

# Features & Specifications

## 2019 Hayabusa



**GSX1300RAL9**

*QEB: Metallic Oort Gray No. 3*

### Overview

The Suzuki Hayabusa is quite simply the Ultimate Sportbike. Twist the throttle on this iconic motorcycle and it reacts with awesome acceleration and crisp throttle response in every gear with an unbelievable top-end charge. Thanks to a lightweight and rigid twin-spar aluminum frame and state-of-the-art suspension, its performance is matched by equally impressive handling, providing exceptional control in tight corners, reassuring stability in sweeping turns, and a smooth ride on the highway. The sleek, aerodynamic bodywork functions as it appears, so the Hayabusa slips through the wind like a peregrine falcon.

### Key Features

- For 2019, riders can select either the Metallic Oort Gray paint scheme with a contrasting red Hayabusa symbol and wheels or Glass Sparkle Black paint with silver wheels and symbol.
- The powerful 1340cc, four-cylinder, DOHC engine employs Suzuki's advanced EFI with two 10-hole fuel injectors feeding each cylinder and dual ram air intakes in the nose of the aerodynamic fairing.
- Suzuki Drive Mode Selector (S-DMS) lets the rider tailor the Hayabusa's power delivery to match the riding conditions.
- Superbike-caliber, twin-spar aluminum frame, and fully adjustable KYB-supplied suspension delivers superlative handling.
- Fully floating 310mm dual front brake rotors are grasped by Brembo Monobloc brake calipers equipped with anti-lock brakes (ABS\*), delivering reliable stopping power.
- Instantly recognizable as a Hayabusa, the wind-cheating body was truly inspired by a peregrine falcon – the world's fastest animal.

### Engine Features

- Powerful 1340cc, in-line four-cylinder, fuel injected, liquid-cooled, DOHC engine delivers a broad wave of torque for effortless acceleration.
- Forged three-ring aluminum alloy slipper pistons provide superior strength, while PVD-coated rings reduce friction and improve cylinder sealing.
- The chrome nitride Physical Vapor Deposition (PVD) piston ring coating is harder and smoother than conventional chrome plating, reducing friction while improving sealing to the cylinder.



### **GSX1300RAL9**

*YVB: Glass Sparkle Black*

### **Engine Features (continued)**

- Suzuki Composite Electrochemical Material (SCEM) cylinder plating improves heat dissipation, durability, and ring seal.
- U-shaped cutouts in the cylinder-bore sides allow air pressure created by descending pistons to escape to adjacent cylinders to reduce internal pumping pressure and mechanical power losses.
- Lightweight titanium valves allow the use of light valve springs and high-lift camshafts while maintaining accurate valve control.
- Iridium spark plugs produce more complete combustion and last longer than conventional plugs.
- Curved radiator with a compact, dense-core design and two ECM-controlled electric fans keep the engine temperature stable.
- Suzuki Clutch Assist System (SCAS) serves as back-torque-limiting system for smooth downshifts and also contributes to a light clutch pull.
- Close-ratio, constant-mesh, six-speed transmission uses dedicated oil spray to the 4th, 5th, and 6th gears to reduce friction, wear, and mechanical noise during high-speed operation.
- Suzuki's advanced fuel injection system with tapered, 44mm double-barrel Suzuki Dual Throttle Valve (SDTV) induction to improve combustion efficiency and smooth throttle response.
- Two 12-hole fine-spray injectors on each throttle body improve fuel atomization for better combustion efficiency while reducing fuel consumption.
- Idle Speed Control (ISC) system improves cold starting and helps maintain a stable engine idle under a variety of conditions.
- Suzuki Pulsed Secondary Air Injection (PAIR) system ignites unburned hydrocarbons (HC) and reduces carbon monoxide (CO) emissions.
- Large-volume catalyzer in the twin-silencer exhaust permits high flow while further reducing HC, CO, and nitrogen oxide (NOx) emissions.
- Suzuki Drive Mode Selector (S-DMS) lets riders select engine power output to match preferences or riding conditions.

### **Chassis Features**

- Twin-spar aluminum-alloy frame is constructed with castings and extrusions to produce a balance of light weight and strength.
- Rear sub-frame made of rectangular steel tubing for ample weight carrying capacity.
- KYB inverted cartridge forks feature Diamond-Like Carbon (DLC) coating on the 43mm stanchion tubes to reduce friction and improve reaction to small road surface irregularities.



## Chassis Features (continued)

- The front forks and the single rear shock absorber both have fully adjustable spring preload, plus compression and rebound damping.
- Standard-equipment steering damper quells unwanted vibration and steering forces.
- Three-spoke cast aluminum alloy wheels shod with 120/70ZR17M/C (58W) front and 190/50ZR17M/C (73W) rear radial tires.
- Dual 310mm (12.2-inch) floating-brake rotors are mated with radial-mount Brembo Monobloc front brake calipers. The calipers are lighter and more rigid than conventional bolt-together calipers, delivering better feedback, and are fitted with larger pistons that increase initial bite for greater controllability. The hollow-type mounting bolts further reduce weight.
- The solo rear 260mm (10.2-inch) brake rotor is grabbed by a single-piston brake caliper.
- The standard equipment Anti-lock Brake System (ABS)\* unit features a lightweight, compact design. The ABS enhances brake performance by helping prevent, to a certain extent, wheel locking due to changes in road conditions or excessive braking by matching stopping power to available traction.
- Radical aerodynamic styling and smooth bodywork provides the Hayabusa its distinctive look, protects the rider from the wind, and improves fuel efficiency.
- Advanced aerodynamics offering superb wind protection both for normal and completely tucked-in seating positions.
- Integrated front turn signals form the outer edges of the functional ram air intake scoop.
- Vertically stacked headlight featuring a projector high beam and a halogen-bulb multi-reflector low beam.
- Unique tail section featuring streamlined bulges that integrate the rear turn signals.
- Bright, durable LED tail light, with clear inner lens and red outer lens.
- Four analog gauges including step-motor-driven tachometer and speedometer. Round LCD panel includes clock, gear position indicator, S-DMS map indicator, odometer, and dual trip meters. Engine rpm indicator is programmable to blink or stay on between 4,000 and 11,500 rpm.
- Silver metallic trim around the analog gauges and LCD panel match the styling of race-specification meters.

## Additional Features

- Stylized Suzuki “S” 3-D emblems on the fuel tank and the fork upper bracket denotes the quality, sophistication and performance legacy of the brand.
- Quality details abound with passenger foot-peg brackets, muffler hangers, rider foot-peg and control brackets that evoking the fine art of feudal Japanese armor, Yoroi-Kabuto.
- A variety of Genuine Suzuki Accessories for Hayabusa owners are available including a large selection of Suzuki logo apparel.
- 12-month limited warranty
- For more details, please visit [www.suzukicycles.com](http://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 ride carefully and do not overly rely on ABS.

# Specifications GSX1300RAL9

## E-03: USA, E-33: California

### DIMENSIONS AND CURB MASS

Overall length .....	2190 mm (86.2 in)
Overall width.....	735 mm (28.9 in)
Overall height .....	1165 mm (45.9 in)
Wheelbase .....	1480 mm (58.3 in)
Ground clearance .....	120 mm (4.7 in)
Seat height .....	805 mm (31.7 in)
Curb mass.....	266 kg (586 lbs)

### ENGINE

Type .....	4-stroke, Liquid-cooled, DOHC
Number of cylinders.....	4
Bore .....	81.0 mm (3.189 in)
Stroke.....	65.0 mm (2.559 in)
Displacement.....	1340 cm <sup>3</sup> (81.8 cu. in)
Compression ratio.....	12.5 : 1
Fuel system .....	Fuel injection
Air cleaner .....	Paper element
Starter system .....	Electric
Lubrication system.....	Wet sump
Idle speed.....	1150 ± 100 r/min

### DRIVE TRAIN

Clutch.....	Wet multi-plate type
Transmission .....	6-speed constant mesh
Gearshift pattern .....	1-down, 5-up
Primary reduction ratio.....	1.596 (83/52)
Gear ratios, Low .....	2.615 (34/13)
2nd.....	1.937 (31/16)
3rd.....	1.526 (29/19)
4th.....	1.285 (27/21)
5th.....	1.136 (25/22)
Top.....	1.043 (24/23)
Final reduction ratio .....	2.388 (43/18)
Drive chain .....	RK GB50GSV Z4, 114 links

### CHASSIS

Front suspension .....	Inverted telescopic, coil spring, oil damped
Rear suspension.....	Link type, coil spring, oil damped
Front suspension stroke.....	120 mm (4.7 in)
Rear wheel travel.....	140 mm (5.5 in)
Caster .....	23° 25'
Trail.....	93 mm (3.66 in)
Steering angle .....	30° (right & left)
Turning radius.....	3.3 m (10.8 ft)
Front brake.....	Disc brake, twin
Rear brake.....	Disc brake
Front tire.....	120/70ZR17M/C (58W), tubeless
Rear tire .....	190/50ZR17M/C (73W), tubeless



# Specifications GSX1300RAL9

## E-03: USA, E-33: California

### ELECTRICAL

Ignition type .....	Electronic ignition (Transistorized)
Ignition timing .....	5° B.T.D.C. at 1150 r/min
Spark plug .....	NGK CR9EIA-9 or DENSO IU27D
Battery .....	12V 36.0 kC (10Ah)/10 HR
Generator .....	Three-phase A.C. generator
Main fuse .....	30A
Fuse .....	30/15/15//15/10/10/10/10A
Headlight .....	12V 65W (H9).....High beam 12V 55W (H7).....Low beam
Position light .....	12V 5W × 2
Brake/Tail light .....	LED
Turn signal light .....	12V 21W
License plate light .....	12V 5W
Speedometer light .....	LED
Tachometer light .....	LED
Neutral indicator light .....	LED
High beam indicator light .....	LED
Turn signal indicator light .....	LED
Engine coolant temperature indicator light .....	LED
Oil pressure indicator light .....	LED
Fuel level indicator light .....	LED
FI indicator light .....	LED
Engine R.P.M. indicator light .....	LED
ABS indicator light .....	LED

### CAPACITIES

Fuel tank .....	20.0 L (5.3/4.4 US/Imp gal) .....	E-33
	21.0 L (5.5/4.6 US/Imp gal) .....	E-03
Engine oil, oil change .....	3100 ml (3.3/2.7 US/Imp qt)	
with filter change .....	3300 ml (3.5/2.9 US/Imp qt)	
overhaul .....	4000 ml (4.2/3.5 US/Imp qt)	
Coolant .....	3.0 L (3.1/2.6 US/Imp qt)	

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# Service Data GSX1300RAL9

## E-03: USA, E-33: California

### Valve + Guide

Unit: mm (in)

Item		Standard	Limit
Valve diam.	IN.	33 (1.30)	—
	EX.	27.5 (1.08)	—
Valve clearance (when cold)	IN.	0.08 – 0.18 (0.003 – 0.007)	—
	EX.	0.18 – 0.28 (0.007 – 0.011)	—
Valve guide to valve stem clearance	IN.	0.010 – 0.037 (0.0004 – 0.0015)	—
	EX.	0.030 – 0.057 (0.0012 – 0.0022)	—
Valve guide I.D.	IN. & EX.	5.000 – 5.012 (0.1969 – 0.1973)	—
Valve stem O.D.	IN.	4.975 – 4.990 (0.1959 – 0.1965)	—
	EX.	4.955 – 4.970 (0.1951 – 0.1957)	—
Valve stem deflection	IN. & EX.	—	0.25 (0.010)
Valve stem runout	IN. & EX.	—	0.05 (0.002)
Valve seat width	IN. & EX.	0.9 – 1.1 (0.035 – 0.043)	—
Valve head radial runout	IN. & EX.	—	0.03 (0.001)
Valve spring free length	IN. & EX.	—	42.3 (1.67)
Valve spring tension	IN. & EX.	Approx. 137 N (14.0 kgf, 30.8 lbs) at length 36.6 mm (1.44 in)	—

### Camshaft + Cylinder Head

Unit: mm (in)

Item		Standard	Limit
Cam height	IN.	36.98 – 37.02 (1.456 – 1.457)	36.68 (1.444)
	EX.	36.58 – 36.62 (1.440 – 1.442)	36.28 (1.428)
Camshaft journal oil clearance	IN. & EX.	0.032 – 0.066 (0.0013 – 0.0026)	0.150 (0.0059)
Camshaft journal holder I.D.	IN. & EX.	24.012 – 24.025 (0.9454 – 0.9459)	—
Camshaft journal O.D.	IN. & EX.	23.959 – 23.980 (0.9433 – 0.9441)	—
Camshaft runout		—	0.10 (0.004)
Cam chain pin (at arrow “3”)		15th pin	—
Cylinder head distortion		—	0.20 (0.008)

## Cylinder + Piston + Piston Ring

Unit: mm (in)

Item	Standard			Limit
Compression pressure	1 400 – 1 800 kPa (14 – 18 kgf/cm <sup>2</sup> , 199 – 256 psi)			1 000 kPa (10 kgf/cm <sup>2</sup> , 142 psi)
Compression pressure difference	—			200 kPa (2 kgf/cm <sup>2</sup> , 28 psi)
Piston-to-cylinder clearance	0.035 – 0.045 (0.0014 – 0.0018)			0.120 (0.0047)
Cylinder bore	81.000 – 81.015 (3.1890 – 3.1896)			No nicks or Scratches
Piston diam.	80.960 – 80.975 (3.1874 – 3.1880) Measure 15 mm (0.6 in) from the skirt end.			80.880 (3.1842)
Cylinder distortion	—			0.20 (0.008)
Piston ring free end gap	1st	—	Approx. 6.5 (0.26)	5.2 (0.20)
	2nd	2T	Approx. 9.0 (0.35)	7.2 (0.28)
Piston ring end gap	1st	—	0.06 – 0.18 (0.002 – 0.007)	0.50 (0.020)
	2nd	2T		
Piston ring-to-groove clearance	1st	—		0.180 (0.0071)
	2nd	—		0.150 (0.0059)
Piston ring groove width	1st	0.83 – 0.85 (0.0327 – 0.0335)		—
		1.30 – 1.32 (0.0512 – 0.0520)		
	2nd	1.01 – 1.03 (0.0398 – 0.0406)		—
Piston ring thickness	1st	0.76 – 0.81 (0.0299 – 0.0319)		—
		1.08 – 1.10 (0.0425 – 0.0433)		
	2nd	0.97 – 0.99 (0.0382 – 0.0390)		—
Piston pin bore	18.002 – 18.008 (0.7087 – 0.7090)			18.030 (0.7098)
Piston pin O.D.	17.996 – 18.000 (0.7085 – 0.7087)			17.980 (0.7079)

## Conrod + Crankshaft

Unit: mm (in)

Item	Standard			Limit
Conrod small end I.D.	18.010 – 18.018 (0.7091 – 0.7094)			18.040 (0.7102)
Conrod big end side clearance	0.10 – 0.20 (0.004 – 0.008)			0.3 (0.012)
Conrod big end width	20.95 – 21.00 (0.825 – 0.827)			—
Crank pin width	21.10 – 21.15 (0.831 – 0.833)			—
Conrod big end oil clearance	0.032 – 0.056 (0.0013 – 0.0022)			0.080 (0.0031)
Crank pin O.D.	37.976 – 38.000 (1.4951 – 1.4960)			—
Crankshaft journal oil clearance	0.010 – 0.028 (0.0004 – 0.0011)			0.080 (0.0031)
Crankshaft journal O.D.	39.982 – 40.000 (1.5741 – 1.5748)			—
Crankshaft thrust bearing thickness	Right side	2.425 – 2.450 (0.0955 – 0.0965)		—
	Left side	2.350 – 2.500 (0.0925 – 0.0984)		—
Crankshaft thrust clearance	0.055 – 0.110 (0.0022 – 0.0043)			—
Crankshaft runout	—			0.05 (0.002)

## Oil Pump

Item	Standard	Limit
Oil pressure (at 60 °C, 140 °F)	200 – 500 kPa (2.0 – 5.0 kgf/cm <sup>2</sup> , 28.4 – 71.1 psi) at 3 000 r/min	—

## Clutch

Unit: mm (in)

Item	Standard		Limit
Clutch drive plate thickness	No. 1	2.92 – 3.08 (0.115 – 0.121)	2.62 (0.103)
	No. 2 & 3	3.72 – 3.88 (0.146 – 0.153)	3.42 (0.135)
Clutch drive plate claw width	No. 1	13.85 – 13.96 (0.542 – 0.550)	13.05 (0.514)
	No. 2 & 3	13.90 – 14.00 (0.547 – 0.551)	13.10 (0.516)
Clutch driven plate distortion	—		0.10 (0.004)
Clutch spring free length	37.13 (1.462)		35.3 (1.39)
Clutch master cylinder bore	14.000 – 14.043 (0.5512 – 0.5529)		—
Clutch master cylinder piston diam.	13.957 – 13.984 (0.5495 – 0.5506)		—
Clutch release cylinder bore	33.600 – 33.662 (1.3228 – 1.3253)		—
Clutch release cylinder piston diam.	33.550 – 33.575 (1.3209 – 1.3218)		—
Clutch fluid type	Brake fluid DOT 4		—

## Drive Train

Unit: mm (in) Except ratio

Item	Standard		Limit
Primary reduction ratio	1.596 (83/52)		—
Final reduction ratio	2.388 (43/18)		—
Gear ratios	Low	2.615 (34/13)	—
	2nd	1.937 (31/16)	—
	3rd	1.526 (29/19)	—
	4th	1.285 (27/21)	—
	5th	1.136 (25/22)	—
	Top	1.043 (24/23)	—
Shift fork to groove clearance	0.1 – 0.3 (0.004 – 0.012)		0.5 (0.02)
Shift fork groove width	5.0 – 5.1 (0.197 – 0.201)		—
Shift fork thickness	4.8 – 4.9 (0.189 – 0.193)		—
Drive chain	Type	RK GB50GSVZ4	—
	Links	114 links	—
	20-pitch length	—	319.4 (12.57)
Drive chain slack (on side-stand)	20 – 30 (0.8 – 1.2)		—
Gearshift lever height	50 – 60 (2.0 – 2.4)		—



### Thermostat + Radiator + Fan + Coolant

Item	Standard/Specification		Note
Thermostat valve opening temperature	Approx. 82 °C (180 °F)		—
Thermostat valve lift	Over 8 mm (0.31 in) and at 95 °C (203 °F)		—
ECT sensor resistance	20 °C (68 °F)	Approx. 2.45 kΩ	—
	50 °C (122 °F)	Approx. 0.811 kΩ	—
	80 °C (176 °F)	Approx. 0.318 kΩ	—
	110 °C (230 °F)	Approx. 0.142 kΩ	—
Radiator cap valve opening pressure	93 – 123 kPa (0.93 – 1.23 kgf/cm <sup>2</sup> , 13.2 – 17.5 psi)		—
Cooling fan operating temperature	OFF → ON	Approx. 105 °C (221 °F)	—
	ON → OFF	Approx. 100 °C (212 °F)	—
Engine coolant type	Use an anti-freeze/coolant compatible with aluminum radiator.		—
Engine coolant including reserve	Reserve tank side	Approx. 250 ml (0.3/0.2 US/Imp qt)	—
	Engine side	Approx. 2 700 ml (2.9/2.4 US/Imp qt)	—

### Injector + Fuel Pump + Fuel Pressure Regulator

Item	Specification	Note
Injector resistance	11 – 13 Ω at 20 °C (68 °F)	
Fuel pump discharge amount	220 ml (7.4/7.7 US/Imp oz) and more/10 sec.	
Fuel pressure regulator operating set pressure	Approx. 300 kPa (3.0 kgf/cm <sup>2</sup> , 43 psi)	

## FI Sensors

Item	Standard/Specification		Note
CKP sensor resistance	180 – 280 Ω		
CKP sensor peak voltage	3.0 V and more		When cranking
IAP sensor input voltage	4.5 – 5.5 V		
IAP sensor output voltage	Approx. 2.7 V at idle speed		
TP sensor input voltage	4.5 – 5.5 V		
TP sensor output voltage	Closed	Approx. 1.1 V	
	Opened	Approx. 4.3 V	
ECT sensor input voltage	4.5 – 5.5 V		
ECT sensor output voltage	0.15 – 4.85 V		
ECT sensor resistance	Approx. 2.45 kΩ at 20 °C (68 °F)		
IAT sensor input voltage	4.5 – 5.5 V		
IAT sensor output voltage	0.15 – 4.85 V		
IAT sensor resistance	Approx. 2.58 kΩ at 20 °C (68 °F)		
AP sensor input voltage	4.5 – 5.5 V		
AP sensor output voltage	Approx. 3.6 V at 100 kPa (760 mmHg)		
TO sensor resistance	16.5 – 22.3 kΩ		
TO sensor voltage	Normal	0.4 – 1.4 V	
	Leaning	3.7 – 4.4 V	When leaning 65°
GP switch voltage	0.6 V and more		From 1st to Top
Injector voltage	Battery voltage		
Ignition coil primary peak voltage	80 V and more		When cranking
HO2 sensor output voltage	0.3 V and less at idle speed		
	0.6 V and more at 3 000 r/min		
HO2 sensor heater resistance	Approx. 8 Ω at 23 °C (73 °F)		
PAIR control solenoid valve resistance	20 – 24 Ω at 20 – 30 °C (68 – 86 °F)		
STP sensor input voltage	4.5 – 5.5 V		
STP sensor output voltage	Closed	Approx. 0.5 V	
	Opened	Approx. 3.9 V	
STVA resistance	Approx. 6.5 Ω		
EVAP system purge control solenoid valve resistance	Approx. 32 Ω at 20 °C (68 °F)		If equipped
ISC valve resistance	Approx. 80 Ω at 20 °C (68 °F)		

## Throttle Body

Item	Specification
Bore size	44 mm (1.73 in)
I.D. No.	15H3 (For E-33), 15H2 (For E-03)
Idle r/min	1 150 ± 100 r/min
Throttle cable play	2.0 – 4.0 mm (0.08 – 0.16 in)

## Electrical

Unit: mm

Item		Specification	Note
Firing order		1 · 2 · 4 · 3	
Spark plug	Type	NGK: CR9EIA-9 DENSO: IU27D	
	Gap	0.8 – 0.9 (0.031 – 0.035)	
Spark performance		Over 8 (0.3) at 1 atm.	
CKP sensor resistance		180 – 280 Ω	
CKP sensor peak voltage		3.0 V and more	When cranking
Ignition coil resistance	Primary	1.0 – 1.9 Ω	Terminal – Terminal
	Secondary	10.0 – 16.2 kΩ	Plug cap – Terminal
Ignition coil primary peak voltage		80 V and more	When cranking
Generator coil resistance		0.2 – 0.7 Ω	
Generator maximum output		Approx. 400 W at 5 000 r/min	
Generator no-load voltage (When engine is cold)		70 V (AC) and more at 5 000 r/min	
Regulated voltage		13.5 – 15.5 V at 5 000 r/min	
Starter motor brush length	Standard	12.0 (0.47)	
	Limit	8.5 (0.33)	
Starter torque limiter slip torque		33.3 – 52.0 N·m (3.3 – 5.2 kgf-m, 24.0 – 37.5 lb-ft)	
Starter relay resistance		3 – 5 Ω	
Battery	Type designation	YTX12-BS	
	Capacity	12 V 36 kC (10 Ah)/10 HR	
	Standard electrolyte S.G.	1.320 at 20 °C (68 °F)	
Fuse size	Headlight	HI	10 A
		LO	10 A
	Signal		10 A
	Ignition		15 A
	Fuel		10 A
	Fan (LH)		15 A
	Fan (RH)		
	Main		30 A
ABS		30 A	

**Wattage**

Unit: W

Item		Specification
Headlight	HI	65
	LO	55
Position/Parking light		5 x 2
Brake light/Taillight		LED
Turn signal light		21 x 4
License plate light		5
Tachometer light		LED
Speedometer light		LED
Turn signal indicator light		LED
High beam indicator light		LED
Neutral position indicator light		LED
Oil pressure indicator light		LED
FI indicator light		LED
Engine coolant temp. indicator light		LED
Fuel level indicator light		LED
Engine R.P.M. indicator light		LED
ABS indicator light		LED
Immobilizer indicator light		LED

**Brake + Wheel**

Unit: mm (in)

Item	Standard		Limit
Rear brake pedal height	50 – 60 (2.0 – 2.4)		—
Brake disc thickness	Front	5.3 – 5.7 (0.21 – 0.22)	5.0 (0.20)
	Rear		
Brake disc runout	—		0.30 (0.012)
Master cylinder bore	Front	14.000 – 14.043 (0.5512 – 0.5529)	—
	Rear	12.700 – 12.743 (0.5000 – 0.5017)	—
Master cylinder piston diam.	Front	13.957 – 13.984 (0.5495 – 0.5506)	—
	Rear	12.657 – 12.684 (0.4983 – 0.4994)	—
Brake caliper cylinder bore	Front	Leading	Approx. 32.0 (1.26)
		Trailing	
	Rear	Approx. 38.1 (1.50)	
Brake caliper piston diam.	Front	Leading	Approx. 32.0 (1.26)
		Trailing	
	Rear	Approx. 38.1 (1.50)	
Brake fluid type	DOT 4		—
Wheel rim runout	Axial	—	2.0 (0.08)
	Radial		
Wheel rim size	Front	17 M/C x MT 3.50	—
	Rear	17 M/C x MT 6.00	—
Wheel axle runout	Front	—	0.25 (0.010)
	Rear		

## Tire

Item	Standard		Limit
Cold inflation tire pressure (Solo/Dual riding)	Front	290 kPa (2.90 kgf/cm <sup>2</sup> , 42 psi)	—
	Rear		
Tire size	Front	120/70 ZR17M/C (58 W)	—
	Rear	190/50 ZR17M/C (73 W)	—
Tire type	Front	BRIDGESTONE BT015F RADIAL M	—
	Rear	BRIDGESTONE BT015R RADIAL M	—
Tire tread depth (Recommended depth)	Front	—	1.6 mm (0.06 in)
	Rear	—	2.0 mm (0.08 in)

## Suspension

Unit: mm (in)

Item	Standard		Limit
Front fork stroke	120 (4.7)		—
Front fork spring free length	263 (10.4)		257 (10.1)
Front fork oil level (Without spring, outer tube fully compressed)	95 (3.7)		—
Front fork oil type	SUZUKI FORK OIL L01 or an equivalent fork oil		—
Front fork oil capacity (Each leg)	532 ml (18.0/18.7 US/Imp oz)		—
Front fork inner tube O.D	43 (1.7)		—
Front fork spring adjuster	3-1/2 grooves from top		—
Front fork damping force adjuster	Rebound	8 clicks out from stiffest position	—
	Compression		—
Rear shock absorber spring pre-set length	195 (7.7)		—
Rear shock absorber damping force adjuster	Rebound	12 clicks out from stiffed position	—
	Compression	8 clicks out from stiffed position	—
Rear wheel travel	140 (5.5)		—
Swingarm pivot shaft runout	—		0.3 (0.01)

## Fuel + Oil

Item	Specification		Note
Fuel type	Use only unleaded gasoline of at least 90 pump octane (R/2 + M/2). Gasoline containing MTBE (Methyl Tertiary Butyl Ether), less than 10% ethanol, or less than 5% methanol with appropriate cosolvents and corrosion inhibitor is permissible.		
Fuel tank capacity	Including reserve	20 L (5.3/4.4 US/Imp gal)	E-33
		21 L (5.5/4.6 US/Imp gal)	E-03
Engine oil type	SAE 10W-40, API SF/SG or SH/SJ with JASO MA		
Engine oil capacity	Change	3 100 ml (3.3/2.7 US/Imp qt)	
	Filter change	3 300 ml (3.5/2.9 US/Imp qt)	
	Overhaul	4 000 ml (4.2/3.5 US/Imp qt)	



## Tightening Torque List

BEND15H10307002

### Engine

Item		N·m	kgf-m	lb-ft	
Exhaust pipe bolt		23	2.3	16.5	
Exhaust pipe mounting bolt		23	2.3	16.5	
Muffler mounting bolt		25	2.5	18.0	
Muffler connecting bolt		23	2.3	16.5	
Muffler joint nut		25	2.5	18.0	
Speed sensor rotor bolt		28	2.8	20.0	
Engine sprocket nut		145	14.5	105.0	
Speed sensor bolt		6.5	0.65	4.7	
Engine mounting bolt		55	5.5	40.0	
Engine mounting nut		75	7.5	54.0	
Engine mounting thrust adjuster		10	1.0	7.0	
Engine mounting thrust adjuster lock-nut		45	4.5	32.5	
Engine mounting pinch bolt		35	3.5	25.5	
Cylinder head cover bolt		14	1.4	10.0	
Spark plug		11	1.1	8.0	
Cam chain guide No. 2 bolt		10	1.0	7.0	
Camshaft journal holder bolt		10	1.0	7.0	
Cam chain tension adjuster mounting bolt		10	1.0	7.0	
Cylinder head side bolt		14	1.4	10.0	
Cam chain tensioner bolt		23	2.3	16.5	
Cylinder head bolt	[M6]	10	1.0	7.0	
	[M10]	Initial	25	2.5	18.0
		Final	52	5.2	37.5
Cylinder nut	[M6]	10	1.0	7.0	
Water inlet connector bolt		10	1.0	7.0	
Oil hose union bolt		18	1.8	13.0	
Clutch cover bolt		10	1.0	7.0	
Clutch sleeve hub nut		150	15.0	108.5	
Clutch spring set bolt		10	1.0	7.0	
Clutch spring support bolt		31	3.1	22.5	
Starter clutch cover bolt		10	1.0	7.0	
Starter torque limiter cover bolt		10	1.0	7.0	
Starter clutch cover cap		10	1.0	7.0	
Valve timing inspection cap		23	2.3	16.5	
Starter clutch bolt		55	5.5	40.0	
Generator cover bolt		10	1.0	7.0	
Generator rotor bolt		120	12.0	87.0	
Generator stator set bolt		11	1.1	8.0	
Gearshift cover bolt		10	1.0	7.0	
Gearshift cam stopper bolt		10	1.0	7.0	
Gearshift cam stopper plate bolt		13	1.3	9.5	
Gearshift arm stopper bolt		19	1.9	13.5	
Oil pressure switch		14	1.4	10.0	
Crankcase bolt	[M6]	11	1.1	8.0	
	[M8]	26	2.6	19.0	
	[M10]	50	5.0	36.0	
Oil gallery plug	[M6] and [M8]	10	1.0	7.0	
	[M10]	18	1.8	13.0	
	[M14]	23	2.3	16.5	
	[M16]	35	3.5	25.5	
Oil drain plug		23	2.3	16.5	
Piston cooling oil jet bolt		10	1.0	7.0	
Oil jet (For generator)		5	0.5	3.5	



Item		N-m	kgf-m	lb-ft	
Oil pump mounting bolt		10	1.0	7.0	
Conrod bearing cap bolt	Initial	21	2.1	15.0	
	Final		90°		
Bearing retainer screw		8	0.8	6.0	
Cam chain guide retainer screw		8	0.8	6.0	
Balancer shaft arm bolt		10	1.0	7.0	
Balancer cover bolt		10	1.0	7.0	
Balancer pipe bolt		10	1.0	7.0	
Oil strainer bolt		10	1.0	7.0	
Oil pan bolt		10	1.0	7.0	
Oil pipe bolt (Camshaft housing)		10	1.0	7.0	
Oil pipe bolt	[M6]	10	1.0	7.0	
Oil pipe union bolt	[M14]	24	2.4	17.5	
Oil filter		20	2.0	14.5	
PAIR reed valve cover bolt		11	1.1	8.0	
Cam chain tension adjuster service cap		23	2.3	16.5	
Water jacket plug		11	1.1	8.0	
Crankshaft journal bolt	[M9]	Initial	18	1.8	13.0
		Final	32	3.2	23.0
Balancer shaft mounting bolt		10	1.0	7.0	
PCV cover bolt		10	1.0	7.0	
PCV reed valve cover bolt		10	1.0	7.0	
Main oil gallery plug	[M6]	35	3.5	25.5	
Oil pressure switch lead wire bolt		1.5	0.15	1.1	
Speed sensor mounting bolt		6.5	0.65	4.7	

### FI System

Item		N-m	kgf-m	lb-ft
CKP sensor mounting bolt		6.5	0.65	4.7
HO2 sensor		25	2.5	18.0
CMP sensor bolt		10	1.0	7.0
TP sensor mounting screw		3.5	0.35	2.5
STP sensor mounting screw		3.5	0.35	2.5
ISC valve mounting screw		2	0.2	1.5
Fuel delivery pipe mounting screw		3.5	0.35	2.5
GP switch mounting bolt		6.5	0.65	4.7
Fuel pump mounting bolt		10	1.0	7.0
IAT sensor mounting screw		5.5	0.55	4.0

### Cooling System

Item		N-m	kgf-m	lb-ft
Impeller securing bolt		8	0.8	6.0
Water pump case screw		6	0.6	4.5
Water pump mounting bolt		10	1.0	7.0
Thermostat cover bolt		10	1.0	7.0
Oil cooler hose bolt		10	1.0	7.0
ECT sensor		18	1.8	13.0

## Chassis

Item	N·m	kgf·m	lb·ft
Steering stem head nut	90	9.0	65.0
Steering stem lock-nut	80	8.0	58.0
Steering damper bolt	23	2.3	16.5
Steering damper nut	23	2.3	16.5
Front fork upper clamp bolt	23	2.3	16.5
Front fork lower clamp bolt	23	2.3	16.5
Front fork cap bolt	23	2.3	16.5
Front fork inner rod lock-nut	15	1.5	11.0
Front fork damper rod bolt	23	2.3	16.5
Front axle bolt	100	10.0	72.5
Front axle pinch bolt	23	2.3	16.5
Handlebar holder mounting nut	35	3.5	25.5
Handlebar clamp bolt	10	1.0	7.0
Master cylinder holder bolt (Upper and Lower)	10	1.0	7.0
Front brake caliper mounting bolt	39	3.9	28.0
Brake hose union bolt	23	2.3	16.5
Clutch master cylinder mounting bolt	10	1.0	7.0
Clutch hose union bolt	23	2.3	16.5
Air bleeder valve (Front)	7.5	0.75	5.5
Air bleeder valve (Rear)	7.5	0.75	5.5
Brake disc bolt (Front)	23	2.3	16.5
Brake disc bolt (Rear)	35	3.5	25.5
Rear brake caliper mounting bolt	17	1.7	12.5
Rear brake pad mounting pin	15	1.5	11.0
Rear brake master cylinder mounting bolt	10	1.0	7.0
Rear brake master cylinder rod lock-nut	18	1.8	13.0
Rear brake caliper sliding pin	33	3.3	24.0
Brake lever pivot bolt	6	0.6	4.5
Brake lever pivot bolt lock-nut	6	0.6	4.5
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
Cushion lever mounting nut	78	7.8	56.5
Cushion rod mounting nut	78	7.8	56.5
Rear shock absorber mounting nut	50	5.0	36.0
Rear axle nut	100	10.0	72.5
Rear sprocket nut	60	6.0	43.5
Rear master cylinder rod lock-nut	18	1.8	13.0
Air bleeder valve (Clutch)	6	0.6	4.5
Clutch master cylinder holder bolt	10	1.0	7.0
Clutch lever pivot bolt	1.0	0.1	0.7
Clutch lever pivot bolt lock-nut	6.0	0.6	4.5
Clutch release mounting bolt	10	1.0	7.0
Brake pipe flare nut	16	1.6	11.5
Wheel speed sensor rotor bolt	6.5	0.65	4.5