# Features & Specifications 2019 V-Strom 650XT



# **Overview**

Renowned for its versatility, reliability, and value, the V-Strom 650XT has attracted many riders who use it for touring, commuting, or a fun ride when the spirit moves them. It is a touchstone motorcycle balanced with a natural riding position, comfortable seat, and a flexible engine character that produces stress-free riding during brief daily use or a high-mile adventure. The 2019 V-Strom 650XT marries the looks of the V-Strom 1000 and the tubeless-spoke wheels of the prior V-Strom 650XT, unifying the V-Strom family. This V-Strom boasts strong engine performance and great fuel economy while achieving worldwide emission standards. A number of engineering accomplishments result in low weight and a thin chassis, producing a V-Strom that is more versatile, more controllable, and more accessible to elevate its total performance so it's simply "more V-Strom." And that's what a rider wants: more of a good ride.

# **Key Features**

- Liquid-cooled, 645cc, 90-degree, V-twin engine delivers strong torque in the low- to mid-rpm range, yet provides a strong rush of high-rpm power that's ideal for any riding mission.
- Suzuki's Advanced Traction Control System\*, Easy Start System, Low RPM Assist feature, plus ABS\*\* technology make a great motorcycle really incredible.
- ADV fairing, with vertically stacked headlights and adjustable windshield, houses a multi-function, illumination-adjustable instrument panel that delivers a wealth of information.
- The strong and light chassis has integrated mount points for unified Suzuki V-Strom luggage that's easy to clip on and off and keeps the motorcycle trim when ready for touring.
- Ready for real adventure, the V-Strom 650XT has aluminum, spoke-style wheels with tubeless radial dual-sport tires, hand guards, and a protective lower engine cowl.

# **Engine Features**

- Using SV650 engineering, the V-Strom 650XT's DOHC, liquid-cooled engine has been tuned to deliver clean, strong power at any rpm.
- Low-friction resin-coated pistons and SCEM-coated cylinders help deliver high mileage for classleading touring range.



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# Engine Features (continued)

- Engine cover hardware and select other fasteners are of a new design that permits the use of Torx or conventional hex-style tools.
- The sleek 2-into-1 exhaust system routes below the chassis to reduce weight, centralize mass, and provide space for a narrow tail section (and optional luggage).
- The exhaust system has twin catalyzers and employs O2 feedback to the EFI system to produce optimum combustion efficiency and reduce emissions to an incredibly low level.
- The fuel injection system employs Suzuki's innovative SDTV (Suzuki Dual Throttle Valve) on 39mm throttle bodies. The secondary throttle valves are controlled by a servo motor for smooth power delivery.
- Ten-hole, long-nose-type fuel injectors on each throttle body improve fuel atomization for better combustion efficiency while reducing fuel consumption.



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- Suzuki's patented Throttle-body Integrated Idle Speed Control (TI-ISC) stabilizes the engine idle speed and helps lower emissions. The system is compact and lightweight.
- The TI-ISC on the V-Strom 650XT has Suzuki's Low RPM Assist feature that seamlessly adjusts engine speed during takeoff and low-speed riding to smooth the power delivery. It also helps reduce the possibility of the rider stalling the motorcycle.
- The Engine Control Module (ECM) provides state-of-the-art engine management and has enhanced settings to suit the updated intake and exhaust systems, resulting in better fuel economy and linear throttle response.
- The engine has dual spark technology heads with two high-energy, slim electrode spark plugs per cylinder, which aid in combustion efficiency and power production.
- The V-Strom 650XT is equipped with Suzuki's Advanced Traction Control System\*, which lets the rider control the throttle with more confidence in various riding conditions. It continuously monitors front and rear wheel speeds, throttle opening, engine speed, and the selected transmission gear to adjust engine output if wheel spin is detected.
- There are three traction control modes (1, 2, and OFF), and the difference between the modes is their sensitivity to road conditions. Mode 1 is lowest sensitivity level, most suitable for skilled riders or in conditions that have good road surface grip (riding on good, smooth roads). Mode 2 is highest sensitivity level, suitable for road conditions where the grip may be limited (wet or cold surfaces). OFF disengages all traction control features.
- This V-Strom also features the Suzuki Easy Start System, which lets the rider start the motorcycle with a momentary press of the start button without pulling in the clutch lever when the transmission is in neutral.
- The compact radiator is flanked by wind-directing plates that enhance cooling efficiency and direct heat out of the side vents away from the rider's legs.
- The six-speed transmission suits sporty rides with tight 1<sup>st</sup> through 5<sup>th</sup> gear ratios and a tall top gear (6th gear) for highway cruising.
- Low-maintenance, long-life sealed O-ring drive chain is standard.

# **Chassis Features**

- The beak-style fairing, with vertically stacked headlights and new mounting structure, helps the V-Strom 650XT cut through the wind, protecting the rider in style.
- The three-way height-adjustable windscreen was wind-tunnel tested to reduce wind sounds, buffeting, and rider fatigue.
- The fuel tank has a generous 5.3-gallon capacity but is shaped to be thin at the rear to flow into the slimmer seat, which aids the rider in touching the ground at stops.

# Chassis Features (continued)

- The internal construction and cap of the fuel tank is updated so the gasoline capacity is the same for both the 49-state and California versions.
- The spacious two-up seat combines smooth and slip-resistant surfaces, plus an embossed V-Strom logo.
- Lightweight, rigid twin-spar aluminum frame and swingarm contribute to smooth handling performance and excellent stability.
- Spring preload-adjustable 43mm front forks and link-type rear suspension with rebound damping adjustment and hand-operated spring preload adjuster.
- Spoke-style wheels with anodized aluminum rims (gold or black) laced with stainless steel spokes absorb shock from irregular road surfaces well and accept tubeless tires.
- Adventure-spec Bridgestone BATTLAX 19-inch front and 17-inch rear tubeless radial tires are mounted to the spoke-style wheels for all-around good performance.
- Front dual 310mm disc brakes and a rear 260mm disc brake deliver controlled stopping power.
- Compact Anti-lock Brake System (ABS)\*\* system monitors wheel speed to match braking to available traction.
- The lightweight resin luggage rack incorporates easy-to-grasp grab bars and aligns with the passenger section of the seat, offering a larger surface for carrying cargo or luggage.
- The V-Strom 650XT comes with hand guards and a protective lower engine cowl.

# **Electrical Features**

- The multi-function instrument panel is similar in appearance to the V-Strom 1000 panel but has functions unique to the V-Strom 650XT.
- The instrument set includes an analog tachometer and brightness-adjustable LCD speedometer and control panel.
- LCD readouts include odometer, dual trip meter, traction control modes, gear position, coolant and ambient temperature, fuel consumption, fuel gauge, and clock. Switching between readings can be done with the left handlebar switch.
- LED indicators include an ABS alert and a freeze warning icon, which together with the air temperature display warn of possible icy road conditions.
- Strong three-phase charging system supplies the 10Ah maintenance-free battery for easy starting and additional accessory power. A dedicated accessory fuse is located under the seat.
- The stacked, 65/55-watt halogen headlamps illuminate the road when your ride stretches into night.
- The LED tail and brake light is bright and vibration resistant. The turn signals use bright amber incandescent bulbs with clear lenses.
- A handy 12-volt DC accessory outlet is mounted on the inner dash.

# **Additional Features**

- Genuine Suzuki Accessories includes side and top cases, engine guards, low and high profile seats, heated grips, hand guards and more.
- 12-month limited warranty
- Coverage period and additional benefits available through Suzuki Extended Protection.
- For more details, please visit <u>www.suzukicycles.com</u>.

\* 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.

\*\* 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.

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# **Specifications DL650XAL9** E-03: USA, E-33: California

**Dimensions and curb mass** 

Item	Specification R	
Overall length	2275 mm (89.57 in)	_
Overall width	910 mm (35.8 in)	_
Overall height	1405 mm (55.31 in)	_
Wheelbase	1560 mm (61.42 in)	_
Ground clearance	170 mm (6.69 in)	_
Seat height	835 mm (32.9 in)	_
Curb mass	216 kg (476 lbs)	_

#### Engine

ltem	Specification	Remark
Туре	Four-stroke, liquid-cooled, DOHC, 90° V-twin	_
Number of cylinders	2	—
Bore	81.0 mm (3.189 in)	—
Stroke	62.6 mm (2.465 in)	—
Displacement	645 cm³ (39.4 cu. in)	—
Compression ratio	11.2 : 1	—
Fuel system	Fuel injection	—
Air cleaner	Non-woven fabric element	—
Starter system	Electric	—
Lubrication system	Wet sump	—
Idle speed	1300 ± 100 r/min	—

#### **Drive train**

	Item Specification		Remark
Clutch		Wet multi-plate type	
Transmission		6-speed constant mesh	
Gearshift patte	ern	1-down, 5-up	_
Primary reduc	tion ratio	2.088 (71/34)	
	Low	2.461 (32/13)	_
	2nd	1.777 (32/18)	_
Gear ratios 3rd 4th	Coor rotico	1.380 (29/21)	_
	1.125 (27/24)	_	
	5th	0.961 (25/26)	_
	Тор	0.851 (23/27)	_
Final reduction	n ratio	3.133 (47/15)	_
Drive chain		RK/525SMOZ8, 118 links	

#### Chassis

Item	Specification	Remark
Front suspension	Telescopic, coil spring, oil damped	_
Rear suspension	Link type, coil spring, oil damped	_
Front fork stroke	150 mm (5.91 in)	_
Rear wheel travel	159 mm (6.26 in)	_
Steering angle	40° (right and left)	_
Caster	25° 40'	—
Trail	107 mm (4.21 in)	_
Turning radius	2.7 m (8.9 ft)	_
Front brake	Disc brake, twin	_
Rear brake	Disc brake	_
Front tire size	110/80R19M/C 59V, tubeless	—
Rear tire size	150/70R17M/C 69V, tubeless	_
or of America, Inc. ai2 01/21/2019 other information may change without notice.	4 /22	UZU

#### Electrical

Item		Specification	Remark
gnition type		Electronic ignition (transistorized)	_
Spark plug		NGK MR8E-9	_
Battery		12 V 36.0 kC (10 Ah)/10 HR	_
Generator		Three-phase A.C. generator	—
Main fuse		30 A	_
Fuse		15/15/10/15/15/10/3 A	_
ABS fuse		25/15 A	—
Headlight	High beam	12 V 65 W H9	_
	Low beam	12 V 55 W H7	—
Position light		12 V 5 W	—
Brake light/Tai		LED	—
Turn signal lig		12 V 21 W	
License plate l		12 V 5 W	—
Instrument par		LED	—
Neutral indicat	tor light	LED	—
Hi beam indica		LED	—
Turn signal inc		LED	—
Engine coolan indicator light/ indicator light		LED	_
MIL	LED		
ABS indicator	light	LED	
Freeze indicate	or light	LED	_
TC indicator lig	ght	LED	_

#### Capacities

	Item	Specification	Remark
Fuel tank		20.0 L (5.3 US gal, 4.4 Imp gal)	—
Engine oil	Oil change	2400 ml (2.5 US qt, 2.1 lmp qt)	—
Lingine on	With filter change	2600 ml (2.7 US qt, 2.3 lmp qt)	—
Engine coo	lant	Approx. 1700 ml (1.80 US qt, 1.50 lmp qt)	—

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# Service Data DL650XAL9 E-03: USA, E-33: California

### NOTE:

The specification of fuel and oil are not listed below. However, their details are described after the tables.

#### **Emission Control Devices**

ltem	Specification	Standard	Limit
EVAP system purge control solenoid			
valve power supply voltage (if		Battery voltage	
equipped)			
EVAP system purge control solenoid	20 °C (68 °F)	30 – 34 O	
valve resistance (if equipped)	20 0 (00 1)	30 - 34 12	
PAIR control solenoid valve power		Patton voltago	
supply voltage (if equipped)		Battery voltage	
PAIR control solenoid valve	20 20 °C (68 96 °E)	20 – 24 Ω	
resistance (if equipped)	20 – 30 °C (68 – 86 °F)	20 - 24 12	

#### **Engine Electrical Devices**

ltem	Specification	Standard	Limit
IAP sensor #1 power supply voltage		4.75 – 5.25 V	—
IAP sensor #1 output voltage	Idle speed at 1 atm.	Approx. 2.5 V	_
IAP sensor #2 power supply voltage		4.75 – 5.25 V	_
IAP sensor #2 output voltage	Idle speed at 1 atm.	Approx. 2.5 V	_
IAT sensor power supply voltage		4.5 – 5.5 V	_
IAT sensor resistance	0 °C (32 °F)	5400 – 6600 Ω	—
	80 °C (176 °F)	290 – 390 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 output voltage	Closed	1.10 – 1.14 V	
TF sensor output voltage	Opened	4.34 – 4.54 V	
STP sensor power supply voltage		4.5 – 5.5 V	
STP sensor output voltage	Closed	0.57 – 0.67 V	
STP sensor output voltage	Opened	4.4 – 4.6 V	
STVA resistance		Approx. 7 Ω	_
HO2 sensor output voltage	Idle speed	0.90 V or less	
HOZ sensor output voltage	5000 r/min	0.90 V or less	
HO2 sensor heater power supply		Battery voltage	
voltage		ballery vollage	
HO2 sensor heater resistance	23 °C (73.4 °F)	11.5 – 17.5 Ω	
CKP sensor peak voltage	When cranking	1 V or more	
CKP sensor resistance	25 °C (77 °F)	156 – 234 Ω	_
TO sensor power supply voltage		4.5 – 5.5 V	—
TO concer output voltage	Normal	0.4 – 1.4 V	
TO sensor output voltage	Leaning 65°	3.7 – 4.4 V	7 —
TO sensor resistance		16500 – 22300 Ω	—
ECM power supply voltage		Battery voltage	—

#### **Engine Mechanical**

Item	Specifica		Standard	Limit
	Without EVAF		28K0	_
	system and PA			
Throttle body I.D. No.	With EVAP cont		28K1	—
	With EVAP cont and PAIR s		28K2	_
Throttle body bore size			39 mm (1.5 in)	—
Throttle cable play			2.0 – 4.0 mm (0.079 – 0.157 in)	—
Idle speed	When engine	warmed	1300 ± 100 r/min	_
Fast idle speed			1500 – 2000 r/min	—
			1300 – 1700 kPa	1100 kPa
Compression pressure			(13.3 – 17.3 kgf/cm², 188 – 246 psi)	(11.2 kgf/cm <sup>2</sup> , 159 psi)
				200 kPa
Compression pressure difference			-	(2.0 kgf/cm <sup>2</sup> , 29.0 psi)
			35.48 – 35.53 mm	35.18 mm
	Intake	;	(1.397 - 1.398  in)	(1.385 in)
Cam height			35.68 – 35.73 mm	35.38 mm
	Exhau	st	(1.405 – 1.406 in)	(1.393 in)
			0.027 – 0.069 mm	0.150 mm
	Intake	)	(0.0011 - 0.0027  in)	(0.0059 in)
amshaft journal oil clearance			0.027 - 0.069  mm	0.150 mm
	Exhaus	st	(0.0011 - 0.0027  in)	(0.0059 in)
			22.007 – 22.028 mm	
	Intake		(0.8665 - 0.8672  in)	
Camshaft journal holder I.D.			22.007 – 22.028 mm	
	Exhaus	st	(0.8665 - 0.8672  in)	
			21.959 – 21.980 mm	
	Intake		(0.8646 - 0.8653  in)	
Camshaft journal O.D.			21.959 – 21.980 mm	
	Exhau	st	(0.8646 – 0.8653 in)	0.40
Camshaft runout	Intake & Ex		—	0.10 mm (0.004 in)
Cam chain pin	At arrow	"3"	16th pin	—
		Intake	0.10 – 0.20 mm	
Valve clearance	When engine		(0.0040 – 0.0078 in)	
	cold	Exhaust	0.20 – 0.30 mm	
			(0.0079 – 0.0118 in)	
Valve diameter	Intake		31 mm (1.2 in)	
	Exhau	St	25.5 mm (1.00 in)	0.05
Valve stem runout	Intake & Ex	chaust		0.05 mm (0.0019 in)
Valve head radial runout	Intake & Ex	chaust	_	0.03 mm (0.0011 in)
Valve head thickness	Intake		_	0.5 mm (0.02 in)
VAIVE HEAU UNUNIESS	Exhau	st	_	0.5 mm (0.02 in)
Valve stem deflection	Intake & Ex	chaust	_	0.35 mm (0.013 in)
Velve stem O.D.	Intake	9	4.475 – 4.490 mm (0.1762 – 0.1767 in)	_
Valve stem O.D.	Exhaus	st	4.455 – 4.470 mm (0.1754 – 0.1759 in)	_



ltem	Specifica	tion	Standard	Limit
	Intake		0.9 – 1.1 mm (0.036 – 0.043 in)	_
Valve seat width			0.9 – 1.1 mm	
	Exhaus	St	(0.036 – 0.043 in)	—
	Intake		4.500 – 4.512 mm	_
Valve guide I.D.			(0.1772 – 0.1776 in)	
C C	Exhaus	st	4.500 – 4.512 mm (0.1772 – 0.1776 in)	_
			0.010 - 0.037  mm	
	Intake		(0.0004 - 0.0014  in)	—
Valve guide to valve stem clearance			0.030 – 0.057 mm	
	Exhaus	51	(0.0012 – 0.0022 in)	_
	Intake	1		37.1 mm
/alve spring free length				(1.46 in)
1 0 0	Exhaus	st	_	37.1 mm
	When		127 – 147 N	(1.46 in)
	compressed to	Intake	(13.0 – 15.0 kgf, 28.6 – 33.0 lbf)	—
Valve spring pre-load	33.40 mm	<b>-</b>	127 – 147 N	
	(1.315 in)	Exhaust	(13.0 – 15.0 kgf, 28.6 – 33.0 lbf)	—
Cylinder head distortion				0.05 mm
				(0.0019 in)
Cylinder distortion				0.05 mm
• • • • • • • • • • • • • • • • • • • •			91.000 91.015	(0.0019 in)
Cylinder bore			81.000 – 81.015 mm (3.1890 – 3.1895 in)	No nicks or scratches
-	Measure at 20	mm (0 70	(3.1890 – 3.1895 ln) 80.976 – 81.011 mm	80.880 mm
Piston diameter	in) from the sl		(3.1880 – 3.1894 in)	(3.1843 in)
<b>-</b>			0.025 – 0.035 mm	0.120 mm
Piston to cylinder clearance			(0.0010 – 0.0013 in)	(0.0047 in)
	1st			0.180 mm
Piston ring to groove clearance	151			(0.0070 in)
	2nd		_	0.150 mm
			0.83 – 0.85 mm	(0.0059 in)
	1st		(0.0327 – 0.0334 in)	_
			1.30 – 1.32 mm	
			(0.0512 – 0.0519 in)	_
Piston ring groove width	2nd		1.01 – 1.03 mm	
	2110		(0.0398 – 0.0405 in)	—
	Oil		2.01 – 2.03 mm	]
			(0.0792 – 0.0799 in)	
			0.76 – 0.81 mm (0.030 – 0.031 in)	_
	1st		1.08 – 1.10 mm	
Piston ring thickness			(0.0426 – 0.0433 in)	—
			0.97 – 0.99 mm	
	2nd		(0.0382 – 0.0389 in)	
	1st		Approx. 6.5 mm (0.26 in)	5.2 mm
Piston ring free end gap				(0.21 in)
	2nd		Approx. 9 mm (0.4 in)	7.2 mm
			0.06 – 0.18 mm	(0.29 in) 0.50 mm
	1st		(0.0024 – 0.0070 in)	(0.019 in)
Piston ring end gap	0		0.06 – 0.18 mm	0.50 mm
Piston ring end gap	2nd		(0.0024 – 0.0070 in)	(0.019 in)

Item	Specification	Standard	Limit
Piston pin horo LD		20.002 – 20.008 mm	20.030 mm
Piston pin bore I.D.		(0.7875 – 0.7877 in)	(0.7885 in)
Piston pin O.D.		19.995 – 20.000 mm	19.980 mm
		(0.7872 – 0.7874 in)	(0.7867 in)
Conrod small end I.D.		20.015 – 20.023 mm	20.040 mm
		(0.7880 – 0.7883 in)	(0.7889 in)
Conrod big end side clearance		0.170 – 0.320 mm	0.5 mm
		(0.0067 – 0.0125 in)	(0.019 in)
Conrod big end width		20.95 – 21.00 mm	
		(0.8248 – 0.8267 in)	
Conrod big end I.D.		41.000 – 41.016 mm	
		(1.6142 – 1.6148 in)	
Conrod big end oil clearance		0.032 – 0.056 mm	0.080 mm
		(0.0013 – 0.0022 in)	(0.0031 in)
Crook pip width		42.17 – 42.22 mm	
Crank pin width		(1.661 – 1.662 in)	
Crank pin O.D.		37.976 – 38.000 mm	
		(1.4952 – 1.4960 in)	
Crank pin bearing thickness		1.480 – 1.496 mm	
Clark pin bearing trickness		(0.0583 – 0.0588 in)	
Crankshaft journal O.D.		41.985 – 42.000 mm	
Clarkshalt journal O.D.		(1.6530 – 1.6535 in)	
Crankshaft journal oil clearance		0.004 – 0.023 mm	0.080 mm
		(0.0002 – 0.0009 in)	(0.0031 in)
Crankcase journal I.D.		46.000 – 46.018 mm	
Clarkcase journal I.D.		(1.8111 – 1.8117 in)	
Crankages journal bearing thickness		1.999 – 2.008 mm	
Crankcase journal bearing thickness		(0.0787 – 0.0790 in)	
Cronkshoft journal holder width	Dight side	19.8 – 19.9 mm	
Crankshaft journal holder width	Right side	(0.780 – 0.783 in)	
Cropkshoft journal width	<b>Diabt side</b>	20.00 – 20.05 mm	
Crankshaft journal width	Right side	(0.7874 – 0.7893 in)	
Crankshaft runout			0.05 mm
			(0.0019 in)

#### **Engine Lubrication System**

Item	Specification	Standard	Limit
Oil pressure	At 60 °C (140 °F),	200 – 600 kPa	
	3000 r/min	(2.0 – 6.1 kgf/cm <sup>2</sup> , 29.0 – 87.0 psi)	
	Oil change	2400 ml (2.5 US qt, 2.1 lmp qt)	
Necessary amount of engine oil	Oil and filter change	2600 ml (2.7 US qt, 2.3 lmp qt)	—
	Engine overhaul	3000 ml (3.2 US qt, 2.6 Imp qt)	



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#### **Cooling System**

Item	Specification	Standard	Limit
	Engine side	Approx. 1700 ml	
Engine coolant		(1.80 US qt, 1.50 Imp qt)	
	Reserve 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/cm <sup>2</sup> , 13.5 – 17.8 psi)	
Cooling fan relay power supply		Battery voltage	_
voltage		, ,	
	$OFF \to ON$	Approx. 105 °C	
Cooling fan operating temperature		(221 °F)	_
	$ON \rightarrow OFF$	Approx. 99 °C	
		(210 °F)	
Thermostat valve opening		80.5 – 83.5 °C	
temperature		(176.9 – 182.3 °F)	
Thermostat valve lift	At 95 °C (203 °F)	8.0 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	_
	Per 10 seconds	166 ml	
FP discharge amount	Fei To seconds	(5.61 US oz, 5.84 Imp oz) or more	—
Fuel pressure		289 – 299 kPa	
Fuel pressure		(2.9 – 3.0 kgf/cm <sup>2</sup> , 41.9 – 43.3 psi)	—

# **Ignition System**

Item	Specification	Standard	Limit
Firing order		1.2	
Spork plug	Туре	NGK MR8E-9	
Spark plug	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		150 V or more	
Ignition coil resistance	Primary	1.45 – 1.96 Ω	
	Secondary	31730 – 35870 Ω	_
Immobilizer antenna power supply voltage (if equipped)		Battery voltage	_

#### Starting System

ltem	Specification	Standard	Limit
Starter motor brush length		12 mm (0.47 in)	6.5 mm (0.26 in)
Starter relay resistance		3 – 6 Ω	_
	ON (side-stand retracted)	0.4 – 0.6 V	
Side-stand switch voltage	OFF (side-stand on the ground)	1.4 V or more	_



### **Charging System**

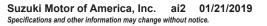
ltem	Specifi	cation	Standard	Limit
Battery leakage current			2 mA or less	_
Regulated voltage	Charging output	At 5000 r/ min	14 – 15 V	_
Generator coil resistance			0.19 – 0.23 Ω	—
Generator no-load voltage	When engine cold	At 5000 r/ min	60 V (AC) or more	_
Reaching time	Standard	charging	1.2 A for 5 to 10 hours	
	Fast ch	arging	5 A for 1 hour	7 <b>–</b>
Generator Max. output	At 5000	0 r/min	Approx. 390 W	_
	Type des	signation	FTX12-BS	
Battery	Сара	acity	12 V 36.0 kC (10 Ah)/10 HR	<b>—</b>

#### **Front Suspension**

Item	Specification	Standard	Limit
Front fork inner tube O.D.		43 mm (1.7 in)	
Front fork oil level	Without spring, inner tube fully compressed	105 mm (4.13 in)	—
Front fork spring free length		466.2 mm (18.35 in)	456 mm (18.0 in)
Front fork oil capacity	Each leg	568 ml (19.21 US oz, 19.99 Imp oz)	_

#### **Rear Suspension**

Item	Specification	Standard	Limit
Rear shock absorber spring adjuster		2nd position from softest end	—
Rear shock absorber damping force adjuster	Rebound side	2 turns counterclockwise from stiffest position	_
Swingarm pivot shaft runout		_	0.3 mm (0.011 in)



#### Wheels and Tires

ltem	Specif	ication	Standard	Limit
	Front	Axial & Radial	_	0.5 mm (0.019 in)
Wheel rim runout	Rear	Axial	_	0.5 mm (0.019 in)
	Real	Radial	_	1.0 mm (0.039 in)
Front wheel hub left end surface to rim distance			21.95 – 22.95 mm (0.8642 – 0.9035 in)	—
Rear wheel hub right end surface to rim distance			23.9 – 24.9 mm (0.941 – 0.980 in)	_
Wheel axle runout	Front & Rear		_	0.25 mm (0.010 in)
Tire size	Front Rear		110/80R19M/C 59V 150/70R17M/C 69V	
Tire type	Front		BRIDGESTONE/BATTLAX ADVENTURE A40F F BRIDGESTONE/BATTLAX	_
			ADVENTURE A40R F	
Tire tread depth	Recommend	Front	_	1.6 mm (0.063 in)
	depth	Rear	_	2.0 mm (0.079 in)
	Solo riding	Front	225 kPa (2.25 kgf/cm², 33 psi)	
Cold inflation tire pressure		Rear	250 kPa (2.50 kgf/cm², 36 psi)	
	Dual riding	Front Rear	225 kPa (2.25 kgf/cm², 33 psi) 290 kPa (2.90 kgf/cm², 42 psi)	—
Wheel rim size		ont ear	19 M/C × MT 2.50 17 M/C × MT 4.00	

### Drive Chain / Drive Train / Drive Shaft

Item	Specification	Standard	Limit
Drive chain	Туре	RK/525SMOZ8	—
	Links	118 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)	
Joint plate distance specification		18.6 – 18.9 mm (0.733 – 0.744 in)	
Pin end diameter specification		5.45 – 5.85 mm (0.215 – 0.230 in)	



#### **Brake Control System and Diagnosis**

Item	Specification	Standard	Limit
Rear brake pedal height		19.5 – 20.5 mm (0.768 – 0.807 in)	—
Master cylinder bore / piston diameter-	Front	Approx. 14 mm (0.55 in)	
	Rear	Approx. 14 mm (0.55 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. 27 mm (1.1 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. 38.2 mm (1.50 in)	_

#### ABS

ltem	Item Specification Standard		Specification Standard		Limit
Wheel speed sensor – sensor rotor	Front	0.28 – 1.65 mm (0.0111 – 0.0649 in)	_		
clearance	Rear	0.28 – 1.45 mm (0.0111 – 0.0570 in)	_		

#### **Manual Transmission**

Item	Specification Standard		Limit
	No. 1	0.1 – 0.3 mm (0.004 – 0.011 in)	0.5 mm (0.019 in)
Gearshift fork to groove clearance	No. 2	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)
	No. 1	5.5 – 5.6 mm (0.217 – 0.220 in)	
Gearshift fork groove width	No. 2	5.5 – 5.6 mm (0.217 – 0.220 in)	—
	No. 3	5.5 – 5.6 mm (0.217 – 0.220 in)	
	No. 1	5.3 – 5.4 mm (0.209 – 0.212 in)	
Gearshift fork thickness	No. 2	5.3 – 5.4 mm (0.209 – 0.212 in)	—
	No. 3	5.3 – 5.4 mm (0.209 – 0.212 in)	
Gearshift lever height		20 – 30 mm (0.79 – 1.18 in)	—
GP switch power supply voltage		4.5 – 5.5 V	—
	1st	Approx. 1.3 V	
	Neutral	Approx. 5.0 V	
	2nd	Approx. 1.8 V	
GP switch voltage	3rd	Approx. 2.5 V	—
	4th	Approx. 3.2 V	
	5th	Approx. 4.1 V	
	6th	Approx. 4.6 V	



#### Clutch

ltem	Specification	Standard	Limit
Clutch cable play		10 – 15 mm (0.39 – 0.59 in)	—
Clutch release screw		1 turn counterclockwise	—
	No. 1	2.92 – 3.08 mm	2.62 mm
Drive plate thickness	110.1	(0.115 – 0.121 in)	(0.104 in)
	No. 2	2.92 – 3.08 mm	2.62 mm
	NO. 2	(0.115 – 0.121 in)	(0.104 in)
	No. 1	13.7 – 13.8 mm	13.2 mm
Drive plate claw width	NO. 1	(0.540 – 0.543 in)	(0.520 in)
	No. 2	13.7 – 13.8 mm	13.2 mm
	NO. 2	(0.540 – 0.543 in)	(0.520 in)
Driven plate distortion			0.10 mm
		—	(0.0039 in)
Clutch spring free length		60.6 mm (2.39 in)	57.6 mm
		00.0 mm (2.39 m)	(2.27 in)

#### Steering / Handlebar

Item	Specification	Standard	Limit
Stearing tension initial force		2 – 5 N	
Steering tension initial force		(0.20 – 0.51 kgf, 0.45 – 1.12 lbf)	—

#### Wiring Systems

Item	Specif	ication	Standard	Limit
	Headlight	HI	15 A	—
	neaulight	LO	15 A	—
	Igni	tion	10 A	—
	Sig	nal	15 A	—
	Fa	an	15 A	—
Fuse size	Fu	ıel	10 A	_
	Ma	ain	30 A	_
	P-so	urce	3 A	—
	ABS	motor	25 A	—
	ABS	valve	15 A	—

### Lighting Systems

ltem	Specification	Standard	Limit
Headlight	HI	65 W	—
	LO	55 W	—
Position light		12 V 5 W	—
Brake light/Taillight		LED	—
Turn signal light		12 V 21 W × 4	—
License plate light		12 V 5 W	—

#### **Combination Meter / Fuel Meter / Horn**

Item	Specification	Standard	Limit
	–20 °C (–4 °F)	13779 – 19083 Ω	_
	–10 °C (14 °F)	8100 – 10609 Ω	_
	0 °C (32 °F)	4928 – 6125 Ω	_
Ambient air temperature sensor	10 °C (50 °F)	3089 – 3656 Ω	_
resistance	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	—
Engine coolant temperature indicator		LED	
light/Oil pressure indicator light			
MIL		LED	_
ABS indicator light		LED	_
Freeze indicator light		LED	—
TC indicator light		LED	-

GILLIK

# **Tightening Torque List**

#### **Emission Control Devices**

Eastoning part	Tightening torque		
Fastening part	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	0.71	5.20

#### **Engine Electrical Devices**

Eactoning part	Tightening torque		
Fastening part	N∙m	kgf-m	lbf-ft
IAT sensor screw	1.3	0.13	0.95
ECT sensor	18	1.8	13.5
TP sensor mounting screw	3.5	0.36	2.60
HO2 sensor	25	2.5	18.5
STP sensor mounting screw	3.5	0.36	2.60

#### **Engine Mechanical**

Eastoning part	Tightening torque			
Fastening part	N∙m	kgf-m	lbf-ft	
Air cleaner outlet tube clamp screw	1.5	0.15	1.10	
Throttle cable lock-nut	4.5	0.46	3.35	
EVAP system purge control solenoid valve bracket screw	5.0	0.51	3.70	
EVAP system purge control solenoid valve nut	7.0	0.71	5.20	
Intake pipe screw	8.4	0.86	6.20	
Cylinder head cover bolt	14	1.4	10.5	
Cylinder head bolt (M10)	$25 \rightarrow 42 \text{ N} \cdot \text{m} (2.5)$	→ 4.3 kgf-m, 18.5	$\rightarrow$ 31.0 lbf-ft)	
Cylinder head bolt (M6) (L70)	10	1.0	7.5	
Cylinder head bolt (M6) (L40)	10	1.0	7.5	
Cylinder nut	10	1.0	7.5	
Camshaft journal holder bolt	10	1.0	7.5	
Cam chain tension adjuster bolt	10	1.0	7.5	
Cam chain tension adjuster plug	23	2.3	17.0	
Crankshaft hole plug	11	1.1	8.5	
TDC plug	23	2.3	17.0	
Engine mounting bracket bolt	35	3.6	26.0	
Engine mounting thrust adjuster	12	1.2	9.0	
Engine mounting thrust adjuster lock-nut	45	4.6	33.5	
Engine mounting bolt	55	5.6	40.5	
Engine mounting bolt	25	2.5	18.5	
Engine mounting nut	93	9.5	69.0	
Engine mounting nut	55	5.6	40.5	
Connector hose union bolt	10	1.0	7.5	
Oil gallery plug (M6)	10	1.0	7.5	
Cam chain tensioner bolt	10	1.0	7.5	
Crankcase bolt (M8) (L80)	26	2.7	19.5	
Crankcase bolt (M8) (L55)	26	2.7	19.5	
Crankcase bolt (M6)	11	1.1	8.5	
Primary drive gear bolt	70	7.1	52.0	
Special tool bolt	23	2.3	17.0	
Oil gallery plug (M8)	18	1.8	13.5	
Oil gallery plug (M12)	21	2.1	15.5	
Drain plug	21	2.1	15.5	
Oil gallery plug (M16)	35	3.6	26.0	
Conrod cap bolt	21 N·m (2.1 kgf-m	, 15.5 lbf-ft) $\rightarrow$ turn	clockwise 90°	



#### **Engine Lubrication System**

Fastening part		<b>Tightening torque</b>	;
Fastening part	N∙m	kgf-m	lbf-ft
Oil gallery plug (M12)	21	2.1	15.5
Oil drain plug	21	2.1	15.5
Oil filter	20	2.0	15.0
Oil pressure regulator	28	2.9	21.0
Oil cooler union bolt	70	7.1	52.0
Oil pressure switch	13	1.3	9.5
Oil gallery plug (M8)	18	1.8	13.5
Oil gallery plug (M6)	10	1.0	7.5
Driveshaft oil seal retainer bolt	10	1.0	7.5
Piston cooling jet bolt	10	1.0	7.5
Oil pump mounting bolt	10	1.0	7.5
Oil separator screw	10	1.0	7.5
Transmission oil guide retainer screw	8.4	0.86	6.20

#### **Engine Cooling System**

Fastening part		Tightening torque		
rastening part	N∙m	kgf-m	lbf-ft	
Water drain bolt	13	1.3	9.5	
Radiator under rubber bracket bolt	10	1.0	7.5	
Cooling fan assembly mounting bolt	4.9	0.50	3.65	
Radiator mounting bolt	10	1.0	7.5	
Radiator reservoir tank mounting bolt	10	1.0	7.5	
Radiator reservoir tank mounting bracket bolt	5.5	0.56	3.70	
Thermostat connector cap bolt	10	1.0	7.5	
Water pump case screw	4.5	0.46	3.35	

#### **Fuel System**

Fastening part		Tightening torque		
	N∙m	kgf-m	lbf-ft	
Fuel tank cap bolt	3.0	0.31	2.25	
Fuel tank cover bracket bolt	10	1.0	7.5	
Fuel tank front mounting bolt	10	1.0	7.5	
Fuel tank rear mounting bolt	23	2.3	17.0	
Fuel pump mounting bolt	10	1.0	7.5	
Fuel delivery pipe mounting screw	3.5	0.36	2.60	

#### **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 mounting bolt	10	1.0	7.5
Starter motor lead wire mounting nut	6.0	0.61	4.45
Starter motor set bolt	5.0	0.51	3.70
Starter motor lead wire and battery (+) lead wire mounting bolt	4.4	0.45	3.25
Starter clutch bolt	25	2.5	18.5



#### **Charging System**

Fastening part	Tightening torque		
	N∙m	kgf-m	lbf-ft
Generator rotor bolt	140	14.3	103.5
Generator cover bolt	10	1.0	7.5
Clutch release arm bolt	9.0	0.92	6.65

#### **Exhaust System**

Fastening part		Tightening torque		
	N⋅m	kgf-m	lbf-ft	
Exhaust pipe bolt #1 and #2	23	2.3	17.0	
Muffler connector bolt	18	1.9	14.0	
Muffler support bolt	30	3.1	22.5	
Exhaust pipe connector bolt	18	1.9	14.0	
Exhaust support bolt	23	2.3	17.0	
Exhaust pipe bolt #2	23	2.3	17.0	
HO2 sensor bolt	25	2.5	18.5	
Exhaust pipe bolt	5.5	0.56	4.05	
Exhaust pipe bolt #1	23	2.3	17.0	
Muffler sport bolt	30	3.1	22.5	

#### 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	21	2.1	15.5
Front fork upper clamp bolt	23	2.3	17.0
Cylinder bolt	20	2.0	15.0

#### **Rear Suspension**

Fastening part	Tightening torque		
	N∙m	kgf-m	lbf-ft
Rear shock absorber lower mounting nut	50	5.1	37.0
Cushion rod mounting nut	78	8.0	57.5
Rear shock absorber upper mounting nut	50	5.1	37.0
Pre-load adjuster bolt	23	2.3	17.0
Cushion lever (front) mounting nut	78	8.0	57.5
Cushion lever (center) mounting nut	78	8.0	57.5
Swingarm pivot shaft	15	1.5	11.0
Swingarm pivot nut	100	10.2	74.0
Swingarm pivot shaft lock-nut	90	9.2	66.5

#### Wheels and Tires

Fastening part	Tightening torque		
	N∙m	kgf-m	lbf-ft
Front axle	65	6.6	48.0
Front axle pinch bolt	23	2.3	17.0
Spoke nipple (front wheel)	7.5	0.76	5.55
Spoke nipple (rear wheel)	7.0	0.71	5.20



#### Drive Chain / Drive Train / Drive Shaft

Fastening part	Tightening torque		
	N∙m	kgf-m	lbf-ft
Rear axle nut	100	10.2	74.0
Engine sprocket nut	145	14.8	107.0
Engine sprocket cover bolt	5.5	0.56	4.05
Rear sprocket nut	60	6.1	44.5

#### **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	13.5	
Front brake air bleeder valve	7.5	0.76	5.55	
Front reservoir cap screw	1.5	0.15	1.10	
Rear brake air bleeder valve	6.0	0.61	4.45	
Rear reservoir cap screw	1.2	0.12	0.90	
Front brake master cylinder holder bolt	10	1.0	7.5	
Brake hose union bolt	23	2.3	17.0	
Brake light switch screw	1.2	0.12	0.90	
Brake lever pivot bolt	5.9	0.60	4.35	
Brake lever pivot bolt lock-nut	5.9	0.60	4.35	
Rear brake master cylinder mounting bolt	10	1.0	7.5	
Front footrest bracket bolt	26	2.7	19.5	

#### **Front Brakes**

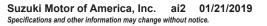
Fastening part		Tightening torque		
	N∙m	kgf-m	lbf-ft	
Front brake caliper mounting bolt	39	4.0	29.0	
Brake hose union bolt	23	2.3	17.0	
Front brake air bleeder valve	7.5	0.76	5.55	
Front brake disc bolt	23	2.3	17.0	

#### **Rear Brakes**

Fastening part		Tightening torque		
	N∙m	kgf-m	lbf-ft	
Rear brake caliper mounting bolt	22	2.2	16.5	
Rear brake pad mounting pin	17	1.7	12.5	
Rear brake pad pin plug	2.5	0.25	1.85	
Brake hose union bolt	23	2.3	17.0	
Rear brake air bleeder valve	6.0	0.61	4.45	
Rear brake caliper sliding pin	27	2.8	20.0	
Rear brake disc bolt	23	2.3	17.0	

#### ABS

Fastening part	Tightening torque		
	N∙m	kgf-m	lbf-ft
Front wheel speed sensor rotor bolt	6.3	0.64	4.65
Rear wheel speed sensor rotor bolt	6.3	0.64	4.65
Brake pipe flare nut	16	1.6	12.0



#### **Manual Transmission**

Fastening part	Tightening torque		
	N∙m	kgf-m	lbf-ft
Driveshaft oil seal retainer bolt	10	1.0	7.5
GP switch mounting bolt	6.0	0.61	4.45
Gearshift arm stopper	19	1.9	14.0
Gearshift cam stopper bolt	10	1.0	7.5
Gearshift cam plate bolt	13	1.3	9.5

#### Clutch

Eastoning part		Tightening torque		
Fastening part	N∙m	kgf-m	lbf-ft	
Clutch release adjuster nut	5.0	0.51	3.70	
Clutch lever pivot bolt	6.5	0.66	4.80	
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 sleeve hub nut	50	5.1	37.0	
Clutch spring bolt	10	1.0	7.5	
Clutch cover bolt	10	1.0	7.5	
Primary drive gear bolt	70	7.1	52.0	

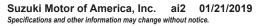
#### Steering / Handlebar

Fastening part		Tightening torque		
	N⋅m	kgf-m	lbf-ft	
Handlebar clamp bolt	23	2.3	17.0	
Handlebar balancer screw	5.5	0.56	4.05	
Steering stem lock-nut	80	8.2	59.0	
Steering stem head nut	90	9.2	66.5	
Front fork upper clamp bolt	23	2.3	17.0	
Steering stem nut	45 N·m (4.6 kgf-m	i, 33.5 lbf-ft) $\rightarrow$ turn	counterclockwise	
	1/4 – 1/2			

#### **Lighting Systems**

Fastening part	Tightening torque		
Fastening part	N⋅m	kgf-m	lbf-ft
Headlight screw	2.0	0.20	1.50
Rear combination light screw	2.5	0.25	1.85
License plate light nut	4.8	0.49	3.55
Front side reflex reflector bolt	10	1.0	7.5
Front side reflex reflector	1.8	0.18	1.35
Rear side reflex reflector nut	1.8	0.18	1.35
License plate bracket nut	5.0	0.51	3.70
Front turn signal light nut	1.3	0.13	0.95
Rear turn signal light nut	1.8	0.18	1.35

#### **Exterior Parts**



# **Special Tools and Equipment**

### Fuel / Oil / Fluid / Coolant Recommendation

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.

Use unleaded gasoline with an octane rating of 87 AKI or higher.

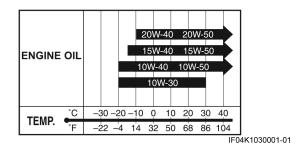
Unleaded gasoline containing up to 10% ethanol by volume may be used.

#### Engine Oil / Final Gear Box Oil

Use engine oils which meet the following requirements.

	Engine oil
API service	SG. SH. SJ or SL
classification	36, 3F, 3J 0I 3L
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.



#### For U.S.A.

Suzuki recommends the use of ECSTAR motorcycle engine oil or SUZUKI PERFORMANCE 4 MOTOR OIL.

Suzuki does not recommend the use of engine oil which have an "ENERGY CONSERVING" indication in the API service symbol for any of its motorcycles / ATVs. It can affect the engine life and the clutch performance.



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CT VA IX

#### **Brake Fluid**

Specification and classification: DOT 4

### A 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))

#### 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.)

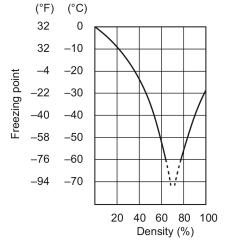
The 50:50 mixture of distilled water and ethylene glycol anti-freeze will provide the optimum corrosion protection and excellent heat protection, and will protect the cooling system from freezing at temperatures above -31 °C (-24 °F).

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.

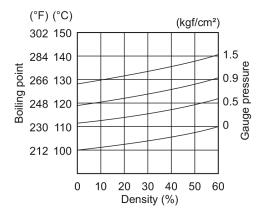
#### Anti-freeze Proportioning Chart

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





#### Fig.2: Engine coolant density-boiling point curve



#### 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. For engine coolant mixture information, refer to "Engine Coolant" (Page 0C-14).

#### 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.

#### 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 antifreeze/engine coolant. If this is not available, use an equivalent which is compatible with an aluminum radiator.

Front Fork Oil Use SUZUKI FORK OIL SS-8.

Fork oil 99000–99001–SA8 (SUZUKI FORK OIL SS-8)

