Features & Specifications
2019 V-Strom 1000XT Adventure

DL1000XAAL9

AJP: Pearl Vigor Blue / Pearl Glacier White

Overview

Introduced in 2002, the V-Strom 1000 expanded the popularity of motorcycles in the adventure category. When a more proficient V-Strom 1000 debuted in 2014, it was also embraced by riders around the world. To maintain leadership in this category, Suzuki applied new technology and practical experience to the 2018 V-Strom 1000 and now adds a host of tour-ready features to the 2019 V-Strom 1000XT Adventure.

Always a good citizen, the V-Strom 1000XT Adventure has innovative systems to maintain engine performance and great fuel economy while achieving worldwide emission standards. To emphasize Suzuki's adventure heritage, the V-Strom's styling hints at its lineage with a renewed call for adventure. That fresh styling also contributes to functionality and joins the unique Motion Track Anti-lock* and Combined Brake System and other features to bring rider assist technology to a new group of adventure riders.

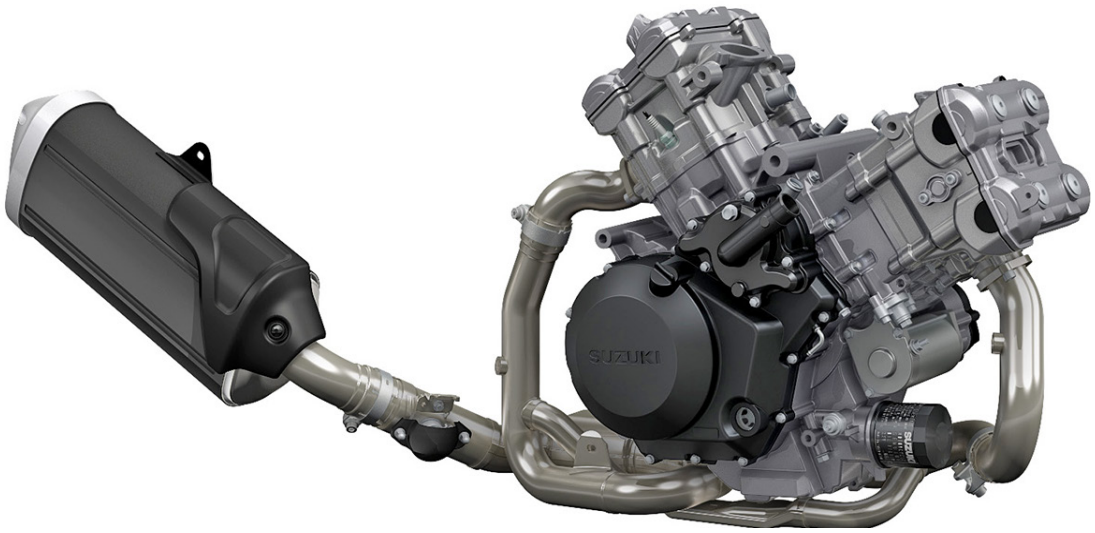
Like every V-Strom before it, the appeal and value of the 2019 V-Strom 1000XT Adventure will be recognized by experienced and enthusiastic riders. If you want to enjoy a trouble-free adventure as well, join them on a V-Strom.

Key Features

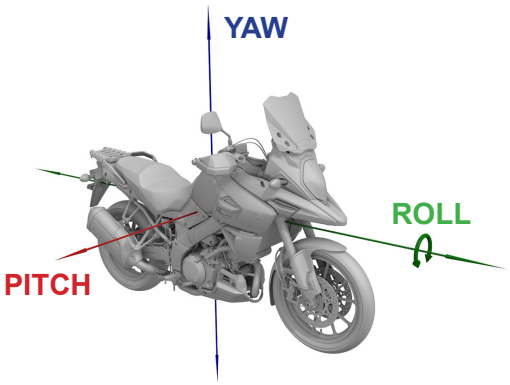
- **Liquid-cooled, 1037cc, 90-degree, V-twin engine delivers strong engine performance while achieving worldwide emissions requirements without any reduction in horsepower.**
- **Three-axis, five-direction Inertia Measurement Unit (IMU) provides vehicle spatial information to the innovative Motion Track Anti-lock** and Combined Brake System.**
- **Multifunction, illumination-adjustable instrument panel delivers a wide range of vehicle information and aids in selecting the Suzuki Traction Control System** modes.**
- **Slim fairing features vertically stacked headlights, hand-adjustable windshield, and iconic Suzuki DR-Big styling that brings true adventure style and real-world function.**
- **Spoke-style wheels with tubeless radial dual-purpose tires plus tapered, large-diameter handlebars deliver the function that validates their exploration style.**
- **Sturdy and nimble chassis includes a rugged accessory bar, center stand, heated hand grips, and Suzuki aluminum panniers that easily clip on and off so the V-Strom 1000XT Adventure is ready for touring in seconds.**

Engine Features

- **The four-stroke, liquid-cooled, DOHC, 1037cc, 90-degree, V-twin engine is designed to deliver outstanding performance across the entire powerband.**
- **The perfect primary balance provided by the 90-degree, L-twin design negates the need for any balancer shafts or rubber mounting, as the engine has smooth power pulses.**
- **Pistons were engineered with use of FEM analysis to achieve ideal rigidity and weight.**
- **Suzuki Composite Electrochemical Material (SCEM)–plated cylinder bores are integrated into the upper crankcase for low weight, increased durability, reduced friction, and excellent heat dissipation.**
- **Twin throttle bodies with Suzuki Dual Throttle Valve (SDTV) system provide precise throttle response and boost torque at the low- to mid-rpm range, while still producing peak performance.**



- **The EFI system employs 10-hole injectors on each throttle body to improve fuel atomization for superior combustion efficiency and frugal fuel consumption.**
- **Advanced 32-bit ECM also operates the Automatic Idle Speed Control (ISC), which improves cold starting and stabilizes the engine idle.**
- **The ISC on the V-Strom 1000 has Suzuki's Low RPM Assist feature that seamlessly adjusts engine speed during takeoff and low-speed riding to smooth the power delivery and to help reduce the possibility of the rider stalling the motorcycle.**
- **The refined, single-silencer exhaust configuration reduces weight and has a lower center of gravity to enhance handling and maneuverability.**
- **Suzuki Exhaust Tuning (SET) servo-controlled butterfly valve in the exhaust mid-pipe helps enhance torque, response, and acceleration, especially at low- to mid-rpm range.**
- **The V-Strom 1000's exhaust has a pair of inline catalyzers, up from a single catalyzer in the prior model, to achieve an effective level of emission control while maintaining flow to preserve engine performance.**
- **Matched to the efficient exhaust, the Suzuki Pulsed Secondary Air Injection (PAIR) System injects fresh air into the exhaust ports to satisfy a variety of US and international emission standards without sacrificing performance.**
- **State-of-the-art transistorized digital ignition system contributes to a more complete combustion by igniting the mixture at the ideal moment.**
- **Twin iridium-type spark plugs are fitted to each cylinder to provide a more condensed and hotter spark, yet they last longer than conventional plugs.**
- **The output of the six-speed, close-ratio transmission is managed by the Suzuki Clutch Assist System (SCAS). This system works like a slipper clutch by allowing a small amount of clutch slip to enable smooth down shifts. It also works as an assist clutch, making the clutch lever pull light and precise.**



Key to the V-Strom 1000XT Adventure's Motion Track Anti-lock* and Combination Brake System is the BOSCH-supplied Inertia Measurement Unit (IMU).

This three-axis IMU measures chassis movement in five directions: PITCH down, ROLL left and right, and YAW left and right. The ABS control unit uses this information, along with wheel speed and other data, to make adjustments to the braking force.

Advanced Electronics Features

- **The V-Strom's Anti-lock Brake System (ABS)* has Suzuki's unique Motion Track Anti-lock and Combination Brake System. This system aids rider control during sudden braking, even in corners, and will help the rider continue cornering on the originally intended line.**
    - **o This advanced ABS system adjusts brake pressure during upright riding with other pressure adjustments when the motorcycle is leaning to either side, so the stopping force matches the available traction.**
    - **o Information about the motorcycle's attitude is continually measured by a BOSCH five-axis IMU. Sensors on the front and rear wheels continually measure speed. The wheel speed and IMU measurements, plus the amount of brake lever or pedal pressure, are calculated by the ABS control unit to instantly adjust the fluid pressure to the brake calipers as required.**
    - **o Additionally, this combination system can apply rear brake pressure when the front brake pressure reaches a certain point to help stabilize the vehicle. This contributes to increase stability and maneuverability during cornering.**
    - **o The rider has customary, independent control of the front and rear brakes unless a situation occurs to activate the Anti-lock or combination braking features.**
    - **o Thanks to the new, advanced ABS control unit, the amount of kickback from anti-lock function to the lever and pedal has been significantly reduced.**
- **Suzuki's debuted its first motorcycle traction control system** on the V-Strom 1000XT Adventure, which enables the rider to control the throttle with more confidence in a variety of riding conditions.**
    - **o The traction control system continuously monitors front and rear wheel speeds, throttle opening, engine speed, and transmission gear. It quickly reduces engine output when it detects wheel spin by adjusting ignition timing and air delivery.**
    - **o The rider can select one of three modes (1, 2, and OFF). Modes 1 and 2 differ in terms of sensitivity. Mode 1 has lower sensitivity; it allows a certain degree of rear wheel spin for good road conditions. Mode 2 has higher sensitivity; the system engages traction control sooner and is for poor road conditions.**

Chassis Features

- **The distinctive fairing design is achieved by a straight styling line from the tip of its beak back to the fuel tank. This is a sharp and aggressive refinement of the Suzuki DR-Big–inspired appearance.**
- **The height- and angle-adjustable windscreen has an angular shape and is 49mm taller than the prior V-Strom's screen. The windscreen was developed through extensive wind-tunnel testing to reduce wind noise and rider fatigue. Suzuki's patented mechanism allows the windscreen angle to be easily adjusted by hand.**
- **The advanced chassis is the foundation of a compact, lightweight adventure-ready package that provides comfort and enjoyment to a variety of riders.**
- **The aluminum, twin-spar frame was designed with the latest FEM analysis technology. It is stiffer and 13 percent lighter than that of the previous-generation V-Strom.**
- **The fuel tank has a generous 5.3-gallon capacity, and the back portion has been slimmed at the seat junction for rider comfort. The sides of the seat use a high-grip texture cover.**
- **The V-Strom's slender chassis, thanks to the narrow V-twin engine design and trim seat, helps the rider's legs to reach to the ground easier than other models in the class.**

Chassis Features (continued)

- **The 43mm KYB inverted front fork provides a sporty yet plush ride in diverse conditions. The fork legs have adjustable spring preload plus compression and rebound-damping force adjusters.**
- **The single-shock, link-style rear suspension features rebound-damping force adjustment plus remote, hand-operated spring preload adjuster.**
- **Tokico Monoblock, four-piston front brake calipers are mated with 310mm floating-mount dual discs. These efficient calipers are connected to the new Motion Track Anti-lock* and Combination Brake System for strong stopping performance.**
- **Spoke-style wheels feature tough, anodized aluminum rims and stainless steel spokes. Fitted with tubeless dual-purpose radial tires, these strong wheels are compliant enough for real ADV riding.**
- **Large-diameter, tapered-style handlebars have handguards with large damper weights for economic comfort and reduced vibration.**
- **A lower engine cowl, rugged accessory bar, and centerstand offer protection and convenience.**
- **The V-Strom 1000XT Adventure is ready to tackle any road, as it is equipped with Suzuki's new, ADV-style, 37-liter aluminum panniers that attach to powder-coated, stainless steel carriers. Fashioned out of 1.5mm thick aluminum plate with super-strong, no-pierce rivet technology, these new panniers offer a number of features, including hinged lids that stay in place when open, internal and external tie-down points, plus keyed stainless steel latches and quick-release hardware. Built to be waterproof with rubber-sealing lids, these panniers have powder-coated interiors to avoid aluminum stains on cargo.**

Electrical Features

- **The charging system uses a durable, three-phase stator with an open-style regulator/rectifier that reduces mechanical drag and heat while producing higher output at lower engine speeds.**
- **The multifunction instruments include an analogue tachometer and a brightness-adjustable LCD speedometer. LCD readouts include an odometer, dual trip meters, the gear position, the coolant and ambient temperatures, the voltage, the riding range, the average fuel consumption, the instantaneous fuel consumption, the traction control mode, a fuel gauge, and a clock.**
- **LED indicators include ABS and traction control alerts, plus a freeze warning icon. This alert, together with the air temperature display, warns of possible icy road conditions.**
- **The rider can switch between traction control** modes and LCD readings using the left handlebar switch. The left handlebar switch can also reset the trip meters.**
- **A 12-volt DC accessory outlet is conveniently located below the instrument panel. This fused SAE socket is ideal for powering a GPS unit or charging mobile devices.**
- **The bright, halogen 65/55-watt headlights have the distinctive vertical configuration seen on the Hayabusa and GSX-R sportbikes.**
- **Rear tail and brake light uses LEDs, which offer higher visibility and excellent durability.**
- **The turn signals use incandescent amber bulbs with clear lenses for superb visibility in traffic.**
- **New-generation Suzuki heated handgrips have multilevel heat adjustment that can be operated via the rider's thumb (without removing hands from the handlebar).**

Additional Features

- **A wide variety of Genuine Suzuki Accessories for V-Strom owners are available including top cases, auxiliary lights, high and low profile seats, and a large selection of Suzuki logo apparel.**
- **Additional lock tumblers that match the bike's ignition key are included, so you can add Suzuki accessory luggage (such as the 35L top case) and have the convenience of same-key operation.**
  NOTE: *The supplied aluminum panniers use a different key than the motorcycle's ignition key.*
- **12-month limited warranty**
- **Additional length coverage and other benefits are available through Suzuki Extended Protection.**
- **For more details, please visit www.suzukicycles.com.**

** Depending on road surface conditions, such as wet, loose, or uneven roads, braking distance for an ABS-equipped vehicle may be longer than for a vehicle not equipped with ABS. ABS cannot prevent wheel skidding caused by braking while cornering. Please drive carefully and do not overly rely on ABS.*

*** 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 DL1000XAAL9
E-03: USA, E-33: California

Dimensions and curb mass

Item	Specification	Remark
Overall length	2280 mm (89.8 in)	—
Overall width	930 mm (36.6 in)	No accessories installed
	991 mm (39.0 in)	*Adventure* accessories installed
Overall height	1470 mm (57.9 in)	—
Wheelbase	1555 mm (61.2 in)	—
Ground clearance	165 mm (6.5 in)	—
Seat height	850 mm (33.5 in)	—
Curb mass	233 kg (514 lbs)	No accessories installed
	257 kg (566.6 lbs)	*Adventure* accessories installed

Engine

Item	Specification	Remark
Type	4-stroke, liquid-cooled, DOHC, 90-degree V-twin	—
Number of cylinders	2	—
Bore	100.0 mm (3.937 in)	—
Stroke	66.0 mm (2.598 in)	—
Displacement	1037 cm^3 (63.3 cu. in)	—
Compression ratio	11.3 : 1	—
Fuel system	Fuel injection system	—
Air cleaner	Paper element	—
Starter system	Electric	—
Lubrication system	Wet sump	—
Idle speed	1200 – 1400 r/min	—

Drive train

Item		Specification	Remark
Clutch		Wet multi-plate	—
Transmission		6-speed constant mesh	—
Gearshift pattern		1-down, 5-up	—
Primary reduction ratio		1.838 (57/31)	—
Gear ratios	Low	3.000 (36/12)	—
	2nd	1.933 (29/15)	—
	3rd	1.500 (27/18)	—
	4th	1.227 (27/22)	—
	5th	1.086 (25/23)	—
	Top	1.000 (24/24)	—
Final reduction ratio		2.411 (41/17)	—
Drive chain		RK525SMOZ8, 116 links	—

Capacities

Item		Specification	Remark
Fuel tank		20.0 L (5.3 US gal, 4.4 Imp gal)	—
Engine oil	Oil change	2700 ml (2.9 US qt, 2.4 Imp qt)	—
	With filter change	3100 ml (3.3 US qt, 2.7 Imp qt)	—
Engine coolant		2.13 L (2.3 US qt, 1.9 Imp qt)	—

Specifications DL1000XAAL9
E-03: USA, E-33: California

Chassis

Item	Specification	Remark
Front suspension	Telescopic, coil spring, oil damped	—
Rear suspension	Link type, coil spring, oil damped	—
Front fork stroke	160 mm (6.3 in)	—
Rear wheel travel	160 mm (6.3 in)	—
Steering angle	36° (right & left)	—
Caster	25° 30’	—
Trail	109 mm (4.29 in)	—
Turning radius	2.9 m (9.5 ft)	—
Front brake	Disc brake, twin	—
Rear brake	Disc brake	—
Front tire	110/80R19M/C 59V, tubeless	—
Rear tire	150/70R17M/C 69V, tubeless	—

Electrical

Item		Specification	Remark
Ignition type		Electronic ignition (Transistorized)	—
Spark plug		NGK LMAR8BI-9	—
Battery		12 V 40.3 kC (11.2 Ah)/10 HR	—
Generator		Three-phase A.C. generator	—
Main fuse		30 A	—
Fuse		15/15/15/15/10/10/3 A	—
ABS fuse		25/15 A	—
Headlight	Hi beam	12 V 65 W H9	—
	Low beam	12 V 55 W H7	—
Position light		12 V 5 W	—
Brake light/Tail light		LED	—
Turn signal light		12 V 21 W	—
License plate light		12 V 5 W	—
Instrument panel light		LED	—
Turn signal indicator light		LED	—
Neutral indicator light		LED	—
Hi beam indicator light		LED	—
Engine coolant temperature indicator light/Oil pressure indicator light		LED	—
MIL		LED	—
Freeze indicator light		LED	—
ABS indicator light		LED	—
Traction control system indicator light		LED	—

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Engine General Information and Diagnosis

Item		Standard / Specification		Limit / Note
IAP sensor power supply voltage (#1 & #2)		4.5 – 5.5 V		—
IAP sensor output voltage (#1 & #2)		Idle speed at 1 atm.	Approx. 2.5 V	—
IAT sensor input voltage		4.5 – 5.5 V		—
IAT sensor output voltage		0.15 – 4.85 V		—
IAT sensor resistance		0 °C (32 °F)	5400 – 6600 Ω	—
ECT sensor input voltage		4.5 – 5.5 V		—
ECT sensor output voltage		0.15 – 4.85 V		—
ECT sensor resistance		20 °C (68 °F)	2320 – 2590 Ω	—
TP sensor power supply voltage		4.5 – 5.5 V		—
TP sensor output voltage		Closed	1.10 – 1.14 V	—
		Opened	Approx. 4.3 V	—
HO2 sensor output voltage (#1 & #2)		Idle speed	Approx. 0.6 V or less	—
		6000 r/min	Approx. 0.6 V or more	—
HO2 sensor heater power supply voltage (#1 & #2)		Battery voltage		—
HO2 sensor heater resistance (#1 & #2)		23 °C (73 °F)	6.7 – 9.5 Ω	—
Injector power supply voltage		Battery voltage		—
Injector resistance		20 °C (68 °F)	11.5 – 12.5 Ω	—
Continuity between each injector terminal and ground		∞ Ω (Infinity)		—
FP relay power supply voltage		Battery voltage		—
CKP sensor resistance		145 – 225 Ω		—
Continuity between each CKP sensor terminal and ground		∞ Ω (Infinity)		—
CKP sensor peak voltage		4.5 V or more		When cranking
EVAP system purge control solenoid valve power supply voltage		Battery voltage		If equipped
EVAP system purge control solenoid valve resistance		20 °C (68 °F)	30 – 34 Ω	If equipped
Cooling fan relay power supply voltage		Battery voltage		—
Immobilizer antenna power supply voltage		Battery voltage		If equipped
TO sensor power supply voltage		4.5 – 5.5 V		—
TO sensor voltage		Normal	0.4 – 1.4 V	—
		Leaning 65°	3.7 – 4.4 V	—
TO sensor resistance		16.5 – 22.3 kΩ		—
PAIR control solenoid valve power supply voltage	DL1000AL5 –	Battery voltage		If equipped
PAIR control solenoid valve resistance	DL1000AL5 –	20 – 30 °C (68 – 86 °F)	20 – 24 Ω	If equipped
STP sensor power supply voltage		4.5 – 5.5 V		—
STP sensor output voltage		Closed	Approx. 0.6 V	—
		Opened	Approx. 4.5 V	—
STVA resistance		Approx. 7 Ω		—
ECM power supply voltage		Battery voltage		—

Emission Control Devices

Item		Standard / Specification		Limit / Note
EVAP system purge control solenoid valve resistance		20 °C (68 °F)	30 – 34 Ω	If equipped
PAIR control solenoid valve resistance	DL1000AL5 –	20 – 30 °C (68 – 86 °F)	20 – 24 Ω	If equipped

Engine Electrical Devices

Item	Standard / Specification		Limit / Note
Throttle cable play	2.0 – 4.0 mm (0.08 – 0.16 in)		—
Idle speed (When engine is warmed)	1100 – 1300 r/min		Without PAIR system
	1200 – 1400 r/min		With PAIR system
Fast idle speed	1500 r/min		—
IAT sensor resistance	0 °C (32 °F)	5400 – 6600 Ω	—
	80 °C (176 °F)	290 – 390 Ω	—
ECT sensor resistance	–20 °C (–4 °F)	13840 – 16330 Ω	—
	20 °C (68 °F)	2320 – 2590 Ω	—
	80 °C (176 °F)	310 – 326 Ω	—
GP switch voltage	0.6 V or more		From 1st to Top
Throttle body I.D. No.	Non-Euro4 model	31J1	With EVAP control system
		31J0	Without EVAP control system
	Euro4 model	31J2	—
Throttle body bore size	45 mm (1.8 in)		—

Engine Mechanical

Item	Standard / Specification		Limit / Note
Compression pressure (Automatic de-comp. actuated)	1000 – 1400 kPa (10 – 14 kgf/cm^2, 142 – 199 psi)		800 kPa (8 kgf/cm^2, 114 psi)
Compression pressure difference	—		200 kPa (2 kgf/cm^2, 28 psi)
Cam height	IN.	36.28 – 36.32 mm (1.428 – 1.430 in)	35.98 mm (1.417 in)
	EX.	35.68 – 35.72 mm (1.405 – 1.406 in)	35.38 mm (1.393 in)
Camshaft journal oil clearance	IN. & EX.	0.019 – 0.053 mm (0.0007 – 0.0021 in)	0.150 mm (0.0059 in)
Camshaft journal holder I.D.	IN. & EX.	22.012 – 22.025 mm (0.8666 – 0.8671 in)	—
Camshaft journal O.D.	IN. & EX.	21.972 – 21.993 mm (0.8650 – 0.8659 in)	—
Camshaft runout	IN. & EX.	—	0.10 mm (0.004 in)
Valve clearance (When engine is cold)	IN.	0.10 – 0.20 mm (0.004 – 0.008 in)	—
	EX.	0.20 – 0.30 mm (0.008 – 0.012 in)	—
Valve diameter	IN.	36 mm (1.4 in)	—
	EX.	33 mm (1.3 in)	—
Valve stem runout	IN. & EX.	—	0.05 mm (0.002 in)
Valve head radial runout	IN. & EX.	—	0.03 mm (0.001 in)
Valve head thickness	IN. & EX.	—	0.5 mm (0.02 in)
Valve stem deflection	IN. & EX.	—	0.35 mm (0.014 in)
Valve stem O.D.	IN.	5.475 – 5.490 mm (0.2156 – 0.2161 in)	—
	EX.	5.455 – 5.470 mm (0.2148 – 0.2154 in)	—
Valve seat width	IN.	1.17 – 1.37 mm (0.046 – 0.054 in)	—
	EX.	1.31 – 1.51 mm (0.052 – 0.059 in)	—
Valve guide I.D.	IN. & EX.	5.500 – 5.512 mm (0.2165 – 0.2170 in)	—
Valve guide to valve stem clearance	IN.	0.010 – 0.037 mm (0.0004 – 0.0015 in)	—
	EX.	0.030 – 0.057 mm (0.0012 – 0.0022 in)	—
Valve spring free length	IN. & EX.	—	39.6 mm (1.56 in)
Valve spring preload when compressed to 35.6 mm (1.40 in)	IN. & EX.	197 – 227 N (20.1 – 23.1 kgf, 44.3 – 51.0 lbf)	—
Cylinder head distortion	—		0.05 mm (0.002 in)
Cylinder distortion	—		0.05 mm (0.002 in)
Cylinder bore	100.000 – 100.015 mm (3.9370 – 3.9376 in)		No nicks or Scratches

Item	Standard / Specification		Limit / Note
Piston diameter	99.980 – 99.995 mm (3.9362 – 3.9368 in) Measure at 10 mm (0.4 in) from the skirt end.		99.880 mm (3.9323 in)
Piston to cylinder clearance	0.015 – 0.025 mm (0.0006 – 0.0010 in)		0.120 mm (0.0047 in)
Piston ring to groove clearance	1st	—	0.180 mm (0.0071 in)
	2nd	—	0.150 mm (0.0059 in)
Piston ring groove width	1st L4 – L6	0.83 – 0.85 mm (0.0327 – 0.0335 in) 1.25 – 1.27 mm (0.0492 – 0.0500 in)	—
	1st L8 –	0.83 – 0.86 mm (0.0327 – 0.0339 in) 1.25 – 1.28 mm (0.0492 – 0.0504 in)	—
	2nd	1.01 – 1.03 mm (0.0398 – 0.0406 in)	—
	Oil	2.01 – 2.03 mm (0.0791 – 0.0799 in)	—
Piston ring thickness	1st	0.76 – 0.81 mm (0.0299 – 0.0319 in) 1.08 – 1.10 mm (0.0425 – 0.0433 in)	—
	2nd	0.97 – 0.99 mm (0.0382 – 0.0390 in)	—
Piston ring free end gap	1st	Approx. 11.0 mm (0.43 in)	8.8 mm (0.35 in)
	2nd	Approx. 13.9 mm (0.55 in)	11.1 mm (0.43 in)
Piston ring end gap	1st	0.10 – 0.25 mm (0.004 – 0.010 in)	0.50 mm (0.020 in)
	2nd	0.30 – 0.45 mm (0.012 – 0.018 in)	0.70 mm (0.028 in)
Piston pin bore I.D.	22.002 – 22.008 mm (0.8662 – 0.8665 in)		22.030 mm (0.8673 in)
Piston pin O.D.	21.995 – 22.000 mm (0.8659 – 0.8661 in)		21.980 mm (0.8654 in)
Conrod small end I.D.	22.010 – 22.018 mm (0.8665 – 0.8668 in)		22.040 mm (0.8677 in)
Conrod big end side clearance	0.17 – 0.32 mm (0.007 – 0.013 in)		0.50 mm (0.020 in)
Conrod big end width	21.95 – 22.00 mm (0.864 – 0.866 in)		—
Crank pin width	44.17 – 44.22 mm (1.739 – 1.741 in)		—
Conrod big end oil clearance	0.032 – 0.056 mm (0.0013 – 0.0022 in)		0.080 mm (0.0031 in)
Conrod big end I.D.	48.000 – 48.016 mm (1.8898 – 1.8904 in)		—
Crank pin O.D.	44.976 – 45.000 mm (1.7707 – 1.7717 in)		—
Crank pin bearing thickness	1.480 – 1.496 mm (0.0583 – 0.0589 in)		—
Crankshaft journal O.D.	47.985 – 48.000 mm (1.8892 – 1.8898 in)		—
Crankshaft journal oil clearance	0.023 mm (0.0009 in) or less		0.080 mm (0.0031 in)
Crankcase journal I.D.	52.000 – 52.018 mm (2.0472 – 2.0479 in)		—
Crankcase journal bearing thickness	1.999 – 2.008 mm (0.0787 – 0.0791 in)		—
Crankshaft journal holder width	25.2 – 25.4 mm (0.99 – 1.00 in)		—
Crankshaft journal width	25.50 – 25.55 mm (1.004 – 1.006 in)		—
Crankshaft runout	—		0.05 mm (0.002 in)

Engine Lubrication System

Item	Standard / Specification		Limit / Note
Oil pressure (at 60 °C, 140 °F)	3000 r/min	400 – 700 kPa (4 – 7 kgf/cm^2, 57 – 100 psi)	—
Necessary amount of engine oil	Oil change	2700 ml (2.9 US qt, 2.4 Imp qt)	—
	Oil and filter change	3100 ml (3.3 US qt, 2.7 Imp qt)	—
	Engine overhaul	3500 ml (3.7 US qt, 3.1 Imp qt)	—

Engine Cooling System

Item	Standard / Specification		Limit / Note
Engine coolant	Reservoir tank side	Approx. 230 ml (0.24 US qt, 0.20 Imp qt)	—
	Engine side	Approx. 1900 ml (2.0 US qt, 1.6 Imp qt)	—
Radiator cap valve opening pressure	108 – 137 kPa (1.1 – 1.4 kgf/cm^2, 15.4 – 19.5 psi)		—
Cooling fan operating temperature	ON→OFF	Approx. 100 °C (212 °F)	—
	OFF→ON	Approx. 105 °C (221 °F)	—
Thermostat valve opening temperature	86.5 – 89.5 °C (188 – 193 °F)		—
Thermostat valve lift	Over 8 mm (0.31 in) at 100 °C (212 °F)		—

Fuel System

Item	Standard / Specification	Limit / Note
Fuel pressure	Approx. 300 kPa (3.0 kgf/cm^2, 43 psi)	—
Fuel pump discharge amount per 10 seconds	167 ml (5.6 US oz, 5.9 Imp oz) or more	—

Ignition System

Item	Standard / Specification		Limit / Note
Firing order	1.2		—
Spark plug	Type	NGK: LMAR8BI-9	—
	Gap	0.8 – 0.9 mm (0.031 – 0.035 in)	—
Spark performance	Over 8 mm (0.3 in) at 1 atm.		—
Ignition coil primary peak voltage	150 V or more		—
Ignition coil resistance	Primary	3.06 – 4.14 Ω	(+) Terminal – (–) Terminal
	Secondary	24 – 36 kΩ	(+) Terminal – Plug cap

Starting System

Item	Standard / Specification		Limit / Note
Starter motor brush length	12 mm (0.47 in)		6.5 mm (0.26 in)
Starter relay resistance	3 – 6 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	—
Starter torque limiter slip torque	20 – 45 N·m (2.0 – 4.5 kgf-m, 14.5 – 32.5 lbf-ft)		—

Charging System

Item		Standard / Specification		Limit / Note
Battery leakage current		3 mA or less		—
Regulated voltage (charging output)		5000 r/min	13.5 – 15.0 V	—
Generator coil resistance		0.21 – 0.27 Ω		Y – Y
Generator no-load voltage (When engine is cold)		5000 r/min	75 V (AC) or more	—
Recharging time		1.4 A for 5 to 10 hours or 6 A for 1 hour		—
Generator maximum output		5000 r/min	Approx. 490 W	—
Battery	Type designation	L4 – L6	FTX14-BS	—
		L8 –	FTZ14S	—
	Capacity	L4 – L6	12 V 43.2 kC (12 Ah)/10 HR	—
		L8 –	12 V 40.3 kC (11.2 Ah)/10 HR	—

Exhaust System

Item	Standard / Specification		Limit / Note
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	Approx. 3.1 kΩ		At adjustment position

Front Suspension

Item	Standard / Specification		Limit / Note
Front fork inner tube O.D.	43 mm (1.7 in)		—
Front fork oil level (Without spring, inner tube fully compressed)	120 mm (4.7 in)		—
Front fork spring free length	328 mm (12.9 in)		321 mm (12.6 in)
Front fork oil capacity (Each leg)	569 ml (19.2 US oz, 20.0 Imp oz)		—
Front fork spring adjuster	11 mm (0.4 in)		—
Front fork damping force adjuster	Rebound	8 clicks counterclockwise from stiffest position	—
	Compression	8 clicks counterclockwise from stiffest position	—

Rear Suspension

Item	Standard / Specification		Limit / Note
Rear shock absorber spring pre-load	11th clicks clockwise from softest position		—
Rear shock absorber damping force adjuster	Rebound	1.25 turns counterclockwise from stiffest position	—
Swingarm pivot shaft runout	—		0.3 mm (0.01 in)

Wheels and Tires

Item	Standard / Specification			Limit / Note
Wheel rim runout	Front & Rear	Axial	—	2.0 mm (0.08 in)
		Radial	—	2.0 mm (0.08 in)
Wheel axle runout	Front & Rear	—		0.25 mm (0.010 in)
Tire size	Front	110/80R19M/C 59V		—
	Rear	150/70R17M/C 69V		—
Tire type	Front	BRIDGESTONE: BW-501 RADIAL J		—
	Rear	BRIDGESTONE: BW-502 RADIAL J		—
Tire tread depth (Recommended depth)	Front	—		1.6 mm (0.06 in)
	Rear	—		2.0 mm (0.08 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)		—
Cold inflation tire pressure (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	19 M/C x MT 2.50		—
	Rear	17 M/C x MT 4.00		—

Drive Chain / Drive Train / Drive Shaft

Item	Standard / Specification		Limit / Note
Drive chain	Type	RK525SMOZ8	—
	Links	116 links	—
	20-pitch length	—	319.4 mm (12.57 in)
Drive chain slack (on side-stand)	20 – 30 mm (0.8 – 1.2 in)		—

Brake Control System and Diagnosis

Item	Standard / Specification		Limit / Note
Rear brake pedal height	20 – 30 mm (0.8 – 1.2 in)		—
Master cylinder bore / piston diameter	Front & Rear	Approx. 14.0 mm (0.55 in)	—

Front Brakes

Item	Standard / Specification	Limit / Note
Brake disc thickness	4.8 – 5.2 mm (0.19 – 0.20 in)	4.5 mm (0.18 in)
Brake disc runout	—	0.30 mm (0.012 in)
Brake caliper cylinder bore / piston diameter	Approx. 30.3 mm (1.19 in) Approx. 32.1 mm (1.26 in)	—

Rear Brakes

Item	Standard / Specification	Limit / Note
Brake disc thickness	4.8 – 5.2 mm (0.19 – 0.20 in)	4.5 mm (0.18 in)
Brake disc runout	—	0.30 mm (0.012 in)
Brake caliper cylinder bore / piston diameter	Approx. 38.2 mm (1.50 in)	—

ABS

Item	Standard / Specification		Limit / Note
Wheel speed sensor – Sensor rotor clearance	Front	0.46 – 1.67 mm (0.018 – 0.066 in)	—
	Rear	0.51 – 1.62 mm (0.020 – 0.064 in)	—

Manual Transmission

Item		Standard / Specification		Limit / Note
Primary reduction ratio		1.838 (57/31)		—
Final reduction ration		2.411 (41/17)		—
Gear ratios	Low	3.000 (36/12)		—
	2nd	1.933 (29/15)		—
	3rd	1.500 (27/18)		—
	4th	1.227 (27/22)		—
	5th	1.086 (25/23)		—
	Top	1.000 (24/24)		—
Gearshift fork to groove clearance		No.1, 2	0.1 – 0.3 mm (0.004 – 0.012 in)	0.50 mm (0.020 in)
Gearshift fork groove width		No.1, 2	5.0 – 5.1 mm (0.197 – 0.201 in)	—
Gearshift fork thickness		No.1, 2	4.8 – 4.9 mm (0.189 – 0.193 in)	—
Gearshift lever height		20 – 30 mm (0.8 – 1.2 in)		—

Clutch

Item	Standard / Specification		Limit / Note
Drive plate thickness	No.1, 2	3.72 – 3.88 mm (0.146 – 0.153 in)	3.42 mm (0.135 in)
Drive plate claw width	No.1, 2	13.90 – 14.00 mm (0.547 – 0.551 in)	13.10 mm (0.516 in)
Driven plate distortion	No.1, 2, 3, 4	—	0.10 mm (0.004 in)
Clutch spring free length	45.7 mm (1.80 in)		43.5 mm (1.71 in)
Master cylinder bore / piston diameter	L4 – L6	Approx. 14.0 mm (0.55 in)	—
	L8 –	Approx. 12.7 mm (0.500 in)	—
Release cylinder bore / piston diameter	Approx. 35.7 mm (1.41 in)		—

Steering / Handlebar

Item	Standard / Specification	Limit / Note
Steering tension initial force	2 – 5 N (0.2 – 0.5 kgf, 0.4 – 1.1 lbf)	—

Wiring Systems

Item			Standard / Specification	Limit / Note
Fuse size	Headlight	Hi	15 A	—
		Lo	15 A	—
	Fuel		10 A	—
	Ignition		10 A	—
	Signal		15 A	—
	Fan		15 A	—
	Main		30 A	—
	P-source		3 A	—
	ABS motor		25 A	—
	ABS valve		15 A	—

Lighting Systems

Item		Standard / Specification	Limit / Note
Headlight	Hi	12 V 65 W (H9)	—
	Lo	12 V 55 W (H7)	—
Position light		12 V 5 W	—
Front turn signal light		12 V 21 W × 2	—
Rear turn signal light		12 V 21 W × 2	—
Brake light/Tail light		LED	—
License plate light		12 V 5 W	—

Combination Meter / Fuel Meter / Horn

Item		Standard / Specification	Limit / Note
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	—
Instrument panel light		LED	—
Turn signal indicator light		LED	—
Hi beam indicator light		LED	—
Neutral indicator light		LED	—
ABS indicator light		LED	—
Engine coolant temperature indicator light/Oil pressure indicator light		LED	—
MIL		LED	—
TC indicator light		LED	—
Freeze indicator light		LED	—

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
EVAP system purge control solenoid valve nut	7	0.7	5.0

Engine Electrical Devices

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Intake pipe clamp screw	1.5	0.15	1.0
Throttle cable lock-nut	4.5	0.45	3.5
STP sensor mounting screw	3.5	0.35	2.5
TP sensor mounting screw	3.5	0.35	2.5
Fuel delivery pipe mounting screw	3.5	0.35	2.5
EVAP system purge control solenoid valve bracket screw	5	0.5	4.0
EVAP system purge control solenoid valve nut	7	0.7	5.0
IAT sensor screw	1.3	0.13	1.0
ECT sensor	18	1.8	13.0
HO2 sensor	25	2.5	18.0
EXCV cable guide bolt	10	1.0	7.5
Rear brake master cylinder mounting bolt	10	1.0	7.5

Engine Mechanical

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Air cleaner outlet tube clamp screw	1.5	0.15	1.0
Cylinder head cover bolt	14	1.4	10.5
Camshaft journal holder bolt	10	1.0	7.5
Generator cover plug	15	1.5	11.0
Valve timing inspection plug	21	2.1	15.5
Engine mounting thrust adjuster	12	1.2	9.0
Engine mounting thrust adjuster lock-nut	45	4.5	32.5
Engine mounting pinch bolt	23	2.3	17.0
Front footrest bracket bolt	26	2.6	19.0
Intake pipe mounting screw	8.5	0.85	6.5
Cylinder head bolt (M10)	25 → 46 N·m (2.5 → 4.6 kgf-m, 18.0 → 33.5 lbf-ft)		
Cylinder head nut (M8)	25	2.5	18.0
Cylinder head nut (M6)	10	1.0	7.5
Cylinder head bolt (M6)	10	1.0	7.5
Cylinder nut	10	1.0	7.5
Cam chain tensioner mounting bolt	10	1.0	7.5
Cylinder head cover No. 2 bolt	10	1.0	7.5
Cam chain tension adjuster mounting bolt	10	1.0	7.5
Cam chain tension adjuster cap bolt (Front)	23	2.3	17.0
Cam chain tension adjuster cap bolt (Rear)	7	0.7	5.0
Water union bolt	10	1.0	7.5
Oil gallery plug (M6)	10	1.0	7.5
Crankcase bolt (M8) (L110)	26	2.6	19.0
Crankcase bolt (M8) (L125)	26	2.6	19.0
Crankcase bolt (M8) (L90)	26	2.6	19.0
Crankcase bolt (M6) (L85)	11	1.1	8.0
Crankcase bolt (M6) (L70)	11	1.1	8.0
Crankcase bolt (M6) (L30)	11	1.1	8.0
Primary drive gear nut	160	16.0	116.0
Cam drive idle gear/sprocket No. 1 nut	71	7.1	51.5
Special tool bolt	23	2.3	17.0
Oil gallery plug (M8)	18	1.8	13.0

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Oil drain plug	23	2.3	17.0
Cam drive idle gear shaft bearing retainer screw	8.5	0.85	6.5
Oil gallery plug (M16)	35	3.5	25.5
Conrod cap bolt	35 N·m (3.5 kgf-m, 25.5 lbf-ft) → turn clockwise 90°		

Engine Lubrication System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Oil gallery plug (M8)	18	1.8	13.0
Oil drain plug	23	2.3	17.0
Oil filter	20	2.0	14.5
Oil pressure switch	14	1.4	10.5
Oil pressure switch lead wire bolt	1.5	0.15	1.0
Piston cooling nozzle bolt	10	1.0	7.5

Engine Cooling System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Clutch cover water drain bolt	5.5	0.55	4.0
Air bleeder bolt	13	1.3	9.5
Cooling fan assembly mounting bolt	8	0.8	6.0
Radiator mounting bolt	10	1.0	7.5
Water hose clamp screw	1.5	0.15	1.0
Reservoir tank mounting bolt	6	0.6	4.5
Reservoir tank bracket bolt	11	1.1	8.0
Thermostat connector cap bolt	10	1.0	7.5
Oil separator screw	8.5	0.85	6.5
Water pump case bolt	10	1.0	7.5

Fuel System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Fuel pump mounting bolt	10	1.0	7.5

Ignition System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Spark plug	11	1.1	8.0

Starting System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Starter motor mounting bolt	10	1.0	7.5
Starter motor lead wire mounting nut	6	0.6	4.5
Starter clutch bolt	25	2.5	18.0

Charging System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Generator stator bolt	10	1.0	7.5
CKP sensor bolt	6.5	0.65	5.0
Generator rotor bolt	180	18.0	130.5

Exhaust System

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
EXCVA pulley mounting bolt	5	0.5	4.0
EXCV cable guide bolt	10	1.0	7.5
EXCV cable bracket mounting nut	11	1.1	8.0
EXCV cover nut	10	1.0	7.5
Exhaust pipe bolt	23	2.3	17.0
Center exhaust pipe bolt	26	2.6	19.0
Exhaust pipe connecting bolt	18	1.8	13.0
Muffler rear cover screw	10	1.0	7.5
Muffler front cover bolt	5.5	0.55	4.0
Muffler support bolt	30	3.0	22.0
Muffler connecting bolt	18	1.8	13.0

Front Suspension

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Front fork cap bolt	23	2.3	17.0
Front fork lower clamp bolt	23	2.3	17.0
Front fork upper clamp bolt	23	2.3	17.0
Front fender mounting bolt	12	1.2	9.0
Inner rod/damper rod	70	7.0	51.0
Front fork inner rod lock-nut	15	1.5	11.0

Rear Suspension

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Rear shock absorber mounting nut	50	5.0	36.5
Cushion lever mounting nut	98	9.8	71.0
Cushion rod mounting nut	98	9.8	71.0
Rear shock absorber lower mounting nut	50	5.0	36.5
Mud guard bolt	6.5	0.65	5.0
Brake hose guide screw	5	0.5	4.0
Swingarm pivot shaft	15	1.5	11.0
Swingarm pivot nut	100	10.0	72.5
Swingarm pivot lock-nut	90	9.0	65.0

Wheels and Tires

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Front axle nut	100	10.0	72.5
Front axle pinch bolt	23	2.3	17.0
Spoke nipple (front wheel)	5	0.5	4.0
Spoke nipple (rear wheel)	4.5	0.45	3.5

Drive Chain / Drive Train / Drive Shaft

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Rear axle nut	100	10.0	72.5
Engine sprocket nut	115	11.5	83.5
Engine sprocket cover bolt	11	1.1	8.0
Clutch release cylinder mounting bolt	10	1.0	7.5
Rear sprocket nut	60	6.0	43.5

Brake Control System and Diagnosis

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Rear brake master cylinder rod lock-nut	18	1.8	13.0
Brake air bleeder valve	7.5	0.75	5.5
Front brake master cylinder mounting bolt	10	1.0	7.5
Brake hose union bolt	23	2.3	17.0
Brake light switch screw	1.2	0.12	1.0
Brake lever pivot bolt	6	0.6	4.5
Brake lever pivot bolt lock-nut	6	0.6	4.5
Rear brake master cylinder mounting bolt	10	1.0	7.5

Front Brakes

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Caliper mounting bolt	39	3.9	28.5
Pad mounting pin	16	1.6	11.5
Brake hose union bolt	23	2.3	17.0
Brake disc bolt	23	2.3	17.0

Rear Brakes

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Caliper mounting bolt	18	1.8	13.0
Pad mounting pin	16	1.6	11.5
Brake hose union bolt	23	2.3	17.0
Caliper sliding pin	33	3.3	24.0
Brake disc bolt	23	2.3	17.0

ABS

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Wheel speed sensor rotor bolt	6.5	0.65	5.0
Brake pipe flare nut	16	1.6	11.5
IMU bolt	7	0.7	5.5

Manual Transmission

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Gearshift cam bearing retainer screw	8.5	0.85	6.5
Driveshaft bearing retainer screw	8.5	0.85	6.5
Driveshaft oil seal retainer bolt	10	1.0	7.5
Countershaft bearing retainer screw	8.5	0.85	6.5
GP switch mounting bolt	6	0.6	4.5
GP switch lead wire clamp bolt	6.5	0.65	5.0
Gearshift link rod lock-nut	10	1.0	7.5
Gearshift arm stopper	19	1.9	14.0
Gearshift cam stopper bolt	10	1.0	7.5
Gearshift cam plate bolt (Up to L6 model)	10	1.0	7.5
Gearshift cam plate bolt (From L8 model)	13	1.3	9.5
Gearshift cover bolt	11	1.1	8.0

Clutch

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Clutch air bleeder valve	6	0.6	4.5
Clutch master cylinder mounting bolt	10	1.0	7.5
Clutch hose union bolt	23	2.3	17.0
Clutch lever pivot bolt	6	0.6	4.5
Clutch lever pivot bolt lock-nut	6	0.6	4.5
Clutch release cylinder mounting bolt	10	1.0	7.5
Clutch sleeve hub nut	150	15.0	108.5
Clutch spring set bolt	10	1.0	7.5
Clutch cover bolt	11	1.1	8.0
Front footrest bracket bolt	26	2.6	19.0
Primary drive gear nut	160	16.0	116.0

Steering / Handlebar

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Handlebar clamp bolt	23	2.3	17.0
Throttle case bolt	3	0.3	2.5
Handlebar balancer screw	5.5	0.55	4.0
Steering stem lock-nut	80	8.0	58.0
Steering stem head nut	90	9.0	65.0
Front fork upper clamp bolt	23	2.3	17.0
Handlebar holder nut	45	4.5	32.5
Steering stem nut	20 N·m (2.0 kgf-m, 14.5 lbf-ft) → turn counterclockwise 0 – 1/4		

Lighting Systems

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Headlight mounting screw	2	0.2	1.5
License plate light mounting nut	5	0.5	4.0
Front turn signal light mounting nut	1.3	0.13	1.0
Rear turn signal light mounting nut	1.8	0.18	1.5

Combination Meter / Fuel Meter / Horn

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Ring nut	3	0.3	2.5
Speedometer screw	1.5	0.15	1.0
Speedometer panel screw	4.5	0.45	3.5

Exterior Parts

Fastening part	Tightening torque		
	N·m	kgf-m	lbf-ft
Sport carrier bolt	27.5	2.75	20.0
Rear cowling screw	5.5	0.55	4.0
Body cowling screw	5.5	0.55	4.0
Clutch cover bolt	11	1.1	8.0

Fuel / Oil / Fuel Recommendation

BENJ31J10308001

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

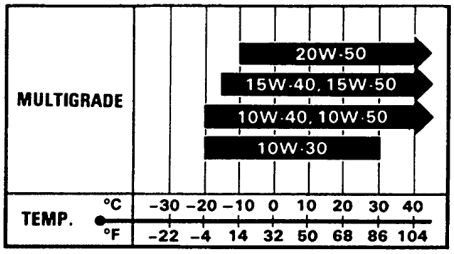
Use unleaded gasoline with an octane rating of 90 AKI or higher.
Unleaded gasoline containing up to 15% MTBE by volume may be used.
Unleaded gasoline containing up to 10% ethanol by volume may be used.
Unleaded gasoline containing up to 5% methanol by volume may be used if it contains appropriate co-solvents and corrosion inhibitors.

Engine Oil

Use engine oils which meet the following requirements.

- API service classification: SG or higher
- 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

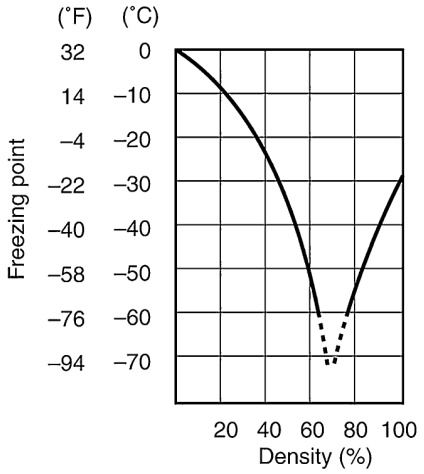
- **Use a high quality ethylene glycol base anti-freeze, mixed with distilled water. Do not mix an alcohol base anti-freeze and different brands of anti-freeze.**
- **Do not put in more than 60% anti-freeze or less than 50%. (Refer to Fig. 1 and 2.)**

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

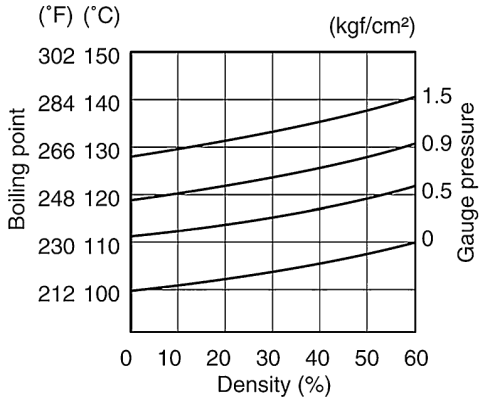
Anti-freeze density	Freezing point
50%	–31 °C (–24 °F)
55%	–40 °C (–40 °F)
60%	–55 °C (–67 °F)

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 dov to freezing point.
Suzuki recommends the use of SUZUKI COOLANT ar 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 L-01.

Fork oil 99000–99044–L01 (SUZUKI FORK OIL L-01)