP system purge control solenoid valve power supply voltage (If equipped)		Battery voltage	—
EVAP system purge control solenoid valve resistance (If equipped)	20 °C (68 °F)	30 – 34 Ω	—
PAIR control solenoid valve power supply voltage		Battery voltage	—
PAIR control solenoid valve resistance	20 – 30 °C (68 – 86 °F)	20 – 24 Ω	—

Engine Electrical Devices

Item	Specification	Standard	Limit
AP sensor power supply voltage		4.75 – 5.25 V	—
IAP sensor power supply voltage		4.75 – 5.25 V	—
IAP sensor output voltage	Idle speed at 1 atm.	Approx. 2.7 V	—
IAT sensor power supply voltage		4.5 – 5.5 V	—
IAT sensor resistance	40 °C (104 °F)	1041 – 1231 Ω	—
ECT sensor power supply voltage		4.5 – 5.5 V	—
ECT sensor resistance	20 °C (68 °F)	2320 – 2590 Ω	—
	80 °C (176 °F)	310 – 326 Ω	
TP sensor power supply voltage		4.5 – 5.5 V	—
TP sensor 1 output voltage	Closed	3.635 – 3.785 V	—
	Opened	Approx. 0.7 V	
TP sensor 2 output voltage	Closed	4.235 – 4.385 V	—
	Opened	Approx. 1.3 V	
HO2 sensor output voltage	Idle speed	0.6 V or less	—
	5000 r/min	0.6 V or more	
HO2 sensor heater power supply voltage		Battery voltage	—
HO2 sensor heater resistance	23 °C (73.4 °F)	11.5 – 17.5 Ω	—
CKP sensor peak voltage	When cranking	0.5 V or more	—
CKP sensor resistance		148 – 222 Ω	—
CMP sensor power supply voltage		4.5 – 5.5 V	—
IMU power supply voltage		Battery voltage	—
TO sensor power supply voltage		4.5 – 5.5 V	—
TO sensor output voltage	Normal	0.4 – 1.4 V	—
	Leaning 65°	3.7 – 4.4 V	
TO sensor resistance		19313 – 19507 Ω	—
ECM power supply voltage		Battery voltage	—
Accelerator position sensor power supply voltage		4.5 – 5.5 V	—
Accelerator position sensor 1 output voltage	Closed	0.54 – 0.58 V	—
	Opened	Approx. 3.51 V	
Accelerator position sensor 2 output voltage	Closed	0.75 – 1.05 V	—
	Opened	Approx. 4.59 V	
ECM resistance		Approx. 120 Ω	—
Combination meter resistance		Approx. 120 Ω	—

Engine Mechanical

Item	Specification		Standard	Limit
Throttle body I.D. No.			17K0	—
Throttle body bore size			46 mm (1.8 in)	—
Throttle cable play			2.0 – 4.0 mm (0.079 – 0.157 in)	—
Idle speed	When engine warmed		1250 ± 100 r/min	—
Fast idle speed			1500 – 2000 r/min	—
Compression pressure			1200 – 1600 kPa (12.2 – 16.3 kgf/cm^2, 174 – 232 psi)	1000 kPa (10.2 kgf/cm^2, 145 psi)
Compression pressure difference			—	200 kPa (2.0 kgf/cm^2, 29.0 psi)
Cam height	Intake		35.68 – 35.73 mm (1.405 – 1.406 in)	35.38 mm (1.393 in)
	Exhaust		35.68 – 35.73 mm (1.405 – 1.406 in)	35.38 mm (1.393 in)
Camshaft journal oil clearance	Intake		0.032 – 0.066 mm (0.0013 – 0.0025 in)	0.150 mm (0.0059 in)
	Exhaust		0.032 – 0.066 mm (0.0013 – 0.0025 in)	0.150 mm (0.0059 in)
Camshaft journal holder I.D.	Intake		24.012 – 24.025 mm (0.9454 – 0.9458 in)	—
	Exhaust		24.012 – 24.025 mm (0.9454 – 0.9458 in)	
Camshaft journal O.D.	Intake		23.959 – 23.980 mm (0.9433 – 0.9440 in)	—
	Exhaust		23.959 – 23.980 mm (0.9433 – 0.9440 in)	
Camshaft runout	Intake & Exhaust		—	0.10 mm (0.004 in)
Clearance between camshaft sprocket and camshaft sprocket ball guide			0.2 – 0.8 mm (0.008 – 0.031 in)	—
Unevenness of the clearance between camshaft sprocket and camshaft sprocket ball guide at 4 points			—	0.5 mm (0.019 in)
Rocker arm I.D.	Intake		8.000 – 8.015 mm (0.3150 – 0.3155 in)	—
	Exhaust		8.000 – 8.015 mm (0.3150 – 0.3155 in)	
Rocker arm shaft O.D.	Intake		7.978 – 7.987 mm (0.3141 – 0.3144 in)	—
	Exhaust		7.978 – 7.987 mm (0.3141 – 0.3144 in)	
Valve clearance	When engine cold	Intake	0.07 – 0.15 mm (0.0028 – 0.0059 in)	—
		Exhaust	0.16 – 0.24 mm (0.0063 – 0.0094 in)	
Valve diameter	Intake		31.5 mm (1.24 in)	—
	Exhaust		24 mm (0.94 in)	
Valve stem runout	Intake & Exhaust		—	0.05 mm (0.0019 in)

Item	Specification		Standard	Limit
Valve head radial runout	Intake & Exhaust		—	0.03 mm (0.0011 in)
Valve stem deflection	Intake & Exhaust		—	0.25 mm (0.0098 in)
Valve stem O.D.	Intake		4.475 – 4.490 mm (0.1762 – 0.1767 in)	—
	Exhaust		4.455 – 4.470 mm (0.1754 – 0.1759 in)	—
Valve seat width	Intake		0.9 – 1.1 mm (0.036 – 0.043 in)	—
	Exhaust		0.9 – 1.1 mm (0.036 – 0.043 in)	—
Valve guide I.D.	Intake		4.500 – 4.512 mm (0.1772 – 0.1776 in)	—
	Exhaust		4.500 – 4.512 mm (0.1772 – 0.1776 in)	—
Valve guide to valve stem clearance	Intake		0.010 – 0.037 mm (0.0004 – 0.0014 in)	—
	Exhaust		0.030 – 0.057 mm (0.0012 – 0.0022 in)	—
Valve spring free length	Inner		—	35.9 mm (1.42 in)
	Outer		—	38.8 mm (1.53 in)
Inner valve spring pre-load	When compressed to 30.50 mm (1.201 in)	Intake	50.2 – 57.8 N (5.1 – 5.9 kgf, 11.3 – 13.0 lbs)	—
		Exhaust	50.2 – 57.8 N (5.1 – 5.9 kgf, 11.3 – 13.0 lbs)	—
Outer valve spring pre-load	When compressed to 34.50 mm (1.358 in)	Intake	117.2 – 134.8 N (12.0 – 13.7 kgf, 26.3 – 30.3 lbs)	—
		Exhaust	117.2 – 134.8 N (12.0 – 13.7 kgf, 26.3 – 30.3 lbs)	—
Cylinder head distortion			—	0.20 mm (0.0078 in)
Cylinder distortion			—	0.20 mm (0.0078 in)
Cylinder bore			76.000 – 76.015 mm (2.9922 – 2.9927 in)	No nicks or Scratches
Piston diameter	Measure at 8 mm (0.3 in) from the skirt end.		75.970 – 75.985 mm (2.9910 – 2.9915 in)	75.850 mm (2.9862 in)
Piston to cylinder clearance			0.025 – 0.035 mm (0.0010 – 0.0013 in)	0.120 mm (0.0047 in)
Piston ring to groove clearance	1st		—	0.180 mm (0.0070 in)
	2nd		—	0.150 mm (0.0059 in)
Piston ring groove width	1st		0.83 – 0.85 mm (0.0327 – 0.0334 in) 1.30 – 1.32 mm (0.0512 – 0.0519 in)	—
	2nd		0.81 – 0.83 mm (0.0319 – 0.0326 in)	—
	Oil		1.51 – 1.53 mm (0.0595 – 0.0602 in)	—

Item	Specification	Standard	Limit
Piston ring thickness	1st	0.76 – 0.81 mm (0.0300 – 0.0318 in) 1.08 – 1.10 mm (0.0426 – 0.0433 in)	—
	2nd	0.77 – 0.79 mm (0.0304 – 0.0311 in)	—
Piston ring free end gap	1st	Approx. 7.5 mm (0.3 in)	6.0 mm (0.24 in)
	2nd	Approx. 9 mm (0.4 in)	7.2 mm (0.29 in)
Piston ring end gap	1st	0.06 – 0.18 mm (0.0024 – 0.0070 in)	0.50 mm (0.019 in)
	2nd	0.06 – 0.18 mm (0.0024 – 0.0070 in)	0.50 mm (0.019 in)
Piston pin bore I.D.		16.002 – 16.008 mm (0.6300 – 0.6302 in)	16.030 mm (0.6311 in)
Piston pin O.D.		15.993 – 16.000 mm (0.6297 – 0.6299 in)	15.980 mm (0.6292 in)
Conrod small end I.D.		16.018 – 16.026 mm (0.6307 –0.6309 in)	16.040 mm (0.6314 in)
Conrod big end side clearance		0.10 – 0.20 mm (0.0040 – 0.0078 in)	0.3 mm (0.011 in)
Conrod big end width		19.95 – 20.00 mm (0.7855 – 0.7874 in)	—
Conrod big end I.D.		38.000 – 38.016 mm (1.4961 – 1.4966 in)	—
Conrod big end oil clearance		0.040 – 0.064 mm (0.0016 – 0.0025 in)	0.080 mm (0.0031 in)
Crank pin width		20.10 – 20.15 mm (0.7914 – 0.7933 in)	—
Crank pin O.D.		34.976 – 35.000 mm (1.3770 – 1.3779 in)	—
Crank pin bearing thickness		1.476 – 1.492 mm (0.0582 – 0.0587 in)	—
Crankshaft journal O.D.		34.976 – 34.994 mm (1.3770 – 1.3777 in)	—
Crankshaft journal oil clearance		0.016 – 0.034 mm (0.0007 – 0.0013 in)	0.080 mm (0.0031 in)
Crankcase journal I.D.		38.000 – 38.018 mm (1.4961 – 1.4967 in)	—
Crankcase journal bearing thickness		1.492 – 1.507 mm (0.0588 – 0.0593 in)	—
Crankshaft thrust bearing thickness	Right side	2.42 – 2.44 mm (0.0953 – 0.0960 in)	—
	Left side	2.36 – 2.50 mm (0.0930 – 0.0984 in)	—
Crankshaft thrust clearance		0.060 – 0.110 mm (0.0024 – 0.0043 in)	—
Crankshaft runout		—	0.05 mm (0.0019 in)

Engine Lubrication System

Item	Specification	Standard	Limit
Oil pressure	At 60 °C (140 °F), 3000 r/min	100 – 500 kPa (1.0 – 5.1 kgf/cm², 14.5 – 72.5 psi)	—
Necessary amount of engine oil	Oil change	3100 ml (3.28 US qt, 2.73 Imp qt)	—
	Oil and filter change	3300 ml (3.49 US qt, 2.90 Imp qt)	
	Engine overhaul	4100 ml (4.33 US qt, 3.61 Imp qt)	

Cooling System

Item	Specification	Standard	Limit
Engine coolant	Engine side	Approx. 2200 ml (2.32 US qt, 1.94 Imp qt)	—
	Reservoir tank side	Approx. 250 ml (0.26 US qt, 0.22 Imp qt)	
Radiator cap valve opening pressure		93.3 – 122.7 kPa (1.0 – 1.3 kgf/cm², 13.5 – 17.8 psi)	—
Cooling fan relay power supply voltage		Battery voltage	—
Cooling fan operating temperature	OFF → ON	Approx. 105 °C (221 °F)	—
	ON → OFF	Approx. 100 °C (212 °F)	
Thermostat valve opening temperature		Approx. 82 °C (179.6 °F)	—
Thermostat valve lift	95 °C (203 °F)	8 mm (0.3 in) or more	—

Fuel System

Item	Specification	Standard	Limit
Fuel injector power supply voltage		Battery voltage	
Fuel injector resistance	20 °C (68 °F)	11.5 – 12.5 Ω	—
FP relay power supply voltage		Battery voltage	—
FP discharge amount	Per 10 seconds	194 ml (6.56 US oz, 6.83 Imp oz) or more	—
Fuel pressure		338 – 348 kPa (3.45 – 3.54 kgf/cm², 49.1 – 50.4 psi)	—

Ignition System

Item	Specification		Standard	Limit
Firing order			1·2·4·3	—
Spark plug	Type		NGK: CR9EIA-9 / DENSO: IU27D	—
	Gap		0.8 – 0.9 mm (0.032 – 0.035 in)	
Spark performance	At 1 atm		8 mm (0.3 in) or more	—
Ignition coil primary peak voltage			80 V or more	—
Ignition coil resistance	Primary	10 – 30 °C (50 – 86 °F)	1.1 – 1.9 Ω	—
	Secondary	10 – 30 °C (50 – 86 °F)	6400 – 9600 Ω	
Immobilizer antenna power supply voltage (If equipped)			Battery voltage	—

Starting System

Item	Specification	Standard	Limit
Starter motor brush length		3.5 mm (0.14 in)	8.5 mm (0.33 in)
Starter relay resistance		3 – 7 Ω	—
Side-stand switch voltage	ON (Side-stand retracted)	0.4 – 0.6 V	—
	OFF (Side-stand on the ground)	1.4 V or more	

Charging System

Item	Specification		Standard	Limit
Battery leakage current			3 mA or less	—
Regulated voltage	Charging output	At 5000 r/min	14.0 – 15.5 V	—
Generator coil resistance			0.1 – 0.2 Ω	—
Generator no-load voltage	When engine cold	At 5000 r/min	85 V (AC) or more	—
Recharging time	Standard charging		1.2 A for 5 to 10 hours	—
	Fast charging		5 A for 1 hour	
Generator Max. output	At 5000 r/min		Approx. 420 W	—
Battery	Type designation		FT12A-BS	—
	Capacity		12 V 36.0 kC (10Ah)/10 HR	

Exhaust System

Item	Specification	Standard	Limit
Front EXCV lever clearance		1.5 – 2.0 mm (0.059 – 0.078 in)	—
EXCVA position sensor power supply voltage		4.5 – 5.5 V	—
EXCVA position sensor output voltage	Closed	0.45 – 1.40 V	—
	Opened	3.60 – 4.55 V	
EXCVA position sensor resistance	At adjustment position	Approx. 4000 Ω	—

Front Suspension

Item	Specification	Standard	Limit
Front fork inner tube O.D.		43 mm (1.7 in)	—
Front fork oil level		83 mm (3.3 in)	—
	10 min. after adjustment	77 mm (3.0 in)	—
Front fork spring free length		235 mm (9.25 in)	230 mm (9.06 in)
Front fork oil capacity	Each leg	538 ml (18.19 US oz, 18.93 Imp oz)	—
Front fork spring adjuster		4-3/4 turns clockwise from softest position	—
Front fork damping force adjuster	Rebound side	4 turns counterclockwise from stiffest position	—
	Compression side	4-3/4 turns counterclockwise from stiffest position	

Rear Suspension

Item	Specification		Standard	Limit
Rear shock absorber spring pre-set length			179.1 mm (7.051 in)	—
Rear shock absorber damping force adjuster	Rebound side		2-3/4 turns counterclockwise from stiffest position	—
	Compression side	Low speed	1-3/4 turns counterclockwise from stiffest position	—
		High speed	2-3/4 turns counterclockwise from stiffest position	
Swingarm pivot shaft runout			—	0.3 mm (0.011 in)

Wheels and Tires

Item	Specification		Standard	Limit
Wheel rim runout	Front	Axial & Radial	—	2.0 mm (0.08 in)
	Rear	Axial & Radial	—	2.0 mm (0.08 in)
Wheel axle runout	Front & Rear		—	0.25 mm (0.010 in)
Tire size	Front		120/70ZR17M/C (58W)	—
	Rear		190/55ZR17M/C (75W)	
Tire type	Front		BRIDGESTONE/RS10F E	—
	Rear		BRIDGESTONE/RS10R E	
Tire tread depth	Recommend depth	Front	—	1.6 mm (0.062 in)
		Rear	—	2.0 mm (0.078 in)
Cold inflation tire pressure	Solo riding	Front	250 kPa (2.50 kgf/cm^2, 36 psi)	—
		Rear	290 kPa (2.90 kgf/cm^2, 42 psi)	
	Dual riding	Front	250 kPa (2.50 kgf/cm^2, 36 psi)	—
		Rear	290 kPa (2.90 kgf/cm^2, 42 psi)	
Wheel rim size	Front		17 M/C x MT 3.50	—
	Rear		17 M/C x MT 6.00	

Drive Chain / Drive Train / Drive Shaft

Item	Specification	Standard	Limit
Drive chain	Type	DID525HV3	—
	Links	120 links	—
Drive chain 20-pitch length		—	319.4 mm (12.57 in)
Drive chain slack	On side-stand	20 – 30 mm (0.79 – 1.18 in)	—

Brake Control System and Diagnosis

Item	Specification	Standard	Limit
Rear brake pedal height		65 – 75 mm (2.6 – 2.9 in)	—
Master cylinder bore / piston diameter	Front	Approx. 19.05 mm (0.750 in)	—
	Rear	Approx. 14.0 mm (0.551 in)	

Front Brakes

Item	Specification	Standard	Limit
Front brake disc thickness		5.0 mm (0.20 in)	4.5 mm (0.18 in)
Front brake disc runout		—	0.30 mm (0.012 in)
Front brake caliper cylinder bore / piston diameter		Approx. 32 mm (1.3 in)	—

Rear Brakes

Item	Specification	Standard	Limit
Rear brake disc thickness		5.0 mm (0.20 in)	4.5 mm (0.18 in)
Rear brake disc runout		—	0.30 mm (0.012 in)
Rear brake caliper cylinder bore / piston diameter		Approx. 30.23 mm (1.19 in)	—

Manual Transmission

Item	Specification	Standard	Limit
Gearshift fork to groove clearance	No.1	0.1 – 0.3 mm (0.004 – 0.011 in)	0.5 mm (0.019 in)
	No.3	0.1 – 0.3 mm (0.004 – 0.011 in)	0.5 mm (0.019 in)
Gearshift fork groove width	No.1	5.0 – 5.1 mm (0.197 – 0.200 in)	—
	No.3	5.0 – 5.1 mm (0.197 – 0.200 in)	
Gearshift fork thickness	No.1	4.8 – 4.9 mm (0.189 – 0.192 in)	—
	No.3	4.8 – 4.9 mm (0.189 – 0.192 in)	
Gearshift lever height		65 – 75 mm (2.6 – 2.9 in)	—
GP sensor power supply voltage		4.5 – 5.5 V	—
GP sensor voltage	1st	0.525 – 0.725 V	—
	Neutral	1.076 – 1.256 V	—
	2nd	1.607 – 1.807 V	—
	3rd	2.274 – 2.474 V	—
	4th	2.941 – 3.141 V	—
	5th	3.608 – 3.808 V	—
	6th	4.275 – 4.475 V	—

Clutch

Item	Specification	Standard	Limit
Clutch lever play		10 – 15 mm (0.4 – 0.6 in)	—
Clutch release screw		1 turn counterclockwise	—
Drive plate thickness		3.22 – 3.38 mm (0.127 – 0.133 in)	2.92 mm (0.115 in)
Drive plate claw width		13.7 – 13.8 mm (0.5394 – 0.5433 in)	13.2 mm (0.520 in)
Driven plate distortion		—	0.10 mm (0.0039 in)
Clutch spring free length		55.8 mm (2.20 in)	53.1 mm (2.09 in)

Steering / Handlebar

Item	Specification	Standard	Limit
Steering tension initial force		2 – 5 N (0.21 – 0.50 kgf, 0.45 – 1.12 lbf)	—
Steering damper solenoid valve resistance	20 °C (68 °F)	12.5 Ω	—

Wiring Systems

Item	Specification		Standard	Limit
Fuse size	Headlight	HI	7.5 A	—
		LO	7.5 A	—
	Ignition		10 A	—
	Signal		10 A	—
	Fuel		10 A	—
	Fan (RH)		15 A	—
	Fan (LH)		15 A	—
	Park		10 A	—
	Main		30 A	—
	ABS (If equipped)		30 A	—

Lighting Systems

Item	Specification	Standard	Limit
Headlight	HI	LED	—
	LO	LED	—
Position light (If equipped)		LED	—
Brake light/Taillight		LED	—
Turn signal light	For U.S.A., Canada and California State	12 V 21 W x 4	—
	Except for U.S.A., Canada and California State	LED	—
License plate light		LED	—

Combination Meter / Fuel Meter / Horn

Item	Specification	Standard	Limit
Wheel speed sensor power supply voltage	Front	Battery voltage	—
	Rear	Battery voltage	—
Instrument panel light		LED	—
Turn signal indicator light		LED	—
High beam indicator light		LED	—
Neutral indicator light		LED	—
Engine coolant temperature indicator light/Oil pressure indicator light		LED	—
MIL		LED	—

Item	Specification	Standard	Limit
Traction control system indicator light		LED	—
Freeze indicator light		LED	—
Engine rpm indicator light		LED	—
Ambient air temperature sensor resistance	–20 °C (–4 °F)	13779 – 19083 Ω	—
	–10 °C (14 °F)	8100 – 10609 Ω	—
	0 °C (32 °F)	4928 – 6125 Ω	—
	10 °C (50 °F)	3089 – 3656 Ω	—
	20 °C (68 °F)	1992 – 2251 Ω	—
	25 °C (77 °F)	1615 – 1785 Ω	—
	30 °C (86 °F)	1290 – 1456 Ω	—
	40 °C (104 °F)	838 – 986 Ω	—

Tightening Torque List

Emission Control Devices

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
PAIR reed valve cover bolt	10	1.0	7.5
Crankcase breather (PCV) cover bolt	10	1.0	7.5
Canister bracket bolt	10	1.0	7.5
EVAP system purge control solenoid valve nut	6.7	0.68	4.95

Engine Electrical Devices

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Intake pipe clamp screw	1.5	0.15	1.10
IAT sensor screw	1.3	0.13	0.95
ECT sensor	18	1.8	13.5
HO2 sensor	25	2.5	18.5
CMP sensor bolt	10	1.0	7.5
Accelerator position sensor No. 2 bracket bolt	10	1.0	7.5
Accelerator position sensor No. 1 bracket bolt	10	1.0	7.5

Engine Mechanical

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Air cleaner cap screw	1.8	0.18	1.35
Secondary fuel delivery pipe mounting bolt	10	1.0	7.5
Funnel bolt	4.3	0.44	3.20
Air cleaner bolt	10	1.0	7.5
Intake pipe screw	8.4	0.86	6.20
Cylinder head cover bolt	14	1.4	10.5
Intake camshaft sprocket bolt	60	6.1	44.5
Exhaust camshaft sprocket bolt	16 → 25 N·m (1.6 → 2.5 kgf-m, 12.0 → 18.5 lbf-ft)		
Camshaft journal holder bolt	10	1.0	7.5
Cam chain tension adjuster bolt	10	1.0	7.5
Cylinder head plug	10	1.0	7.5
Crankshaft hole plug	11	1.1	8.5
Engine mounting thrust adjuster	23	2.3	17.0
Engine mounting thrust adjuster lock-nut	45	4.6	33.5
Engine mounting nut	75	7.6	55.5
Engine mounting bolt (Front)	75	7.6	55.5
Radiator lower bracket bolt	10	1.0	7.5
Hose guide bracket bolt	10	1.0	7.5
Cylinder head bolt (L95)	25 → 31 N·m (2.5 → 3.2 kgf-m, 18.5 → 23.0 lbf-ft) → turn clockwise 63°		
Cylinder head bolt (L65)	10	1.0	7.5
Oil gallery bolt	10	1.0	7.5
Cylinder head plug	23	2.3	17.0
Bypass hose union	12	1.2	9.0
Cam chain tensioner bolt	23	2.3	17.0
Cam chain guide No. 1 bolt	23	2.3	17.0
Conrod cap bolt	27 N·m (2.8 kgf-m, 20.0 lbf-ft) → turn clockwise 90°		
Crankcase lower bolt (M9)	18 N·m (1.8 kgf-m, 13.5 lbf-ft) → turn clockwise 50°		
Crankcase upper bolt (M8)	15 → 26 N·m (1.5 → 2.7 kgf-m, 11.0 → 19.5 lbf-ft)		
Crankcase lower bolt (M8)	15 → 26 N·m (1.5 → 2.7 kgf-m, 11.0 → 19.5 lbf-ft)		
Crankcase upper bolt (M6)	11	1.1	8.5
Crankcase lower bolt (M6)	11	1.1	8.5
Cylinder water inlet connector bolt	10	1.0	7.5

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Water jacket plug	9.5	0.97	7.00
Oil gallery upper plug (M10)	18	1.8	13.5
Oil gallery plug (M16)	35	3.6	26.0
Oil gallery plug (M6)	10	1.0	7.5
Oil gallery plug (M12)	15	1.5	11.0
Oil gallery plug	7.0	0.71	5.20

Engine Lubrication System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Oil gallery plug (M16)	35	3.6	26.0
Oil drain plug	23	2.3	17.0
Oil filter	20	2.0	15.0
Oil strainer bolt	10	1.0	7.5
Oil pan bolt	10	1.0	7.5
Oil hose plate bolt	10	1.0	7.5
Oil cooler guard bolt	5.5	0.56	4.05
Oil cooler mounting bolt	5.5	0.56	4.05
Oil hose bolt	10	1.0	7.5
Oil pressure switch	13	1.3	9.5
Oil pressure switch lead wire connecting screw	1.5	0.15	1.10
Piston cooling jet bolt	10	1.0	7.5
Oil pump driven sprocket bolt	15	1.5	11.0
Oil pump bolt	10	1.0	7.5

Engine Cooling System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Cooling fan assembly mounting bolt	4.9	0.50	4.00
Radiator mounting upper bolt	10	1.0	7.5
Radiator mounting lower bolt	5.5	0.56	4.05
Water hose clamp screw	1.5	0.15	1.10
Reservoir tank mounting bolt	5.5	0.56	4.05
Thermostat connector cover bolt	10	1.0	7.5
Water pump bolt	10	1.0	7.5
Impeller securing bolt	8.0	0.82	5.90
Water pump case screw	5.5	0.56	4.05

Fuel System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Fuel tank cap bolt	3.0	0.31	2.25
Fuel tank rear nut	10	1.0	7.5
Fuel tank front screw	5.5	0.56	4.05
Fuel pump mounting bolt	10	1.0	7.5
Fuel delivery pipe mounting screw	3.5	0.36	2.60
Secondary fuel injector bracket mounting screw	3.5	0.36	2.60
Secondary fuel delivery pipe mounting bolt	10	1.0	7.5

Ignition System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Spark plug	11	1.1	8.5

Starting System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Starter motor bolt	10	1.0	7.5
Starter motor terminal screw	4.0	0.41	2.95
Starter clutch bolt	54	5.5	40.0

Charging System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Generator stator bolt	13 – 14	1.3 – 1.4	9.5 – 10.5
Generator lead wire clamp bolt	6.5	0.66	4.80
Generator rotor bolt	145	14.8	107.0
Generator cover bolt	10	1.0	7.5

Exhaust System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
EXCVA pulley bolt	5.0	0.51	3.70
EXCV cable bracket mounting nut	10	1.0	7.5
EXCV cable lock-nut	4.5	0.46	3.35
EXCVA mounting bolt	11	1.1	8.5
EXCV cable No. 3 lever mounting nut	10	1.0	7.5
EXCV cover nut	10	1.0	7.5
EXCV cable lock-nut	9.0	0.92	6.65
EXCV cable No. 3 lock-nut	4.5	0.46	3.35
Rear EXCV shaft	10	1.0	7.5
Exhaust pipe bolt	23	2.3	17.0
Exhaust support bolt	23	2.3	17.0
Muffler rear cover bolt	5.5	0.56	4.05
Muffler support bolt	30	3.1	22.5
Muffler connector bolt	18	1.8	13.5
Muffler front cover bolt	5.5	0.56	4.05

Front Suspension

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Front fork cap	35	3.6	26.0
Front fork lower clamp bolt	23	2.3	17.0
Front fork upper clamp bolt	23	2.3	17.0
Handlebar clamp bolt	23	2.3	17.0
Front fender mounting bolt	8.4	0.86	6.20
Piston rod nut	28	2.9	21.0
Rod guide case	90	9.2	66.5

Rear Suspension

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Rear shock absorber mounting nut	50	5.1	37.0
Cushion lever mounting nut	80	8.2	59.0
Cushion rod mounting nut	80	8.2	59.0
Rear shock absorber lower mounting nut	50	5.1	37.0
Swingarm pivot shaft	15	1.5	11.0
Swingarm pivot nut	100	10.2	74.0
Swingarm pivot lock-nut	90	9.2	66.5

Wheels and Tires

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Front axle nut	100	10.2	74.0
Front axle pinch bolt	23	2.3	17.0

Drive Chain / Drive Train / Drive Shaft

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Rear axle nut	100	10.2	74.0
Chain adjuster lock-nut	22	2.2	16.5
Engine sprocket nut	145	14.8	107.0
Engine sprocket cover bolt	10	1.0	7.5
Gearshift link arm bolt	12	1.2	9.0
Rear sprocket nut	60	6.1	44.5

Brake Control System and Diagnosis

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Brake light switch screw	1.2	0.12	0.90
Rear brake master cylinder rod lock-nut	18	1.8	13.5
Front brake caliper air bleeder valve	7.5	0.76	5.55
Front brake master cylinder air bleeder valve	6.0	0.61	4.45
Rear brake caliper air bleeder valve	6.0	0.61	4.45
Front brake master cylinder holder bolt	10	1.0	7.5
Brake hose union bolt	23	2.3	17.0
Brake lever pivot bolt	1.0	0.10	0.75
Brake lever pivot bolt lock-nut	6.0	0.61	4.45
Rear brake master cylinder mounting bolt	13	1.3	9.5
Footrest holder bolt	39	4.0	29.0
Front footrest bracket bolt	23	2.3	17.0
Rear brake master cylinder bolt	10	1.0	7.5

Front Brakes

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Front brake caliper mounting bolt	39	4.0	29.0
Brake hose union bolt	23	2.3	17.0
Brake disc bolt	18	1.8	13.5

Rear Brakes

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Rear brake pad mounting pin	17	1.7	12.5
Rear brake pad pin plug	2.5	0.25	1.85
Rear brake caliper sliding pin	27	2.8	20.0
Rear brake hose union bolt	23	2.3	17.0
Rear brake caliper sliding pin	12	1.2	9.0
Brake disc bolt	35	3.6	26.0

Manual Transmission

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Gearshift fork shaft retainer screw	10	1.0	7.5
Transmission cover oil gallery plug	12	1.2	9.0
Transmission cover bolt	15	1.5	11.0
Transmission cover bolt	26	2.7	19.5
Left driveshaft bearing retainer screw	8.4	0.86	6.20
Right driveshaft bearing retainer screw	8.4	0.86	6.20
Gearshift cam bearing retainer screw	10	1.0	7.5
Countershaft bearing retainer screw	12	1.2	9.0
GP sensor bolt	6.0	0.61	4.45
Gearshift lever shaft	40	4.1	29.5
Gearshift link rod lock-nut	10	1.0	7.5
Gearshift cam stopper bolt	10	1.0	7.5
Gearshift cam plate bolt	13	1.3	9.5
Gearshift shaft end screw	8.4	0.86	6.20
Gearshift link arm bolt	12	1.2	9.0

Clutch

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Clutch release adjuster lock-nut	5.5	0.56	4.05
Clutch cable lock-nut	4.5	0.46	3.35
Clutch release adjuster cap	11	1.1	8.5
Clutch lever pivot nut	6.5	0.66	4.80
Clutch switch screw	0.6	0.06	0.45
Clutch lever holder bolt	10	1.0	7.5
Clutch release holder bolt	10	1.0	7.5
Engine sprocket cover bolt	10	1.0	7.5
Gearshift link arm bolt	12	1.2	9.0
Clutch release arm bolt	8.8	0.90	6.50
Clutch push rod oil seal retainer screw	8.4	0.86	6.20
Clutch sleeve hub nut	150	15.3	111.0
Clutch spring set bolt	10	1.0	7.5
Clutch cover bolt	10	1.0	7.5

Steering / Handlebar

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Clutch lever holder bolt	10	1.0	7.5
Front fork upper clamp bolt	23	2.3	17.0
Handlebar clamp bolt	23	2.3	17.0
Steering stem head nut	90	9.2	66.5
Handlebar balancer screw	23	2.3	17.0
Steering damper mounting bolt	23	2.3	17.0
Steering damper rod end nut	23	2.3	17.0

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Steering stem lock-nut	80	8.2	59.0
Steering stem adjust-nut	20 N·m (2.0 kgf-m, 15.0 lbf-ft) → turn counterclockwise 0 – 1/4		

Lighting Systems

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Rear combination light screw	2.0	0.20	1.50
License plate light nut	3.0	0.31	2.25
Rear reflex reflector nut	1.8	0.18	1.35
Front turn signal light mounting nut	5.5	0.56	4.05
Rear turn signal light mounting nut	5.5	0.56	4.05

Combination Meter / Fuel Meter / Horn

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Speedometer screw	2.0	0.20	1.50
Horn bolt	6.0	0.61	4.45

Exterior Parts

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Rear view mirror bolt	10	1.0	7.5
Fuel tank front cover screw	5.5	0.56	4.05

Fuel / Oil / Fluid / Coolant Recommendation

BENH17K10308001

Fuel

NOTICE

Do not use leaded gasoline. If it is used, the engine and the emission control system will be damaged.

For U.S.A. and Canada

Use unleaded gasoline with an octane rating of 90 AKI or higher.

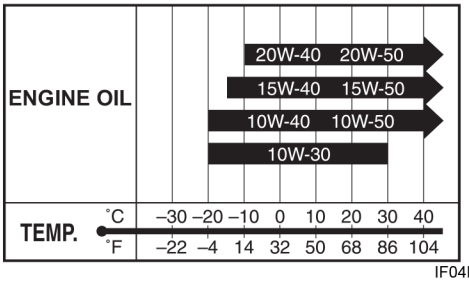
Unleaded gasoline containing up to 10% ethanol by volume may be used.

Engine Oil

Use engine oils which meet the following requirements.

	Engine oil
API service classification	SG, SH, SJ or SL
JASO T903 standard	MA
Viscosity	SAE 10W-40

If SAE 10W-40 engine oils are not available, select oils of an appropriate viscosity grade according to the following chart.



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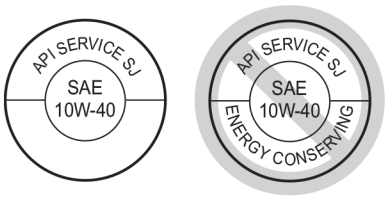
Suzuki does not recommend the use of engine oils which have an “ENERGY CONSERVING” or “RESOURCE CONSERVING” indication in the API service symbol for any of its motorcycles / ATVs. They can affect the engine life and the clutch performance.



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For U.S.A. and Canada

Suzuki recommends the use of SUZUKI PERFORMANCE 4 MOTOR OIL.

Brake Fluid

Specification and classification: DOT 4

⚠ WARNING

Since the brake system of this motorcycle is filled with a glycol-based brake fluid by the manufacturer, do not use or mix different types of fluid such as silicone-based and petroleum-based fluid for refilling the system, otherwise serious damage will result.
Do not use any brake fluid taken from old or used or unsealed containers.
Never reuse brake fluid left over from a previous servicing, which has been stored for a long period.

Engine Coolant

Suzuki recommends the use of SUZUKI LONG LIFE COOLANT or SUZUKI SUPER LONG LIFE COOLANT.

Coolant 99000–99032–12X (SUZUKI LONG LIFE COOLANT (GREEN))
Coolant 99000–99032–20X (SUZUKI SUPER LONG LIFE COOLANT (BLUE))

If SUZUKI COOLANT is not available, use an anti-freeze/engine coolant compatible with an aluminum radiator, mixed with distilled water only.

For SUZUKI LONG LIFE COOLANT

NOTICE

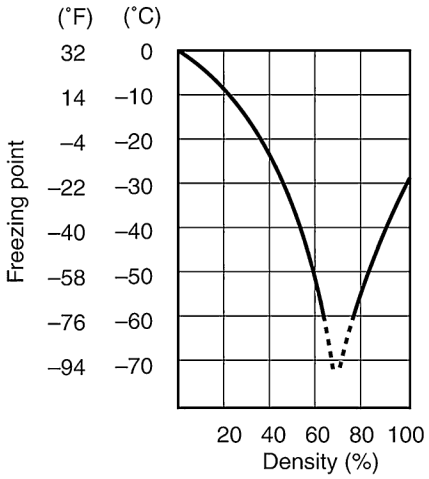
- **Use a high quality ethylene glycol base anti-freeze, mixed with distilled water. Do not mix an alcohol base anti-freeze and different brands of anti-freeze.**
- **Do not put in more than 60% anti-freeze or less than 50%. (Refer to Fig. 1 and 2.)**

The 50:50 mixture of distilled water and ethylene glycol anti-freeze will provide the optimum corrosion protection and excellent heat protection, and will protect the cooling system from freezing at temperatures above –31 °C (–24 °F).
If the vehicle is to be exposed to temperatures below –31 °C (–24 °F), this mixing ratio should be increased up to 55% or 60% according to the figure.

Anti-freeze Proportioning Chart

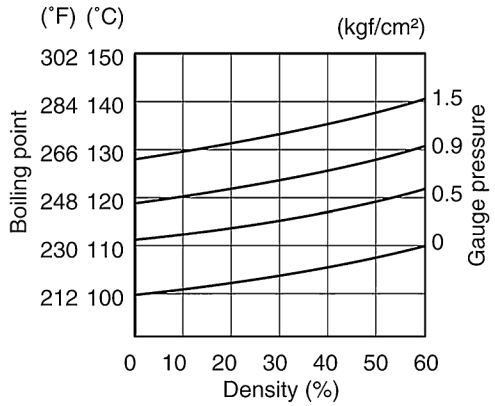
Anti-freeze density	Freezing point
50%	–31 °C (–24 °F)
55%	–40 °C (–40 °F)
60%	–55 °C (–67 °F)

Fig.1: Engine coolant density-freezing point curve



Anti-freeze / Engine coolant
The engine coolant perform as a corrosion and rust inhibitor as well as anti-freeze. Therefore, the engine coolant should be used at all times even though the atmospheric temperature in your area does not go down to freezing point.
Suzuki recommends the use of SUZUKI COOLANT anti-freeze/engine coolant. If this is not available, use an equivalent which is compatible with an aluminum radiator.

Fig.2: Engine coolant density-boiling point curve



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For SUZUKI SUPER LONG LIFE COOLANT

NOTICE

- **Ethanol or methanol base coolant or water alone should not be used in cooling system at any time as damage to cooling system could occur.**
- **Do not mix the distilled water, SUZUKI LONG LIFE COOLANT (coolant color: Green) or equivalent.**

SUZUKI SUPER LONG LIFE COOLANT will provide the optimum corrosion protection and excellent heat protection, and will protect the cooling system from freezing at temperatures above –36 °C (–33 °F).

Anti-freeze concentration table

Anti-freeze density	Freezing point
50%	–36 °C (–33 °F)

Water for mixing
Use distilled water only. Water other than distilled water can corrode and clog the aluminum radiator.

NOTICE

Mixing of anti-freeze/engine coolant should be limited to 60%. Mixing beyond it would reduce its efficiency. If the anti-freeze/engine coolant mixing ratio is below 50%, rust inhabiting performance is greatly reduced. Be sure to mix it above 50% even though the atmospheric temperature does not go down to the freezing point.

Front Fork Oil
Use SUZUKI FORK OIL SS-47.

Fork oil 99000–99001–47S (SUZUKI FORK OIL SS-47)