



**PRESS INFORMATION**

**March 2015**

**GSX-S1000**



## Introduction

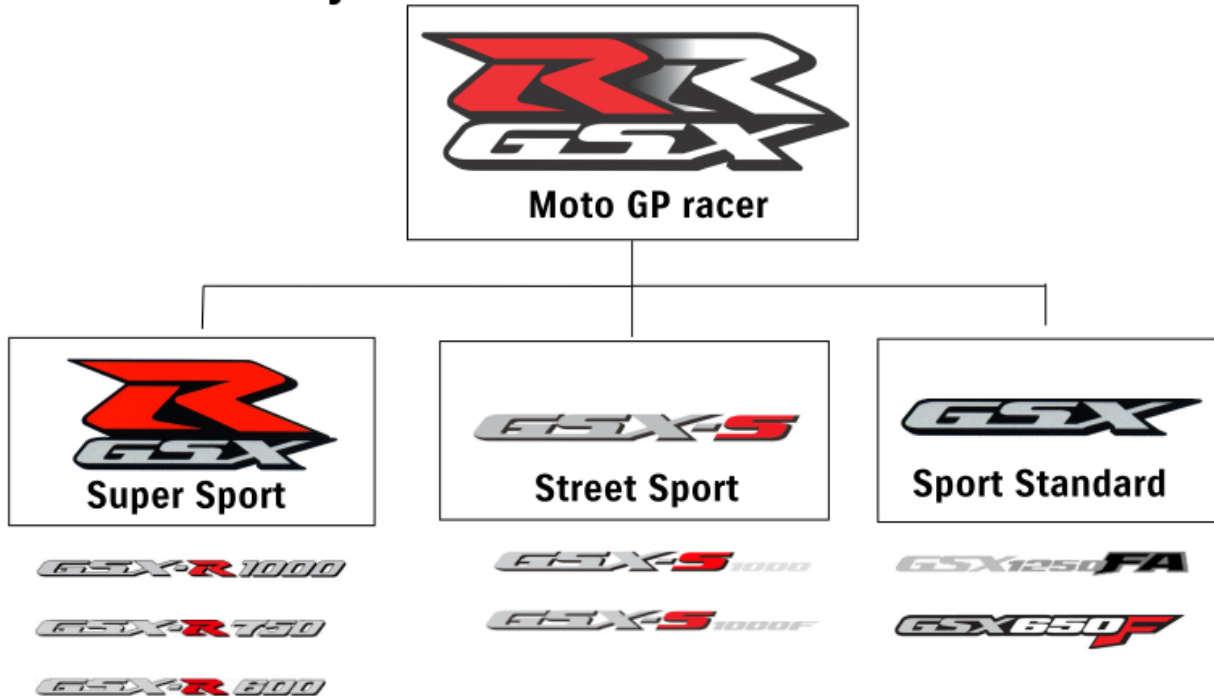
Suzuki proudly presents the newest line of motorcycle in its on-road street bike range. 35 years after the birth of the original GSX model, the GSX-S1000 takes the GSX line in an aggressive new direction.

## The concept of the GSX series

The roots of the GSX series started in 1976 with the GS750. It was Suzuki's first 4-stroke in-line-four cylinder powered sportbike. Its performance, handling and durability impressed the riders all over the world. In 1980, the GS engine evolved to 16-valve design with the introduction of the GSX750E. It was the origin of the glorious GSX lineage, followed by the radical GSX1100S KATANA in 1981, and the legendary, original GSX-R750 in 1985.

The concept of the original GSX was high-performance sportbike which has broad power band, nimble handling, and great durability. Its heritage is still alive in the engineering philosophy of the all current GSX models, from top-end Moto GP race machine to street legal on-road bikes.

To enhance the heritage, we proudly introduce the new series with the name of GSX.

GSX series structure**GSX brand family**

The “RR” in the name of GSX-RR stands for premier class prototype racing machine packed with Suzuki’s advanced technologies. “R” in the GSX-R stands for “Racing”, the “S” in the GSX-S stands for “Street Sport” version of GSX series.

These series are connected with the engineering philosophy and latest technology feedback from the GSX-RR, Moto GP machine.

We are sure that new GSX-S1000/ABS will satisfy the experienced, sport minded riders from all over the world.

The product concept of GSX-S1000 is;

## “Pure Sport Roadster”

The model is developed to provide maximum fun of sport riding on street. Both engine and chassis are developed to achieve an exciting riding experience. The basic performance aspects of "running," "braking" and "cornering" are embodied to the fullest extent allowed with the latest state-of-the-art technology. The motorcycle is made for experienced, sport-minded enthusiasts who desire to enjoy sport riding on the street in an upright riding position.

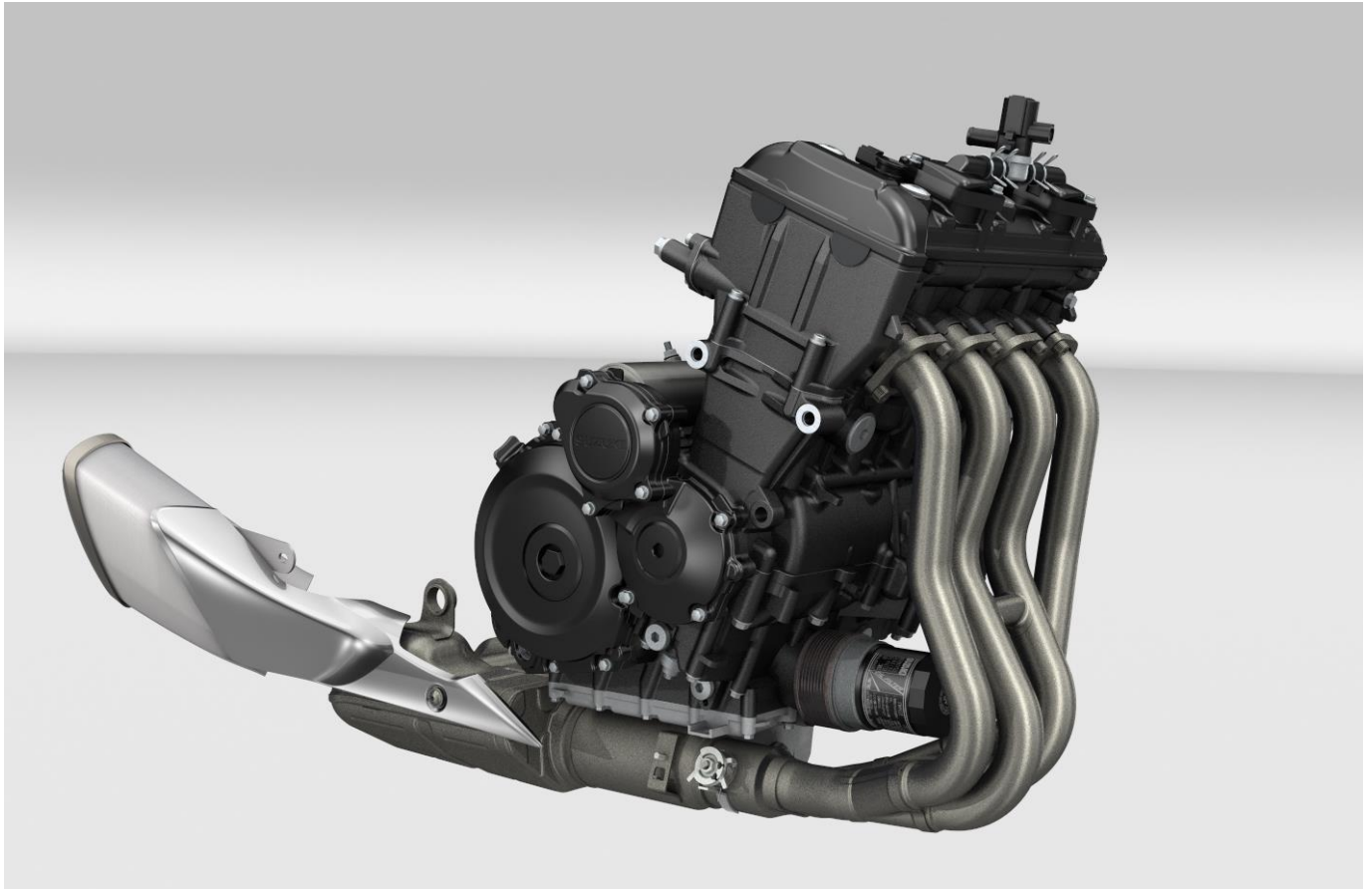
Major features of the GSX-S1000/ABS are;

- Performance features:
  - 999cc inline four power unit based on the legendary GSX-R1000.
  - Finely tuned Fuel injection system.
  - Lightweight design for nimble handling.
  - Newly designed, lightweight and compact Aluminum frame.
  - Lightweight, ruggedly braced aluminum swingarm.
  - KYB upside down front fork.
  - Radial mount Brembo front brake calipers.
- Utility features:
  - 3-mode traction control system.
  - Lightweight digital ABS.
  - Sporty, yet comfortable, upright riding position.
  - Informative, full-LCD instrument.
- Features for pride of ownership:
  - Distinctive, aggressive looking body work.
  - LED position lights and taillight.
  - Renthal aluminum fat bar.
  - Finely tuned intake & exhaust sound.



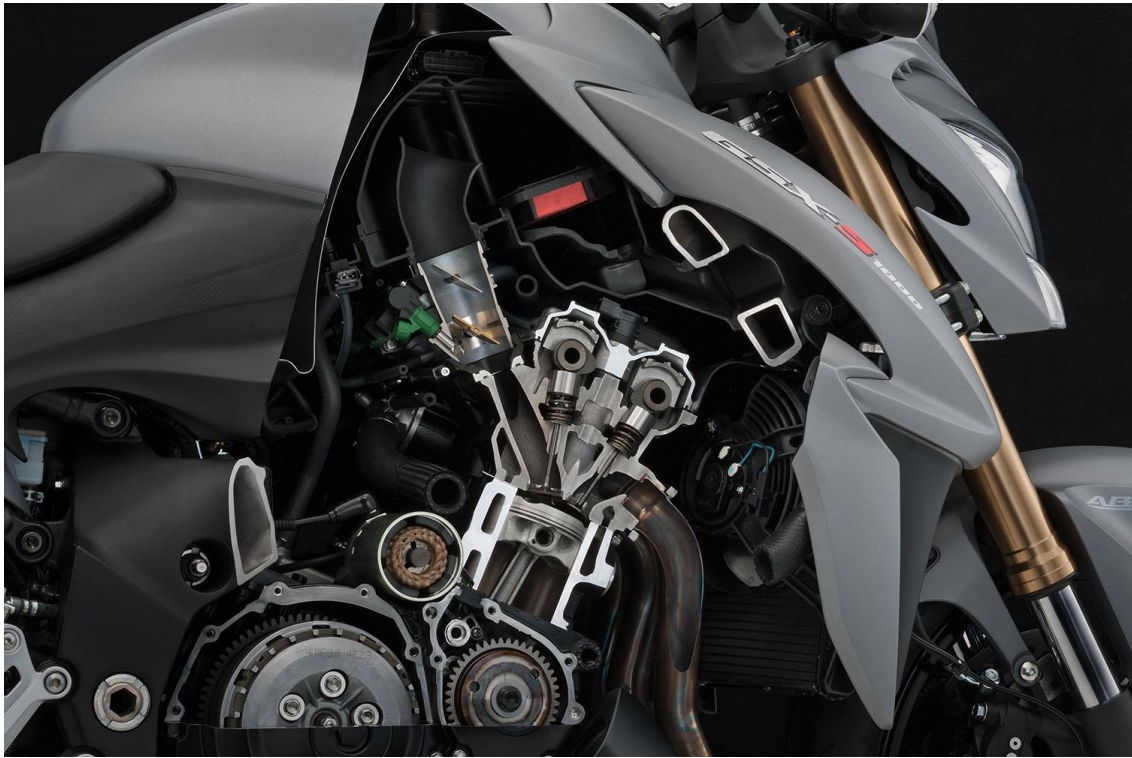
### Engine design - outline

Four-stroke, liquid-cooled, DOHC, 999cm<sup>3</sup> inline-four engine, street-tuned version of the legendary 2005-2008 GSX-R1000 engine, is designed to provide smooth throttle response, immediate, controlled acceleration. That results in exciting, adrenaline-rushing performance in sport riding.



We chose 2005-2008 GSX-R engine, not using that of the current GSX-R1000. The reasons are;

- Because of its long stroke design, it has broad low-to-mid range power/torque that is more suitable for street riding.
- Because of its crankshaft/gearbox layouts, the main frame can be designed straight from steering head to swing-arm pivot. It enables us to design the main frame lightweight.
- 2005-2008 generation GSX-R1000 won number of championship all over the world. This engine has great reputation in the market.



The GSX-R1000 engine, which started out as a long-stroke version of the GSX-R750 engine, has a long-stroke design with a 73.4mm bore and 59.0mm stroke. The long-stroke design allows the combustion chamber to be compact. It makes it possible to regulate compression ratio while maintaining a flat-top piston shape and power characteristics with a broad spread of power throughout the rev range can be obtained.

In this GSX-S1000, the legendary engine is re-tuned for the real world riding environment, without detracting the power character of GSX-R1000 – the broad low-end torque and adrenaline rushing performance in the high rev range.

|                   |                    |
|-------------------|--------------------|
| Displacement      | 999cm <sup>3</sup> |
| Bore x Stroke     | 73.4mm x 59.0mm    |
| Compression ratio | 12.2 : 1           |
| Max power         | 107kW/10,000rpm    |
| Max torque        | 106N-m/9,500rpm    |

### Pistons and piston rings



- New pistons were engineered with use of FEM (Finite Element Method) analysis to achieve optimal rigidity and weight.
- The piston and piston rings are designed 3% lighter than that of the 2007 GSX-R engine without compromising the durability.

### Cylinder head

Cylinder head



Iridium spark plug



- The new cam profiles are designed to optimize the valve timing to tune the GSX-R1000 engine – which is designed keeping in mind racetrack use – to obtain the GSX-S1000 power character that's more suited to the streets and winding roads.
- Iridium spark plugs heighten the spark strength and combustion efficiency, thereby contributing to higher power, more linear throttle response, easier engine start-up, and a more stable idle compared to conventional type.
- Suzuki Composite Electrochemical Material (SCEM)-plated cylinders integrated into the upper crankcase reduce friction and improve heat transfer and durability.

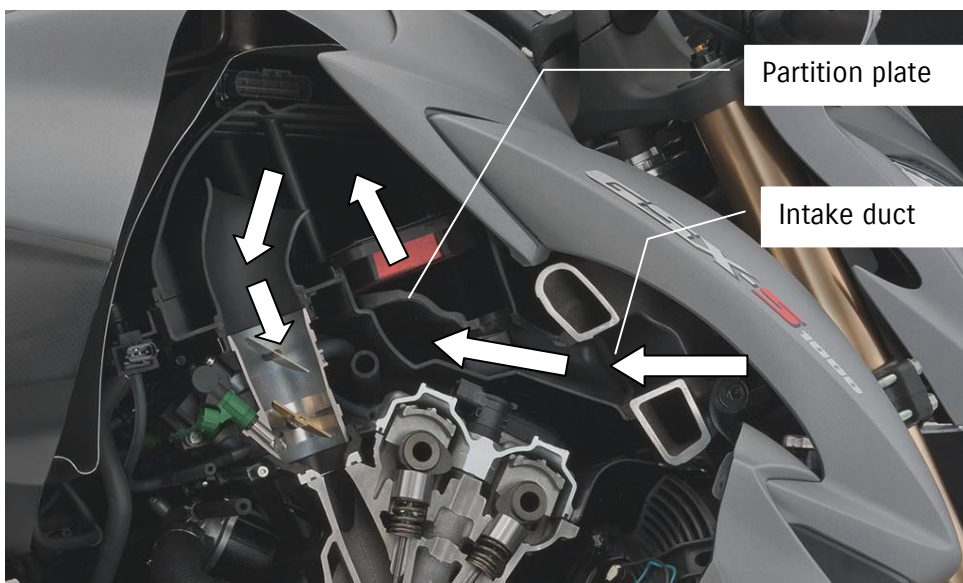


## Fuel injection

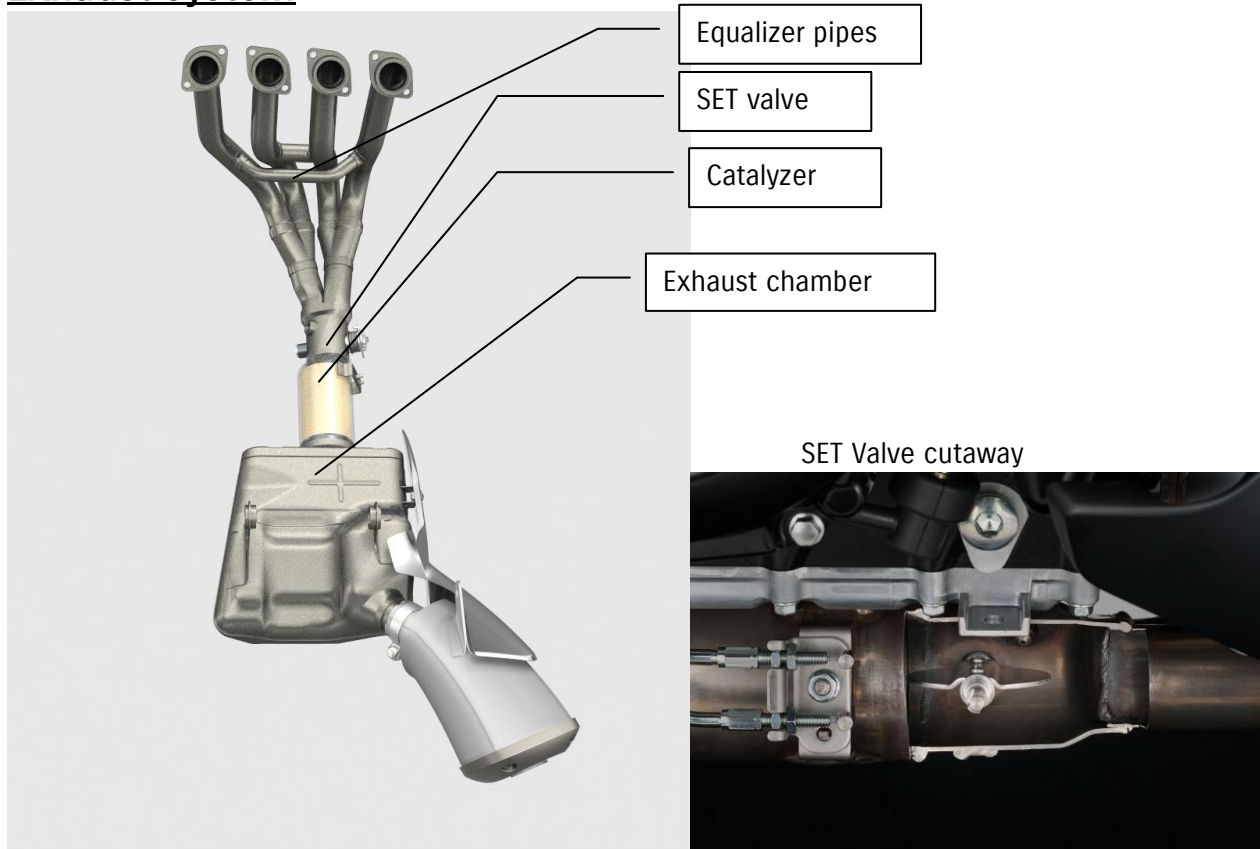


- Fuel injection system employs Suzuki's original, SDTV (Suzuki Dual Throttle Valve) 44mm throttle body (same size as GSX-R1000K7), the secondary throttle valves are controlled by servo motor for smooth power delivery and optimum combustion efficiency.
- Fuel injectors are 10-hole; long-nosed injectors on each throttle body improve fuel atomization for better combustion efficiency and while reducing fuel consumption.
- Fuel injection works with O2 feedback system and intake pressure sensor for optimum combustion efficiency in various conditions, reduces emissions to meet Euro 3 requirement.

## Air Cleaner



- Air cleaner is newly designed to match with required intake capacity.
- The air cleaner has partition plate inside the box, which guides air into the box, that increases intake efficiency and reduces intake noise.

**Exhaust system**

- Exhaust system is newly designed to achieve clean looks, exciting exhaust notes, and adrenaline-rushing performance.
- The exhaust system is 4-into-2into-1 system, it has equalizer pipes between 1 and 4, 2 and 3 header pipes. This design contributes to stronger low-to-mid range output by fine tuning the exhaust pressure waves.
- The system has exhaust chamber after the joint section. The chamber is carefully shaped to fit under the engine. Thanks to the exhaust chamber, the muffler size is minimized for clean, agile look of rear section.
- The exhaust system contains catalyzer for clean emission. It conforms to the strict Euro 3 emission regulations.
- The new GSX-S1000 uses the Suzuki Exhaust Tuning (SET) system. A butterfly valve is actuated by a servo motor. The amount of valve opening is determined by engine rpm, throttle position and gear position. The SET system controls exhaust pressure waves in order to improve engine combustion at low rpm.

## Cooling system

### Radiator



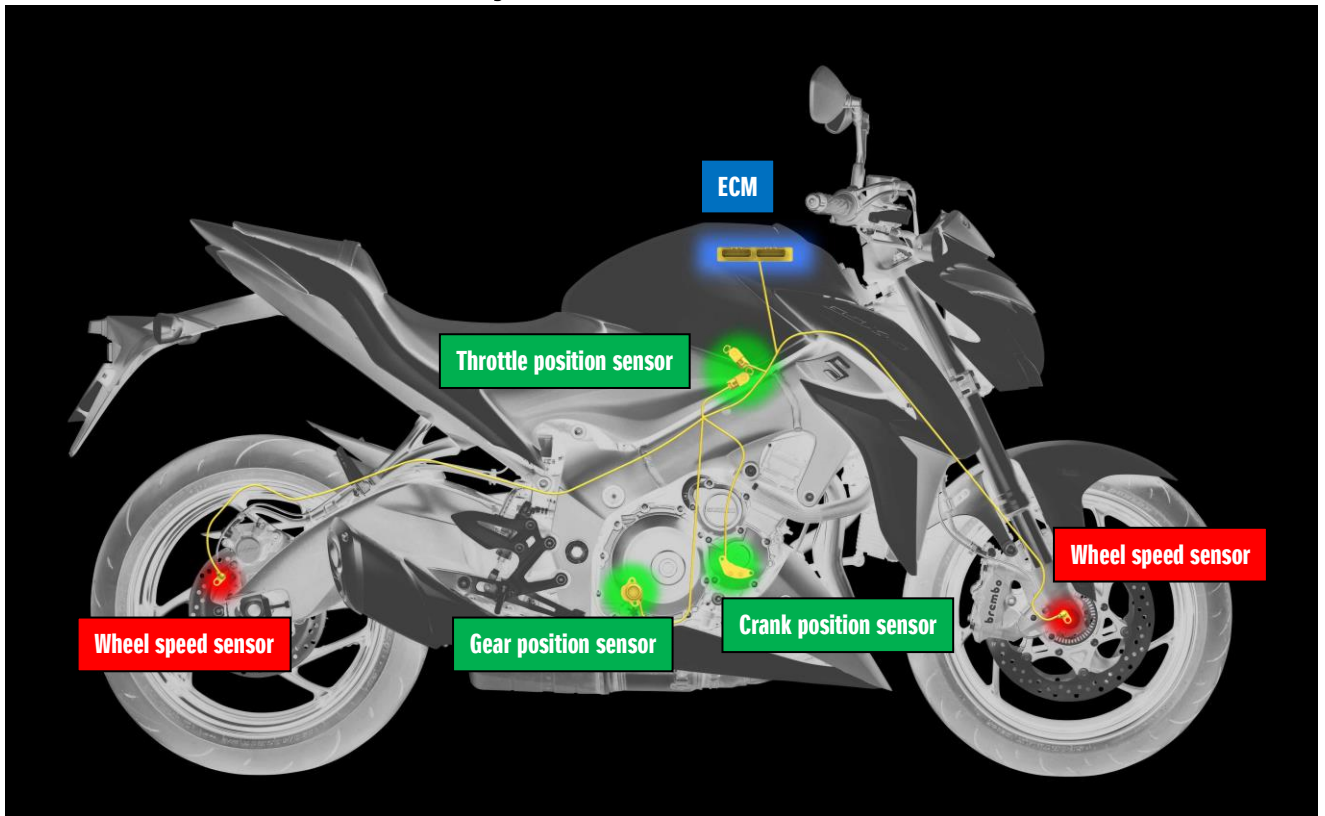
- Newly designed, High-efficiency round shaped radiator has strong cooling performance. The radiator shrouds efficiently guides air to radiator core.

### Oil cooler



- Liquid-cooled oil cooler is used unlike air-cooled type on the GSX-R1000.
- Benefit of liquid-cooled oil cooler is lightweight, compact and clean look. Thanks to its compact design, it creates room for exhaust pipes.

### 3-mode Traction control system



2015 GSX-S1000 features Suzuki's advanced traction control system to let the rider to control throttle with more confidence in various riding conditions. As a result, rider can enjoy sport riding with more confidence, with less stress and fatigue.

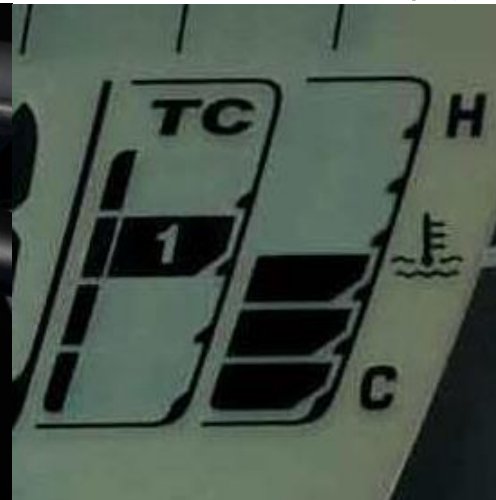
\* Traction control system is not a substitute for rider's throttle control under the various conditions, and traction control cannot prevent loss of traction due to excessive speed when entering turns, or while braking, and it does not control front wheel traction.

- Suzuki's traction control system continuously monitors front and rear wheel speeds, throttle position sensor, crank position sensor and gear position sensor, and quickly reduce engine output when wheel spin is detected. Engine output is controlled by managing ignition timing and air delivery to ensure smoother traction control operation.
- Suzuki's Traction control system confirms conditions every 4 milliseconds, and governs ignition, which allows extremely quick reaction.
- Suzuki's system precisely controls output by optimizing ignition timing and air delivery depends on the conditions. That results in smooth, natural control of power, which does not bother sport riding even in the system is working.

Traction control switch



Traction control mode display



- Rider can select 3 different modes 1, 2, 3 and off, depends on conditions or rider's preference. The difference between mode 1, 2 and 3 is sensitivity levels.
- Mode 1 is the lowest sensitivity level, allows certain level of rear wheel spin. It is suitable for sport riding in good grip road conditions.
- Mode 2 is the second lowest sensitivity level. System activates slightly earlier than Mode 1. It is suitable for most of the riders and road conditions.
- Mode 3 is the highest sensitivity level, system activate earlier than other 2 modes. It is suitable in bad road conditions.

| Mode | Sensitivity level | Suitable conditions                  |
|------|-------------------|--------------------------------------|
| OFF  | -                 | -                                    |
| 1    | Low               | Sport riding, good road conditions   |
| 2    | Middle            | City riding, regular road conditions |
| 3    | High              | Wet or cold conditions               |

## Multi-function Instrument panel



- Full LCD Instrument cluster is designed lightweight and compact. Thanks to its full-LCD design, it eliminates motor and needle mechanics, it weighs only 275g. (i.e. GSR750 instrument: 320g, GSX-R1000 instrument: 380g)
  - Instruments are brightness-adjustable full LCD. The LCD readouts includes;
    - Speedometer
    - Tachometer
    - Odometer
    - Dual trip meter
    - Gear position
    - Water temperature
    - Driving range
    - Average fuel consumption
    - Instant fuel consumption
    - Traction control mode
    - Fuel gauge
    - Clock
- |  |                          |
|--|--------------------------|
|  | Instant fuel consumption |
|  | Average Fuel consumption |
|  | Driving Range            |
- White back light for good visibility in night time riding.
  - LED indicators include a turn signal, high-beam, Neutral, Malfunction indicator, ABS, traction control system and coolant temperature /oil pressure indicator lights are designed to easy to recognize.
  - Bar-type tachometer features “peak-hold” function, which shows peak rpm when rpm drops. So rider can recognize the peak rpm of the last moment when downshifting.

## Suzuki Easy Start system



32-bit ECM



Starter switch

- GSX-S1000 features a new Suzuki Easy start system. On the regular motorcycle engine starting, rider need to press-hold the starter switch until the engine fires up. On the GSX-S1000, all you need to do is just one-push the starter switch just like the recent automobile's engine start system. The 32-bit ECM recognizes the signals and keeps starter motor working for a certain time.
- Thanks to the new system, rider doesn't have to pull the clutch lever in engine starting. (when the gear is in neutral)

## Chassis design

Newly designed chassis is engineered in compact, lightweight package to provide agile, fun-to-ride character for variety of riders. And it is aimed to perform best in real world riding conditions - all roads which riders meet on public roads, city traffic, highway, rural roads and winding roads.



| Model         | Curb weight                       |
|---------------|-----------------------------------|
| GSX-S1000     | 207kg (208kg for California spec) |
| GSX-S1000 ABS | 209kg (210kg for California spec) |

## Low seat and slim bodywork



- Seat height is 810mm, the lowest in 1000cc sport naked class.
- Seat and fuel tank meet slim, it makes feet reach ground easier.



## Frame / Swingarm



- Newly designed main frame is aimed to provide nimble handling and great road holding performance.
- Main tube is designed straight from steering head to swingarm pivot. It is ideal design to achieve both high rigidity and lightweight.
- The frame is designed with latest FEM analysis technology; the weight of the frame is lighter than that of the current GSX-R1000.



- The aluminum alloy swingarm is derived straight from the current GSX-R1000.
- The highly rigid, ruggedly braced swingarm provides great road holding performance and Superbike looks.

## Dimensions and Ergonomics

- Riding position is designed for sporting comfort. Sporty yet upright riding position reduces rider's fatigue and increase the visibility.
- The seat height is 810mm, the lowest in the 1000cc roadster class.
- The seat to fuel tank interface has a slim design, making it easy for riders to plant their feet firmly on the ground.

| Dimension   | GSX-S1000       |
|-------------|-----------------|
| Wheelbase   | 1460mm (57.5in) |
| Rake/Trail  | 25° / 100mm     |
| Seat height | 810mm           |



GSX-S1000



GSX-R1000

### Fully adjustable, inverted front forks



- Newly equipped, 43mm KYB Inverted front fork has 120mm stroke, provide sporty yet plush ride.
- The front fork is fully adjustable damping, rebound, compression and spring pre-load.

### Rear suspension



- Link-type shock unit has 63 mm stroke, tuned for a superb progressive feel, reacts efficiently to road surface conditions, delivering an agile and stable feel.
- Rear suspension is adjustable for rebound damping and spring pre-load.

## Brembo radial mount brake calipers and ABS

Brembo mono-block calipers



ABS control unit



- Brembo mono-block front brake calipers are mated with 310mm floating-mount dual discs provides strong braking performance.
- The front brake calipers have four opposite pistons. (all 32mm)
- The front brake calipers are same type used on 2014 GSX-R1000.
- Antilock Brake System (ABS)\* monitors wheel speed 50 times per wheel rotation, and matches stopping power to available traction.
- ABS control unit, produced by BOSCH, is compact and lightweight design, weights only 640g.

\* Please note that ABS is a supplemental device for brake operation, not a device for shortening stopping distance. Always remember to reduce speed sufficiently before approaching curves and corners.

## Wheels and tires



- Newly designed, 6-spoke cast aluminum wheels, manufactured by TRP, are made light weight, provide nimble handling and sporty appearance.
- Dunlop radial tires, D214F (front) and D214R (rear) provide great grip in sport riding on the public roads.

|            | Size       | Brand |
|------------|------------|-------|
| Front tyre | 120/70ZR17 | D214F |
| Rear tyre  | 190/50ZR17 | D214  |

## Handlebar



- Handlebar is Renthal Fatbar. Its aluminum made, tapered design increases the rigidity of the handlebar, and reduces weight and vibration
- Renthal is known as top-end handlebar brand in off-road motorcycle world. Its mat-black finish and Renthal logo on the center enhances customized look in the cockpit.

Styling design concept:

## “The crouching beast”

It impresses you with wild, bold and aggressive look.

- Overall shape is inspired by a beast crouching for hunt.
- LED position lights are shaped as look of “fang” of the beast.
- A combination of black plastics and painted parts emphasize its sporty and aggressive image.
- As the targeted customer is matured 40’s and above, the designer intends to create classy touch on the styling design.
- The bodywork is designed with muscular, rounded surface while the overall shape is in aggressive form.



Image sketch



## Headlight and Turn signal lights



- Distinctively shaped headlight is multi-reflector type with 12V60/55W bulb.
- LED position lights are located under the headlight, shaped as a look of fang of a beast.





## **Radiator shroud**

The radiator shrouds are made of layered surfaces that emphasize its dynamic, wild, and fierce attitudes. They also contribute to aerodynamics and cooling performance.

## **Belly pans**

The belly pans are designed in sharp lines and surfaces that connected dynamically to the tail section.

## **Tail section**

The rear frame covers and tail section are made of layered surfaces. With the combination of painted parts and black parts emphasizes sharp and clean look of tail section. Its short tail design emphasizes the wild street fighter looks.

## **Short muffler**

Muffler is designed short and compact, thanks to its chamber design, creates clean look of rear section.

## Rear combination lights



- Thin, flatly shaped rear combination lights use LED for high visibility and long life. It is double lens design that emphasizes classy look of tail section.
- License plate light uses 12V5W bulb.

## Seat



- Seat shape is tailored for sport riding – easy to move around, good grip of seat skin.



Metallic Triton Blue



Sparkle Black / Candy Daring Red



Mat Fibroin Gray

## Tentative Specifications

|                     |       |  |
|---------------------|-------|--|
| Overall Length      |       | 2,115 mm                                       |
| Overall width       |       | 795 mm   |
| Overall height      |       | 1,080 mm                                       |
| Wheelbase           |       | 1,460 mm                                       |
| Ground clearance    |       | 140 mm   |
| Seat height         |       | 810 mm   |
| Curb mass           |       | 207kg (non-ABS model), 209kg (ABS model)       |
| Engine type         |       | Four-stroke, liquid-cooled, DOHC, in-line four |
| Bore x stroke       |       | 73.4 mm x 59 mm                                |
| Engine displacement |       | 999 cm   |
| Compression ratio   |       | 12.2 : 1                                       |
| Fuel system         |       | Fuel injection                                 |
| Starter system      |       | Electric                                       |
| Lubrication system  |       | Wet-sump                                       |
| Transmission        |       | 6-speed constant mesh                          |
| Suspension          | Front | Inverted telescopic, coil spring, oil damped   |
|                     | Rear  | Link type, coil spring, oil damped             |
| Rake / trail        |       | 25° / 100mm                                    |
| Brakes              | Front | Disc brake, twin                               |
|                     | Rear  | Disc brake                                     |
| Tires               | Front | 120/70ZR17M/C (58W) tubeless                   |
|                     | Rear  | 190/50ZR17M/C (73W) tubeless                   |
| Ignition system     |       | Electronic ignition                            |
| Fuel tank capacity  |       | 17 L   |