

Features & Specifications

2016 V-Strom 1000 ABS



DL1000AL6

YMD: Metallic Mystic Silver

Introduction

- The V-Strom 1000 ABS* is designed for unforgettable sport-adventure riding. It has a Suzuki fuel-injected, 90-degree V-twin engine tuned for incredible low-end and mid-range torque, so you can tap into thrilling acceleration in every gear. It is also equipped with traction control**, a key to its versatile capabilities. That performance is matched by a lightweight chassis and advanced suspension that provides remarkably crisp handling even on the tightest back roads.

Key Features

- 1037cc, fuel-injected, 90-degree, V-twin engine
- Suzuki's Traction Control System
- Anti-Lock Brake System (ABS)
- Tokico 4-piston monobloc front brake calipers with 310mm floating-mount dual discs

Engine Features

- The four-stroke, liquid-cooled, DOHC, 1037cc 90-degree V-twin engine is designed to deliver outstanding performance across the entire powerband. This broad capability is necessary to take on the road surfaces that riders encounter during long-distance tours, such as congested urban streets, stone-strewn roads, high-speed highways and twisting, winding roads.
- 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.
- The EFI system employs 10-hole injectors on each throttle body to improve fuel atomization for superior combustion efficiency and frugal fuel consumption.
- Twin throttle bodies with Suzuki Dual Throttle Valve (SDTV) system contribute to better throttle response and torque at the low-to-mid RPM range, while still producing peak performance.

- Advanced 32-bit ECM also operates the Automatic Idle Speed Control (ISC) which improves cold starting and stabilizes the engine idle.
- The 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 helps enhance torque, response and acceleration, especially at low-to-mid rpm range.
- The Suzuki Pulsed-secondary AIR-injection (PAIR) system injects fresh air into the exhaust ports while the exhaust is fitted with a large-volume catalyzer that enables the bike to satisfy a variety of US and international emission standards without sacrificing any 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 last longer than convention 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 to make the lever easier to pull.
- Suzuki's debuted its first motorcycle traction control system on the V-Strom 1000 ABS, 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.
- 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.

Chassis Features

- The advanced chassis is the foundation of a compact, lightweight adventure-ready package that provides comfort and enjoyment to a variety of riders.
- Seat and fuel tank joint creates a slim cockpit thanks to the narrow V-twin engine design, enabling the rider legs to reach to the ground easier than other models in the class.
- The aluminum, twin-spar frame was designed with the latest FEM analysis technology. It is stiffer and 13% lighter than that of the previous generation V-Strom.
- 43mm KYB inverted front forks provide a sporty yet plush ride in diverse conditions. The front forks have fully adjustable spring preload plus compression and rebound damping force.
- The single-shock, link-style rear suspension features rebound damping force adjustment plus remote, hand-operated spring pre-load adjuster.
- Tokico mono-block front brake calipers are mated with 310mm floating-mount dual discs for strong braking performance.
- Standard anti-lock brake system (ABS) monitors the wheel speeds 50 times per wheel rotation to match stopping power to the available traction.
- Lightweight 10-spoke cast-aluminum wheels (manufactured for Suzuki by Enkei) combine nimble handling with sporty looks.
- A height- and angle-adjustable windscreen was carefully shaped through extensive wind-tunnel testing to reduce wind noise and rider fatigue. The angle is easily adjusted by hand.
- The 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.
- The rider can switch between traction control modes and LCD readings using the left handlebar switch.
- 12V DC outlet is conveniently located below the instrument panel. The SAE socket is ideal for powering a GPS unit or charging mobile devices.
- To emphasize Suzuki's heritage, the bike's front fairing and beak reflects design cues from the 1988 DR750S, Suzuki's first adventure touring motorcycle.
- The bright, halogen 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 greater durability than bulbs.
- The seat is shaped for comfort and to allow riders to easily put their feet on the ground. The side walls of the seat have a high-grip texture for strong hold.

Additional Features

- A variety of Genuine Suzuki Accessories for V-Strom owners are available including 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 side cases and have the convenience of one-key operation.
- 12-month limited warranty
- 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. Traction control cannot prevent the front wheel from losing grip.*

Specifications DL1000AL6

E-03: USA, E-33: California

DIMENSIONS AND CURB MASS

Overall length	2285 mm (90.0 in)
Overall width	865 mm (34.1 in)
Overall height	1410 mm (55.5 in)
Wheelbase	1555 mm (61.2 in)
Ground clearance	165 mm (6.5 in)
Seat height	850 mm (33.5 in)
Curb mass	228 kg (503 lbs)

ENGINE

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
Air cleaner	Paper element
Starter system	Electric
Lubrication system	Wet sump
Idle speed	1100 - 1300 r/min

DRIVE TRAIN

Clutch	Wet multi-plate type
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

CHASSIS

Front suspension	Inverted 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)
Caster	25°30'
Trail	109 mm (4.29 in)
Steering angle	36° (right & left)
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

Specifications DL1000AL6

E-03: USA, E-33: California

ELECTRICAL

Ignition type	Electronic ignition (Transistorized)
Ignition timing	3° B.T.D.C. at 1150 r/min
Spark plug	NGK LMAR8BI-9
Battery	12V 43.2 kC (12 Ah)/10 HR
Generator	Three-phase A.C. generator
Main fuse	30A
Fuse	15/15/15/15/10/10/3A
Headlight	12V 65W (H9).....High beam 12V 55W (H7).....Low beam
Position/Parking light	12V 5W x 2
Brake/Tail light	LED
Turn signal light	12V 21W
License plate light	12V 5W
Combination meter light	LED
Neutral indicator light	LED
High beam indicator light	LED
Turn signal indicator light	LED
Oil pressure/Coolant temperature indicator light	LED
FI/SD indicator light	LED
Fuel level indicator light	LED
Engine RPM indicator light	LED

CAPACITIES

Fuel tank	20.0 L (5.3/4.4 US/Imp gal)
Engine oil, oil change	2700 ml (2.9/2.4 US/Imp qt)
with filter change	3100 ml (3.5/2.9 US/Imp qt)
overhaul	3500 ml (3.7/3.1 US/Imp qt)
Coolant	2.13 L (3.0/2.5 US/Imp qt)

Service Data DL1000AL6

E-03: USA, E-33: California

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	Approx. 1.1 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		E33
EVAP system purge control solenoid valve resistance	20 °C (68 °F)	30 – 34 Ω	E33
Cooling fan relay power supply voltage	Battery voltage		—
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		—
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	E33

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		—
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.	31J1		For Thailand, California (U.S.A) and China
	31J0		For others
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
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)

Item	Standard / Specification		Limit / Note
Piston ring groove width	1st	0.83 – 0.85 mm (0.0327 – 0.0335 in) 1.25 – 1.27 mm (0.0492 – 0.0500 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
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	FTX14-BS
	Capacity	12 V 43.2 kC (12 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 ratio	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		Approx. 14.0 mm (0.55 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	—
Combination meter light	LED	—	
Turn signal indicator light	LED	—	
High beam indicator light	LED	—	
Neutral position indicator light	LED	—	
ABS indicator light	LED	—	
Oil pressure/Engine coolant temp. indicator light	LED	—	
FI indicator light	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
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

Fastening part	Tightening torque		
	N·m	kgf·m	lbf·ft
Special tool bolt	23	2.3	17.0
Oil gallery plug (M8)	18	1.8	13.0
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
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

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	18	1.8	13.0
Pad mounting pin	16	1.6	11.5
Caliper mounting bolt	39	3.9	28.5
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

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	10	1.0	7.5
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

Fuel / Oil / Fluid Recommendation

Fuel

NOTICE

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

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.

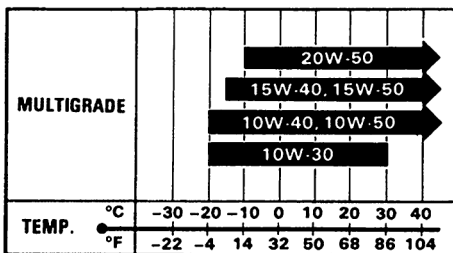
Unleaded gasoline containing up to 5% methanol by volume may be used if it contains appropriate co-solvents and corrosion inhibitors.

Engine Oil

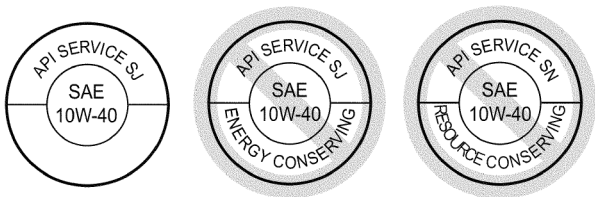
Use engine oils which meet the following requirements.

- 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.



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.



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

(SUZUKI LONG LIFE COOLANT (GREEN))

Coolant

(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.

Front Fork Oil

Use SUZUKI FORK OIL L-01.