

Features & Specifications

2017 GSX-S1000F ABS



GSX-S1000FAL7

PGZ: Metallic Matte Fibroin Gray

Top Five Key Features

- Fuel-injected 999cc, 4-cylinder, engine powers a torque-rich sportbike experience.
- Suzuki Advanced Traction Control* lets the rider select sensitivity to match road conditions.
- Twin-spar aluminum frame and adjustable KYB suspension delivers controlled handling.
- Brembo Monobloc front brake calipers plus an Antilock Brake System* (ABS) deliver controlled stopping power.
- Additional panache and wind protection from the full fairing and upper windshield.

Overview

As much as a GSX-R1000 owns the racetrack, the GSX-S1000F ABS owns the road. Developed using the attributes of the championship winning 2005 – 2008 generation GSX-R1000, this touring-ready sportbike carries the spirit of the Suzuki performance to the street, with shared technology and components packaged into a chassis designed specifically for all-day riding comfort.

It's more than just an attitude, a spirit, or a lineage though; it's about performance-packed hard parts evolving from one generation to the next. The GSX-S1000F ABS is powered by a 999cc inline four-cylinder powerplant that's based on the legendary long-stroke GSX-R1000 engine, which makes for ideal street-riding power and torque curve. Focused on making big power through the low and mid-range, this engine uses a valve-train that's optimized to deliver street-dominating power.

Equipped with a powerful engine, Suzuki's Advanced Traction Control System**, a balanced KYB suspension, plus ABS-equipped Brembo and NISSIN brakes, the GSX-S1000F ABS is a street bike packed with some serious performance. Top that performance off with wild, rugged, and aggressive styling, a wind-cheating fairing and screen, and you have a touring-ready sportbike ready for the open road or corner carving.

With the GSX-S1000F ABS, Suzuki changes motorcycling for the better, again.

Engine Features

- The strong, four-stroke, liquid-cooled, DOHC, 999cc inline-four engine is designed to provide smooth throttle response and controlled acceleration.
- Long-stroke GSX-R engine design has broad low-to-mid range power and torque that is ideal for street riding.
- The profiles of the dual, overhead camshafts were designed to enhance street performance while preserving peak, racetrack-capable power.
- Aluminum pistons, engineered with use of FEM (Finite Element Method) analysis, are cast with optimal rigidity and weight.
- Suzuki Composite Electrochemical Material (SCEM)-plated cylinders integrated into the upper crankcase reduce friction and improve heat transfer and durability.
- The EFI system uses Suzuki's proprietary, SDTV (Suzuki Dual Throttle Valve) throttle bodies where the secondary throttle valves are controlled by a servo motor for smooth power delivery.
- Long tip, 10-hole fuel injectors on each 44mm throttle body improves fuel atomization while the automatic Idle Speed Control (ISC) improves cold starting and stabilizes the engine idle.
- The digital ignition fires iridium type spark plugs that increase spark strength and combustion efficiency, contributing to higher power, more linear throttle response, easier engine start-up, and a more stable idle. These quality components also last longer than conventional spark plugs.
- The stainless-steel, 4-2-1 exhaust system helps the engine deliver a strong low-to-mid range punch with an exciting rush to redline.
- The Suzuki Exhaust Tuning (SET) system-equipped mid-muffler design enhances style and aids in mass centralization for great chassis balance.
- The sculpted muffler has a pleasing appearance that's not common to under-chassis exhausts while creating an exciting, distinctive sound.
- Suzuki's advanced traction control system* lets the rider to control the throttle with more confidence in various riding conditions. As a result, the rider can enjoy sport riding with less anxiety. There are four traction control modes (1, 2, 3, and OFF) that the rider can easily adjust at rest or on-the-fly via a handlebar-mounted control. The difference between the modes are their sensitivity to road conditions.
 - o Mode 1 is lowest sensitivity level most suitable for skilled riders or in conditions that have good road surface grip (sport riding on good, smooth roads).
 - o Mode 2 is a moderate sensitivity level that is suitable for most riders or in conditions that have varied road surface grip (city riding, regular road conditions).
 - o Mode 3 is highest sensitivity level suitable for road conditions where the grip may be limited (wet or cold surfaces).
 - o OFF disengages all traction control features.
- The sides of the fairing efficiently guide cooling air to the high-capacity curved radiator. Additional heat is removed from the engine via the use of a lightweight and compact liquid-cooled oil cooler (like those used on the GSX-R models).

Transmission Features

- The race-proven six-speed close-ratio transmission features vertically staggered shafts to reduce overall engine length.
- Large diameter, wet multi-plate clutch is derived from a GSX-R1000 design to easily transmit power while the rack and pinion clutch release provides the rider with superb friction-point feel.
- The refined shift linkage helps the rider easily and quickly select the best gear for the riding conditions.
- The strong, RK-supplied drive chain uses O-rings to preserve internal lubrication so power is transmitted smoothly and quietly.

Chassis Features

- Styled to complement the rest of the chassis and to house a bright dual headlight, the GSX-S1000F ABS's full fairing slices through the wind while so the rider benefits from the upright, sporty ergonomics.
- Lightweight and compact chassis is engineered to be agile and fun-to-ride for a wide range of riders. This ability starts with the low-mass rigid aluminum main frame coupled with the strong aluminum-alloy swingarm.
- The new 43mm inverted KYB forks have adjustable compression and rebound damping, and spring pre-load with a generous 120mm (4.7 in) of front wheel travel.
- Link-type rear suspension, with arched aluminum swingarm and a single shock absorber that features spring preload that is 7-way adjustable with rebound damping force adjustment.
- Dual front brakes with fully-floating 310mm discs and BREMBO monobloc calipers with four 32mm opposed pistons provide strong and consistent stopping power.
- The front brakes are complemented by a 240mm rear disc brake with a NISSIN single-piston caliper to help make sure you can have controlled stops.
- Both the front and rear brakes can be modulated by a compact Anti-lock Brake System (ABS) controller to match stopping force to the available traction.
- Unique to the GSX-S1000 models, the TRP 6-spoke lightweight cast aluminum wheels are shod with Dunlop radial tires (120/70ZR17 front and 180/50ZR17 rear).
- Matte black aluminum Renthal Fatbar handlebar is standard equipment offering excellent riding ergonomics with great vibration damping.
- The reasonable sport riding position is created by a carefully crafted relationship between the Renthal FatBar, footrests and seat.
- The low seat height of 815 mm (32 in.) contributes to the sporty, yet upright riding position and aids rider confidence at stops.

Electrical Features

- The GSX-S1000F ABS premiered Suzuki's Easy-start System that requires just a simple touch of the starter button to fire up the engine (without pulling the clutch lever if the transmission is in neutral).
- The dual headlight assembly in the full fairing use a pair of 55W H7 halogen bulbs – one for the low beam, while both illuminate for the high beam. The tail section houses an integrated LED taillight with clear lens.
- The lightweight and compact instrument sets uses a LCD display that includes speedometer, tachometer, odometer, dual tripmeters, gear position, coolant temperatures, driving range, average fuel consumption, instantaneous fuel consumption, traction control, and a clock functions.
- The display has an adjustable intensity, white-color backlight for great nighttime visibility and is flanked by LED indicators for the turn signals, high beam, malfunction, traction control, ABS, plus coolant temperature and oil pressure alerts.

Additional Features

- A variety of Genuine Suzuki Accessories such as a tank bag and taller, touring screen are available, plus a large selection of logo apparel.
- 12-month unlimited mileage, limited warranty*
 - o Coverage can be increased via Suzuki Extended Protection
- For more details, please visit www.suzukicycles.com.

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

*** 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 GSX-S1000FAL7

E-03: USA, E-33: California

Dimensions and curb mass

| Item | Specification | Remark |
|------------------|-------------------|--------|
| Overall length | 2115 mm (83.3 in) | — |
| Overall width | 795 mm (31.3 in) | — |
| Overall height | 1180 mm (46.5 in) | — |
| Wheelbase | 1460 mm (57.5 in) | — |
| Ground clearance | 140 mm (5.5 in) | — |
| Seat height | 810 mm (31.9 in) | — |
| Curb mass | 214 kg (472 lbs) | E03 |
| | 215 kg (474 lbs) | E33 |

Engine

| Item | Specification | Remark |
|---------------------|-----------------------------------|--------|
| Type | Four-stroke, liquid-cooled, DOHC | — |
| Number of cylinders | 4 | — |
| Bore | 73.4 mm (2.890 in) | — |
| Stroke | 59.0 mm (2.323 in) | — |
| Displacement | 999 cm ³ (61.0 cu. in) | — |
| Compression ratio | 12.2 : 1 | — |
| Fuel system | Fuel injection | — |
| Air cleaner | Paper element | — |
| Starter system | Electric | — |
| Lubrication system | Wet sump | — |
| Idle speed | 1150 ± 100 r/min | — |

Drive train

| Item | Specification | Remark |
|-------------------------|-----------------------|---------------|
| Clutch | Wet multi-plate type | — |
| Transmission | 6-speed constant mesh | — |
| Gearshift pattern | 1-down, 5-up | — |
| Primary reduction ratio | 1.553 (73/47) | — |
| Gear ratios | Low | 2.562 (41/16) |
| | 2nd | 2.052 (39/19) |
| | 3rd | 1.714 (36/21) |
| | 4th | 1.500 (36/24) |
| | 5th | 1.360 (34/25) |
| | Top | 1.269 (33/26) |
| Final reduction ratio | 2.588 (44/17) | — |
| Drive chain | RK525GSH, 116 links | — |

Specifications GSX-S1000FAL7

E-03: USA, E-33: California

Chassis

| Item | Specification | Remark |
|-------------------|--|--------|
| Front suspension | Inverted telescopic, coil spring, oil damped | — |
| Rear suspension | Link type, coil spring, oil damped | — |
| Front fork stroke | 120 mm (4.7 in) | — |
| Rear wheel travel | 130 mm (5.1 in) | — |
| Steering angle | 31° (right and left) | — |
| Caster | 25° | — |
| Trail | 100 mm (3.9 in) | — |
| Turning radius | 3.1 m (10.2 ft) | — |
| Front brake | Disc brake, twin | — |
| Rear brake | Disc brake | — |
| Front tire size | 120/70ZR17M/C (58W), tubeless | — |
| Rear tire size | 190/50ZR17M/C (73W), tubeless | — |

Electrical

| Item | Specification | Remark |
|--|--------------------------------------|--------|
| Ignition type | Electronic ignition (Transistorized) | — |
| Spark plug | NGK CR9EIA-9 or DENSO IU27D | — |
| Battery | 12 V 36.0 kC (10 Ah)/10 HR | — |
| Generator | Three-phase A.C. generator | — |
| Main fuse | 30 A | — |
| Fuse | 10/10/10/10/10/15 A | — |
| ABS fuse | 20/15 A | — |
| Headlight | 12 V 55 W (H7) x 2 | — |
| Brake light/Tail light | LED | — |
| Turn signal light | 12 V 21 W x 4 | — |
| License plate light | 12 V 5 W | — |
| Instrument panel light | LED | — |
| Neutral indicator light | LED | — |
| High beam indicator light | LED | — |
| Turn signal indicator light | LED | — |
| Oil pressure/Coolant temperature indicator light | LED | — |
| MIL | LED | — |
| Traction control system indicator light | LED | — |
| ABS indicator light | LED | — |

Capacities

| Item | Specification | Remark |
|----------------|----------------------------------|---------------------------------|
| Fuel tank | 17.0 L (4.5 US gal, 3.7 Imp gal) | — |
| Engine oil | Oil change | 2800 ml (3.0 US qt, 2.5 Imp qt) |
| | With filter change | 3200 ml (3.4 US qt, 2.8 Imp qt) |
| Engine coolant | 2.8 L (3.0 US qt, 2.5 Imp qt) | — |

Service Data GSX-S1000FAL7

E-03: USA, E-33: California

GEN-0125001-001

Emission Control Devices

| Item | Specification | Standard | Limit |
|---|-------------------------|-----------------|-------|
| EVAP system purge control solenoid valve power supply voltage | E33 | Battery voltage | |
| EVAP system purge control solenoid valve resistance | E33 20 °C (68 °F) | 30 – 34 Ω | |
| PAIR control solenoid valve power supply voltage | | Battery voltage | |
| PAIR control solenoid valve resistance | 20 – 30 °C (68 – 86 °F) | 20 – 24 Ω | |

Engine Electrical Devices

| Item | Specification | Standard | Limit |
|--|----------------------|-----------------|-------|
| AP sensor power supply voltage | | 4.75 – 5.25 V | — |
| AP sensor output voltage | Idle speed at 1 atm. | Approx. 2.8 V | — |
| IAP sensor power supply voltage | | 4.75 – 5.25 V | — |
| IAP sensor output voltage | Idle speed at 1 atm. | Approx. 2.7 V | — |
| IAT sensor power supply voltage | | 4.5 – 5.5 V | — |
| IAT sensor output voltage | | 0.15 – 4.85 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 (–4 °F) | 13840 – 16330 Ω | — |
| | 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 | — |
| | Opened | Approx. 4.5 V | |
| STP sensor power supply voltage | | 4.5 – 5.5 V | — |
| STP sensor output voltage | Closed | 0.57 – 0.67 V | — |
| | Opened | Approx. 4.5 V | |
| ISC valve resistance | 20 °C (68 °F) | Approx. 20 Ω | — |
| HO2 sensor output voltage | Idle speed | 0.6 V or less | — |
| | 5000 r/min | 0.6 V or more | |
| HO2 sensor heater power supply voltage | | Battery voltage | — |
| HO2 sensor heater resistance | 23 °C (73.4 °F) | 11.5 – 17.5 Ω | — |
| CKP sensor peak voltage | When cranking | 0.5 V or more | — |
| CKP sensor resistance | 20 °C (68 °F) | Approx. 168 Ω | — |
| TO sensor power supply voltage | | 4.5 – 5.5 V | — |
| TO sensor output voltage | Normal | 0.4 – 1.4 V | — |
| | Leaning 65° | 3.7 – 4.4 V | |
| TO sensor resistance | | 16500 – 22300 Ω | — |
| ECM power supply voltage | | Battery voltage | — |

Engine Mechanical

| Item | Specification | | Standard | Limit |
|---------------------------------|--------------------|---------|--|--|
| Throttle body I.D. No. | E33 | | 04K1 | — |
| | E03 | | 04K0 | — |
| Throttle body bore size | | | 44 mm (1.7 in) | — |
| Throttle cable play | | | 2.0 – 4.0 mm (0.079 – 0.157 in) | — |
| Idle speed | When engine warmed | | 1150 ± 100 r/min | — |
| Fast idle speed | | | 1150 – 2000 r/min | — |
| STVA resistance | | | Approx. 7.8 Ω | — |
| Compression pressure | | | 1300 – 1700 kPa (13.3 – 17.3 kgf/cm ² , 188 – 246 psi) | 1000 kPa (10.2 kgf/cm ² , 145 psi) |
| Compression pressure difference | | | — | 200 kPa (2 kgf/cm ² , 28 psi) |
| Cam height | Intake | | 36.78 – 36.83 mm (1.448 – 1.450 in) | 36.48 mm (1.437 in) |
| | Exhaust | | 36.63 – 36.68 mm (1.443 – 1.444 in) | 36.33 mm (1.431 in) |
| Camshaft journal oil clearance | Intake | | 0.032 – 0.066 mm (0.0013 – 0.0025 in) | 0.150 mm (0.0059 in) |
| | Exhaust | | 0.032 – 0.066 mm (0.0013 – 0.0025 in) | 0.150 mm (0.0059 in) |
| Camshaft journal holder I.D. | Intake | | 24.012 – 24.025 mm (0.9454 – 0.9458 in) | — |
| | Exhaust | | 24.012 – 24.025 mm (0.9454 – 0.9458 in) | |
| Camshaft journal O.D. | Intake | | 23.959 – 23.980 mm (0.9433 – 0.9440 in) | — |
| | Exhaust | | 23.959 – 23.980 mm (0.9433 – 0.9440 in) | |
| Camshaft runout | Intake & Exhaust | | — | 0.10 mm (0.004 in) |
| Cam chain pin | At arrow "3" | | 14th pin | — |
| Valve clearance | When engine cold | Intake | 0.10 – 0.20 mm (0.0040 – 0.0078 in) | — |
| | | Exhaust | 0.20 – 0.30 mm (0.0079 – 0.0118 in) | |
| Valve diameter | Intake | | 30 mm (1.2 in) | — |
| | Exhaust | | 24 mm (0.94 in) | |
| Valve stem runout | Intake & Exhaust | | — | 0.05 mm (0.0019 in) |
| Valve head radial runout | Intake & Exhaust | | — | 0.03 mm (0.0011 in) |
| Valve head thickness | Intake | | — | 0.5 mm (0.019 in) |
| | Exhaust | | — | 0.5 mm (0.019 in) |
| Valve stem O.D. | Intake | | 4.475 – 4.490 mm (0.1762 – 0.1767 in) | — |
| | Exhaust | | 4.455 – 4.470 mm (0.1754 – 0.1759 in) | — |
| Valve seat width | Intake | | 0.9 – 1.1 mm (0.036 – 0.043 in) | — |
| | Exhaust | | 0.9 – 1.1 mm (0.036 – 0.043 in) | — |

| Item | Specification | | Standard | Limit |
|-------------------------------------|--|---------|---|--------------------------|
| Valve guide I.D. | Intake | | 4.500 – 4.512 mm (0.1772 – 0.1776 in) | — |
| | Exhaust | | 4.500 – 4.512 mm (0.1772 – 0.1776 in) | — |
| Valve guide to valve stem clearance | Intake | | 0.010 – 0.037 mm (0.0004 – 0.0014 in) | — |
| | Exhaust | | 0.030 – 0.057 mm (0.0012 – 0.0022 in) | — |
| Valve spring free length | Intake | | — | 37.3 mm (1.47 in) |
| | Exhaust | | — | 37.3 mm (1.47 in) |
| Valve spring pre-load | When compressed to 33.55 mm (1.321 in) | Intake | 141 – 163 N (14.4 – 16.6 kgf, 31.7 – 36.6 lbs) | — |
| | | Exhaust | 141 – 163 N (14.4 – 16.6 kgf, 31.7 – 36.6 lbs) | — |
| Cylinder head distortion | | | — | 0.20 mm (0.0078 in) |
| Cylinder distortion | | | — | 0.20 mm (0.0078 in) |
| Cylinder bore | | | 73.400 – 73.415 mm (2.8898 – 2.8903 in) | No nicks or Scratches |
| Piston diameter | Measure at 8 mm (0.3 in) from the skirt end. | | 73.370 – 73.385 mm (2.8886 – 2.8891 in) | 73.280 mm (2.8851 in) |
| Piston to cylinder clearance | | | 0.025 – 0.035 mm (0.0010 – 0.0013 in) | 0.120 mm (0.0047 in) |
| Piston ring to groove clearance | 1st | | — | 0.180 mm (0.0070 in) |
| | 2nd | | — | 0.150 mm (0.0059 in) |
| Piston ring groove width | 1st | | 0.81 – 0.83 mm (0.0319 – 0.0326 in) | — |
| | 2nd | | 0.81 – 0.83 mm (0.0319 – 0.0326 in) | — |
| | Oil | | 1.51 – 1.53 mm (0.0595 – 0.0602 in) | — |
| Piston ring thickness | 1st | | 0.77 – 0.79 mm (0.0304 – 0.0311 in) | — |
| | 2nd | | 0.77 – 0.79 mm (0.0304 – 0.0311 in) | — |
| Piston ring free end gap | 1st | | Approx. 9 mm (0.4 in) | 7.2 mm (0.29 in) |
| | 2nd | | Approx. 8 mm (0.3 in) | 6.4 mm (0.26 in) |
| Piston ring end gap | 1st | | 0.06 – 0.18 mm (0.0024 – 0.0070 in) | 0.50 mm (0.019 in) |
| | 2nd | | 0.06 – 0.18 mm (0.0024 – 0.0070 in) | 0.50 mm (0.019 in) |
| Piston pin bore I.D. | | | 16.002 – 16.008 mm (0.6300 – 0.6302 in) | 16.030 mm (0.6311 in) |
| Piston pin O.D. | | | 15.995 – 16.000 mm (0.6298 – 0.6299 in) | 15.980 mm (0.6292 in) |
| Conrod small end I.D. | | | 16.010 – 16.018 mm (0.6304 – 0.6306 in) | 16.040 mm (0.6314 in) |
| Conrod big end side clearance | | | 0.10 – 0.20 mm (0.0040 – 0.0078 in) | 0.3 mm (0.011 in) |
| Conrod big end width | | | 19.95 – 20.00 mm (0.7855 – 0.7874 in) | — |

| Item | Specification | Standard | Limit |
|-------------------------------------|---------------|--|-------------------------|
| Conrod big end I.D. | | 38.000 – 38.016 mm (1.4961 – 1.4966 in) | — |
| Conrod big end oil clearance | | 0.040 – 0.064 mm (0.0016 – 0.0025 in) | 0.080 mm (0.0031 in) |
| Crank pin width | | 20.10 – 20.15 mm (0.7914 – 0.7933 in) | — |
| Crank pin O.D. | | 34.976 – 35.000 mm (1.3770 – 1.3779 in) | — |
| Crank pin bearing thickness | | 1.476 – 1.492 mm (0.0582 – 0.0587 in) | — |
| Crankshaft journal O.D. | | 34.982 – 35.000 mm (1.3773 – 1.3779 in) | — |
| Crankshaft journal oil clearance | | 0.010 – 0.028 mm (0.0004 – 0.0011 in) | 0.080 mm (0.0031 in) |
| Crankcase journal I.D. | | 38.000 – 38.018 mm (1.4961 – 1.4967 in) | — |
| Crankcase journal bearing thickness | | 1.492 – 1.507 mm (0.0588 – 0.0593 in) | — |
| Crankshaft thrust bearing thickness | Right side | 2.42 – 2.44 mm (0.0953 – 0.0960 in) | — |
| | Left side | 2.36 – 2.50 mm (0.0930 – 0.0984 in) | — |
| Crankshaft thrust clearance | | 0.060 – 0.110 mm (0.0024 – 0.0043 in) | — |
| Crankshaft runout | | — | 0.05 mm (0.0019 in) |
| Balancer journal oil clearance | | 0.028 – 0.052 mm (0.0011 – 0.0020 in) | 0.080 mm (0.0031 in) |
| Balancer journal O.D. | | 22.976 – 22.992 mm (0.9046 – 0.9051 in) | — |

Engine Lubrication System

| Item | Specification | Standard | Limit |
|--------------------------------|----------------------------------|--|-------|
| Oil pressure | At 60 °C (140 °F), 3000 r/min | 100 – 400 kPa (1.0 – 4.1 kgf/cm ² , 14.5 – 58.0 psi) | — |
| Necessary amount of engine oil | Oil change | 2800 ml (3.0 US qt, 2.5 Imp qt) | — |
| | Oil and filter change | 3200 ml (3.4 US qt, 2.8 Imp qt) | |
| | Engine overhaul | 3400 ml (3.6 US qt, 3.0 Imp qt) | |

Cooling System

| Item | Specification | Standard | Limit |
|--|---------------------|--|-------|
| Engine coolant | Engine side | Approx. 2500 ml (5.28 US qt, 4.40 Imp qt) | — |
| | Reservoir tank side | Approx. 250 ml (0.53 US qt, 0.44 Imp qt) | |
| Radiator cap valve opening pressure | | 107.9 – 137.3 kPa (1.1 – 1.4 kgf/cm ² , 15.7 – 19.9 psi) | — |
| Cooling fan relay power supply voltage | | Battery voltage | — |
| Cooling fan operating temperature | OFF → ON | Approx. 105 °C (221 °F) | — |
| | ON → OFF | Approx. 100 °C (212 °F) | |
| Thermostat valve opening temperature | | Approx. 82 °C (179.6 °F) | — |
| Thermostat valve lift | 95 °C (203 °F) | 8 mm (0.3 in) or more | — |

Fuel System

| Item | Specification | Standard | Limit |
|--|----------------|--|-------|
| Fuel injector power supply voltage | | Battery voltage | |
| Fuel injector resistance | 20 °C (68 °F) | 11.5 – 12.5 Ω | — |
| FP relay power supply voltage | | Battery voltage | — |
| FP discharge amount | Per 10 seconds | 223 ml (7.55 US oz, 7.85 Imp oz) or more | — |
| Fuel pressure regulator operating set pressure | | 289 – 299 kPa (2.95 – 3.04 kgf/cm ² , 42.0 – 43.3 psi) | — |

Ignition System

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

Starting System

| Item | Specification | Standard | Limit |
|----------------------------|--------------------------------|-----------------|---------------------|
| Starter motor brush length | | 12 mm (0.47 in) | 8.5 mm (0.33 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 | |

Charging System

| Item | Specification | Standard | Limit |
|---------------------------|-------------------|------------------------------------|-------|
| Battery leakage current | | 3 mA or less | — |
| Regulated voltage | Charging output | At 5000 r/min 14.0 – 15.5 V | — |
| Generator coil resistance | 20 °C (68 °F) | 0.12 – 0.18 Ω | — |
| Generator no-load voltage | When engine cold | At 5000 r/min 65 V (AC) or more | — |
| Recharging time | Standard charging | 1.2 A for 5 to 10 hours | — |
| | Fast charging | 5 A for 1 hour | |
| Generator Max. output | At 5000 r/min | Approx. 385 W | — |
| Battery | Type designation | FT12A-BS | — |
| | Capacity | 12 V 36.0 kC (10Ah)/10 HR | |

Exhaust System

| Item | Specification | Standard | Limit |
|--|------------------------|----------------|-------|
| EXCVA position sensor power supply voltage | | 4.5 – 5.5 V | — |
| EXCVA position sensor output voltage | Closed | 0.45 – 1.40 V | — |
| | Opened | 3.60 – 4.55 V | |
| EXCVA position sensor resistance | At adjustment position | Approx. 3100 Ω | — |

Front Suspension

| Item | Specification | Standard | Limit |
|-----------------------------------|---|--|------------------|
| Front fork inner tube O.D. | | 43 mm (1.7 in) | — |
| Front fork oil level | Without spring, outer tube fully compressed | 91 mm (3.6 in) | — |
| Front fork spring free length | | 271.1 mm (10.67 in) | 265 mm (10.5 in) |
| Front fork oil capacity | Each leg | 523 ml (17.68 US oz, 18.41 Imp oz) | — |
| Front fork spring adjuster | | 10 mm (0.39 in) | — |
| Front fork damping force adjuster | Rebound side | 8 clicks counterclockwise from stiffest position | — |
| | Compression side | 8 clicks counterclockwise from stiffest position | |

Rear Suspension

| Item | Specification | Standard | Limit |
|--|---------------|--|-------------------|
| Rear shock absorber spring adjuster | | 3rd position | — |
| Rear shock absorber damping force adjuster | Rebound side | 1 turn counterclockwise from stiffest position | — |
| Swingarm pivot shaft runout | | — | 0.3 mm (0.011 in) |

Wheels and Tires

| Item | Specification | | Standard | Limit |
|--------------------------------------|---------------|----------------|---|--------------------|
| Wheel rim runout | Front | Axial & Radial | — | 2.0 mm (0.08 in) |
| | Rear | Axial & Radial | — | 2.0 mm (0.08 in) |
| Wheel axle runout | Front | | — | 0.25 mm (0.010 in) |
| | Rear | | — | 0.25 mm (0.010 in) |
| Tire size | Front | | 120/70ZR17M/C (58W) | — |
| | Rear | | 190/50ZR17M/C (73W) | |
| Tire type | Front | | DUNLOP/D214F M | — |
| | Rear | | DUNLOP/D214 M | |
| Tire tread depth (Recommended depth) | Front | | — | 1.6 mm (0.062 in) |
| | Rear | | — | 2.0 mm (0.078 in) |
| Cold inflation tire pressure | Solo riding | Front | 250 kPa (2.50 kgf/cm ² , 36 psi) | — |
| | | Rear | 290 kPa (2.90 kgf/cm ² , 42 psi) | |
| | Dual riding | Front | 250 kPa (2.50 kgf/cm ² , 36 psi) | — |
| | | Rear | 290 kPa (2.90 kgf/cm ² , 42 psi) | |
| Wheel rim size | Front | | 17 M/C x MT 3.50 | — |
| | Rear | | 17 M/C x MT 6.00 | |

Drive Chain / Drive Train / Drive Shaft

| Item | Specification | Standard | Limit |
|-----------------------------|---------------|--------------------------------|------------------------|
| Drive chain | Type | RK525GSH | — |
| | Links | 116 links | — |
| Drive chain 20-pitch length | | — | 319.4 mm (12.57 in) |
| Drive chain slack | On side-stand | 20 – 30 mm (0.79 – 1.18 in) | — |

Brake Control System and Diagnosis

| Item | Specification | Standard | Limit |
|--|---------------|----------------------------|-------|
| Rear brake pedal height | | 50 – 60 mm (2.0 – 2.3 in) | — |
| Master cylinder bore / piston diameter | Front | Approx. 19.1 mm (0.752 in) | — |
| | Rear | Approx. 14.0 mm (0.551 in) | |

Front Brakes

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

Rear Brakes

| Item | Specification | Standard | Limit |
|--|---------------|---------------------------|-----------------------|
| Rear brake disc thickness | | 5.0 mm (0.20 in) | 4.5 mm (0.18 in) |
| Rear brake disc runout | | — | 0.30 mm (0.012 in) |
| Rear brake caliper cylinder bore / piston diameter | | Approx. 38.2 mm (1.50 in) | — |

ABS

| Item | Specification | Standard | Limit |
|---|---------------|--|-------|
| Wheel speed sensor – sensor rotor clearance | Front | 0.38 – 1.05 mm (0.0150 – 0.0413 in) | — |
| | Rear | 0.42 – 1.08 mm (0.0166 – 0.0425 in) | — |

Manual Transmission

| Item | Specification | Standard | Limit |
|------------------------------------|-----------------|---------------------------------|----------------------|
| Gearshift fork to groove clearance | No.1 | 0.1 – 0.3 mm (0.004 – 0.011 in) | 0.5 mm (0.019 in) |
| | No.3 | 0.1 – 0.3 mm (0.004 – 0.011 in) | 0.5 mm (0.019 in) |
| Gearshift fork groove width | No.1 | 5.0 – 5.1 mm (0.197 – 0.200 in) | — |
| | No.3 | 5.0 – 5.1 mm (0.197 – 0.200 in) | |
| Gearshift fork thickness | No.1 | 4.8 – 4.9 mm (0.189 – 0.192 in) | — |
| | No.3 | 4.8 – 4.9 mm (0.189 – 0.192 in) | |
| Gearshift lever height | | 45 – 55 mm (1.8 – 2.1 in) | — |
| GP switch power supply voltage | | 4.5 – 5.5 V | — |
| GP switch voltage | From 1st to Top | 0.6 V or more | — |

Clutch

| Item | Specification | Standard | Limit |
|---------------------------|---------------|--|-------------------------|
| Clutch lever play | | 10 – 15 mm (0.4 – 0.6 in) | — |
| Clutch release screw | | 1/2 turn counterclockwise | — |
| Drive plate thickness | | 2.72 – 2.88 mm (0.107 – 0.113 in) | 2.42 mm (0.0953 in) |
| Drive plate claw width | | 13.85 – 13.96 mm (0.5453 – 0.5496 in) | 13.35 mm (0.5256 in) |
| Driven plate distortion | | — | 0.10 mm (0.0039 in) |
| Clutch spring free length | | 66.7 mm (2.63 in) | 63.4 mm (2.50 in) |

Steering / Handlebar

| Item | Specification | Standard | Limit |
|--------------------------------|---------------|---|-------|
| Steering tension initial force | | 2 – 5 N (0.21 – 0.50 kgf, 0.50 – 1.12 lbf) | — |

Wiring Systems

| Item | Specification | Standard | Limit |
|-----------|---------------|----------|-------|
| Fuse size | Headlight | HI | 10 A |
| | | LO | 10 A |
| | Ignition | | 10 A |
| | Signal | | 10 A |
| | Fuel | | 10 A |
| | Fan | | 15 A |
| | Main | | 30 A |
| | ABS motor | | 20 A |
| | ABS valve | | 15 A |

Lighting Systems

| Item | Specification | Standard | Limit |
|------------------------------|---------------|----------------|-------|
| Headlight | HI | 12 V 55 W (H7) | — |
| | LO | 12 V 55 W (H7) | — |
| Position light (If equipped) | | LED | — |
| 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 |
|--|---------------|-----------------|-------|
| Speed sensor power supply voltage (Without ABS) | Front | Battery voltage | — |
| | Rear | Battery voltage | — |
| Instrument panel light | | LED | — |
| Turn signal indicator light | | LED × 2 | — |
| High beam indicator light | | LED | — |
| Neutral indicator light | | LED | — |
| Oil pressure indicator light/Engine coolant temp. indicator light | | LED | — |
| MIL | | LED | — |
| Traction control system indicator light | | LED | — |
| ABS indicator light | | LED | — |