

2011

GSX-R 750

TECHNICAL INFORMATION

| | | | |
|---|----|---|----|
| Introduction | 3 | 3. Precise engine control and environmental performance | 30 |
| 1. Product Concept | 4 | (1) Suzuki Dual Throttle Valve (SDTV) | 30 |
| 2. Key Features Overview | 6 | (2) Idle Speed Control (ISC) | 30 |
| Chassis | 8 | (3) Engine Control Module (ECM) | 31 |
| 1. Outline of chassis | 9 | (4) Iridium plugs | 31 |
| (1) Frame | 10 | (5) Muffler | 32 |
| (2) Front suspension | 11 | (6) Suzuki Exhaust Tuning (SET) | 33 |
| (3) Rear suspension | 12 | (7) Pulsed-AIR (PAIR) injection | 33 |
| (4) Swingarm | 12 | (8) Air cleaner | 34 |
| 2. Outline of braking system | 13 | (9) Radiator | 34 |
| (1) Front brake calipers (Brembo) | 14 | 4. Instruments | 35 |
| (2) Rear brake | 15 | (1) Instrument cluster | 35 |
| 3. Adjustability | 16 | (2) Handlebar controls | 36 |
| (1) Riding position | 16 | (3) Immobilizer | 36 |
| (2) Seat | 17 | Styling | 37 |
| (3) Adjustable footpegs | 18 | 1. Styling concept | 38 |
| (4) Electronically controlled steering damper | 18 | 2. External components | 42 |
| 4. Lightweight wheels and high-grip tires | 19 | (1) Lower cowling | 43 |
| (1) Front axle | 19 | (2) Fuel tank | 43 |
| (2) Front wheel | 19 | 3. Trademark styling | 44 |
| (3) Rear axle | 20 | (1) Headlights | 44 |
| (4) Rear wheel | 20 | (2) Turn signals | 45 |
| (5) Tires | 21 | (3) Rear combination lamps | 45 |
| Engine | 22 | 4. Body colors | 46 |
| 1. Outline of engine | 23 | Specifications | 47 |
| (1) Outstanding low-to-mid rpm range performance | 23 | | |
| (2) GSX-R750 engine performance | 24 | | |
| 2. Lighter engine, enhanced running performance | 25 | | |
| (1) Piston rings | 25 | | |
| (2) Valve design | 25 | | |
| (3) Crankcase | 26 | | |
| (4) Suzuki Composite Electrochemical Material (SCEM)-plated cylinders | 26 | | |
| (5) Compactly designed engine layout | 27 | | |
| (6) Back-torque limiter | 28 | | |
| (7) Suzuki Drive Mode Selector (S-DMS) | 29 | | |

Introduction



Since the introduction of the GSX-R750 in 1985, the GSX-R range has been adored enthusiastically by sports-oriented riders all over the world.

As far as technical evolution is concerned, the new GSX-R750 shares much in common with the new GSX-R600, because we developed these models in parallel.

The uniqueness of the GSX-R750 is to be found in the displacement.

Initially, the original existing GSX-R series started out with a 750cm³ engine. Then, because of race regulation changes and market demands, the 600 and 1000 were developed and the GSX-R range has evolved. During that time, one after another, our competitors abandoned the 750cm³, but Suzuki stayed.

Why did we stay? Because, once again, the 750 is where our roots lie, and also, we believe this is one of the ideal displacements where the engine output and machine weight balance up.

We are sure that all our customers will enjoy this advantage - not only on race tracks but also on public roads.

1. Product Concept

(1) The Top Performer

Experience a breathtaking combination of outstanding engine performance, nimble handling, compact size and light weight. Experience the GSX-R750 – the latest version of The Original GSX-R, the best choice for riders who appreciate a state-of-the-art 750cm³ engine combined with the compactness of a 600cm³ Supersport.

(2) Improved running and environmental performance

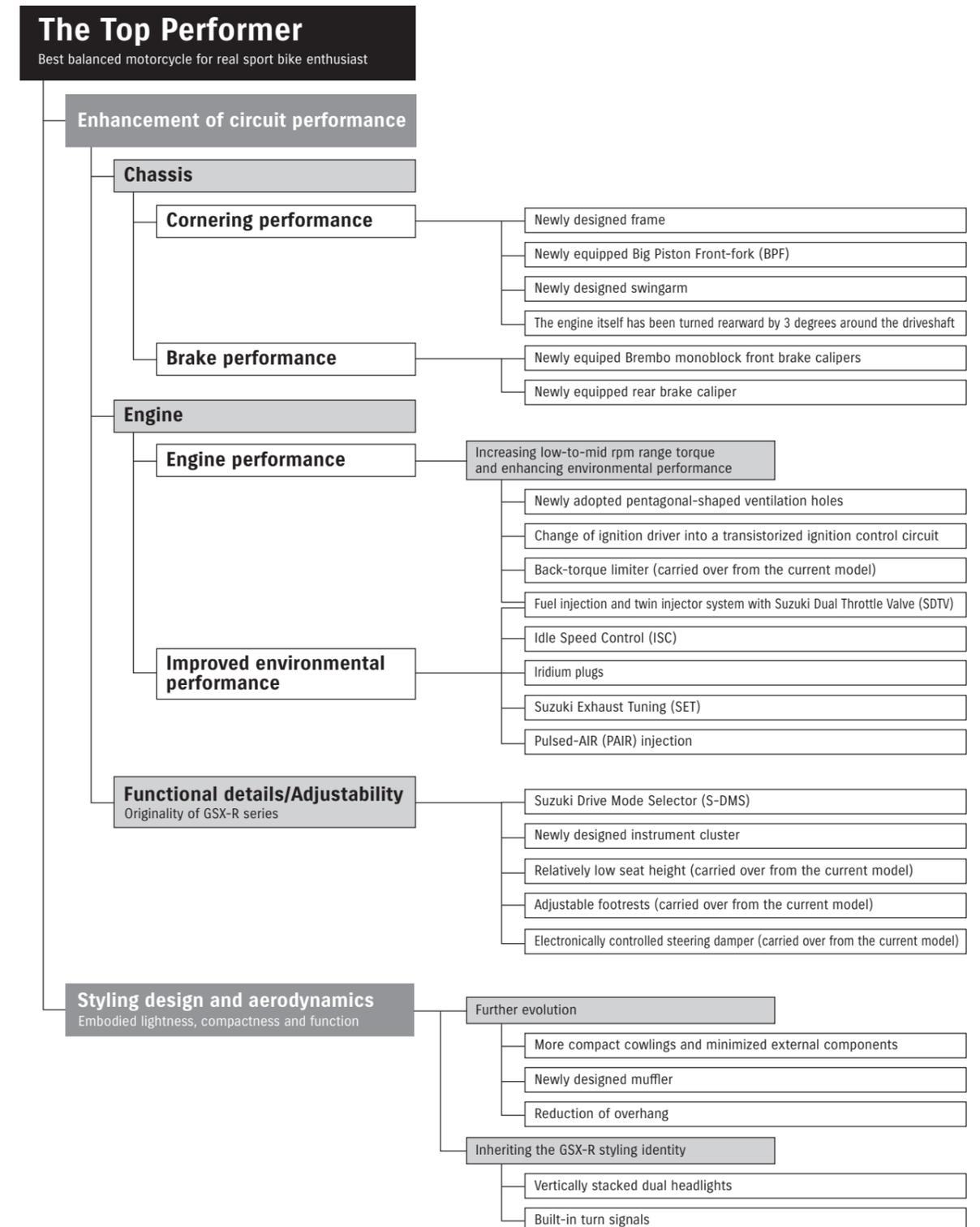
Compared to the current model, the latest GSX-R750 has a 8 kilograms lighter curb mass, 15mm shorter wheelbase and reduced (by 55mm front and 35mm rear) overhang, as well as approximately 10% better fuel mileage (WMTC mode, Suzuki in-house research) and lower emissions.

| Parts | Weight Reduction (grams) |
|----------------------|--------------------------|
| Exterior resin parts | 3,400 g |
| Muffler | 1,100 g |
| Main frame | 1,350 g |
| Front forks | 1,040 g |
| Swingarm | 900 g |
| Front brake calipers | 405 g |

(3) Attractive styling embodying outstanding running performance

The instantly recognizable GSX-R design with vertically stacked dual headlights, built-in turn signals and taillight is now lighter and more compact to deliver the best balance.

2011 GSX-R750 Concept Chart



2. Key Features Overview

Feature map of the new GSX-R750

(1) Frame

The newly designed aluminum-alloy twin-spar frame features a lightweight and shorter-wheelbase design (15mm shorter compared to the current model). (See page 10)



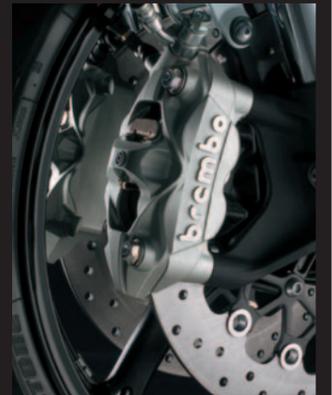
(2) Front suspension

The Big Piston Front-fork (BPF) is a new design created with racing feedback. The BPF delivers stable damping performance even during hard braking, resulting in greater smoothness of fork action. (See page 11)



(3) Front brake calipers (Brembo)

The front brake calipers are changed to a one-piece monoblock design by Brembo. The brake system components were reviewed down to details to deliver stopping performance that's not only powerful but also highly controllable with a superb feel. (See page 14)



(4) Engine

Changes to various moving parts reduce mechanical losses and enhance low-to-mid rpm range performance. The engine/chassis performance balance is as refined as ever, thanks to the lighter chassis. The overall engine performance potential is significantly upgraded. (See page 22)



(5) Suzuki Drive Mode Selector (S-DMS)

The new S-DMS allows the rider to select between two engine performance maps to suit the rider's personal preferences in different riding situations. (See page 29)



(6) Muffler

The newly designed muffler is compact and 1,100 grams lighter. (See page 32)



(7) Rear combination lamps

Distinctive LED combination lamps are built into the tail section that's slim-styled and thin-shaped. (See page 45)



(8) Headlights

The new model inherits the vertical dual headlights, long a GSX-R trademark. They are lighter by 562 grams. (See page 44)



(9) External components

By minimizing the external components, which weight is reduced by 3,400 grams, they contribute for better aerodynamics and wind protection. (See page 42)



(10) Instrument cluster

The instrument cluster is high functional type which is the same as that of 2010 GSX-R1000. The engine rpm indicator which is installed in GP machine is adopted. (See page 35)



Chassis



Chassis

1. Outline of chassis

Features

1. Chassis designed with emphasis on light weight and compactness

- The new components were developed with priority on keeping the weight low.

2. Lighter chassis enhances basic performance

- Handling performance is enhanced with a 15mm-shorter wheelbase.

3. Upgraded suspension and brakes

- Big Piston Front-forks (BPF) are adopted for the front suspension, similar to that on the 2010 GSX-R1000.
- Front brakes newly use Brembo monoblock calipers.

Benefits

- The lightweight, compact chassis realizes nimble handling.
- The vehicle/rider mass is better centered by the shortened wheelbase and overall length. Reduction of inertial mass enhances handling performance.



2011 GSX-R750

2010 GSX-R750



(1) Frame

Features

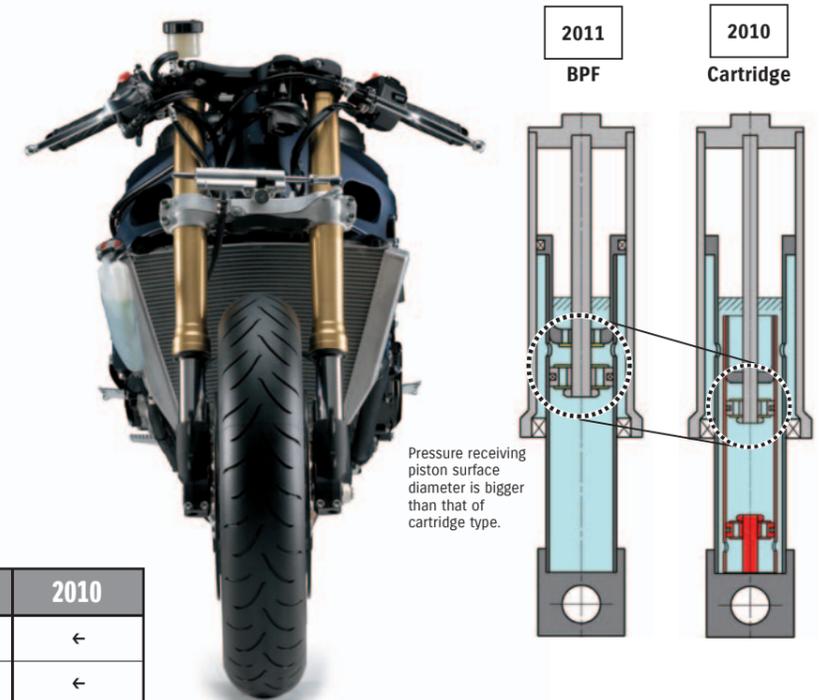
- New cast-aluminum twin-spar frame composed of five sections. The new frame is designed with emphasis on weight reduction.
- Material thickness of each frame section has been carefully optimized (the thinnest section has been narrowed from 3.5mm to 3.0mm), resulting in frame weight reduced by 1,350 grams.
- The seat rail is now narrower, making it easier for the rider to straddle the machine.
- In order to further optimize chassis dimensions, the wheelbase has been shortened by reviewing the layout of the frame and other sections, while keeping the swingarm length the same as the current model.



(2) Front suspension

Features

- The front suspension newly features inverted telescopic type Big Piston Front-forks (BPF) made by SHOWA and developed with racing-technology feedback. The forks use 41mm-diameter inner tubes, and the overall fork assembly, in particular the fork outer tubes, are newly designed. The new forks are 1,040 grams lighter compared to the forks on the current model.
- The BPF design relocates the fork springs to each fork leg, where they are completely submerged in oil. This reduces fork oil foaming and thus contributes to a more stable damping performance.
- Damping force and spring preload are both fully adjustable.



| | 2011 | 2010 |
|---------------------|--------|------|
| Front fork stroke | 120 mm | ← |
| Inner tube diameter | 41 mm | ← |

Benefits

- The new BPF particularly improves damping performance at slow speeds at the start of compression. It features a direct operating feel such as when changing directions through tight S curves, delivers a highly controllable handling performance and also contributes to high stability during braking.
- The new forks make possible a linear reaction to the rider's intentions, such as when changing directions and leaning into corners.
- The forks provide a smooth operating feel, and makes for better road-surface contact and turn-in performance.
- Overall, the design delivers stable response from the start of fork compression, and makes for heightened precision of fork compression and delivers better feedback to the rider.

(3) Rear suspension

Features

- The rear suspension comes with fully adjustable spring preload and rebound and compression damping force. Compression damping is a 2-way – high-speed and low-speed – adjustable type, making possible precise settings.
- A ride-height adjustment system is equipped.



| | 2011 | 2010 |
|------------------------------|--------|------|
| Rear suspension rod diameter | 14 mm | ← |
| Rear wheel travel | 130 mm | ← |

(4) Swingarm

Features

- Swingarm design has been reviewed, resulting in a weight reduction of 900 grams.
- The cushion lever is changed to pressed aluminum, from forged aluminum in the current model, while the arm structure is changed from die cast and plate to a cast, contributing to its weight reduction.



Benefits

- Further optimization of rigidity and reduced weight result in enhanced cornering performance and straightline stability.

2. Outline of braking system

Features

- The front brake system uses newly designed Brembo monoblock-construction cast-aluminum-alloy calipers, which feature high caliper-body rigidity and light weight.
- The 4-piston calipers are radial-mounted.
- The rear brake uses a compact and lightweight caliper shared with the GSX-R1000.
- The overall brake system is designed to heighten brake feel, with the goal of delivering better brake performance on racetracks.



(1) Front brake calipers (Brembo)

Features

- The new Brembo calipers are radial-mount, lightweight monoblock-construction opposed-4-piston calipers. Piston sizes were changed from 32-30mm to 32-32mm.
- Rather than the purely functional shapes of conventional brake calipers, the new Brembo calipers are shaped with an insistence on a visually pleasing design including the logo section, thus expressing a feeling of precision and cutting-edge performance.
- The mounting bolts are now the hollow type, to further reduce weight.
- The front brake system is 405 grams lighter as a whole compared to those on the current model.



2011 GSX-R750 front brake caliper



2010 GSX-R750 front brake caliper

| | 2011 | 2010 |
|-----------------------------------|-----------------------------|--------------------------------|
| Brand | Brembo | TOKICO |
| Caliper type | Opposed 4-piston, monoblock | Opposed 4-piston, conventional |
| Mounting | Radial | ← |
| Piston diameter | 32 mm / 32 mm | 32 mm / 30 mm |
| Master cylinder diameter (NISSIN) | 17.46 mm | ← |

Benefits

- The lighter weight of the brake system reduces chassis weight, and by itself contributes to enhanced brake performance.
- The monoblock construction is advantageous in reducing caliper weight.



2011 GSX-R750 front brake disc



2010 GSX-R750 front brake disc

| | 2011 | 2010 |
|----------------|--------|------|
| Disc diameter | 310 mm | ← |
| Disc thickness | 5.0 mm | ← |

(2) Rear brake

Features

- The new compact, lightweight NISSIN-made rear brake caliper is shared with the GSX-R1000 (the caliper body is the same).
- The rear brake system as a whole is 262 grams lighter than the current model.



2011 GSX-R750 rear brake disc



2010 GSX-R750 rear brake disc

| | 2011 | 2010 |
|-----------------|----------|----------|
| Disc diameter | 220 mm | ← |
| Disc thickness | 5.0 mm | ← |
| Piston diameter | 30.23 mm | 38.18 mm |

Benefits

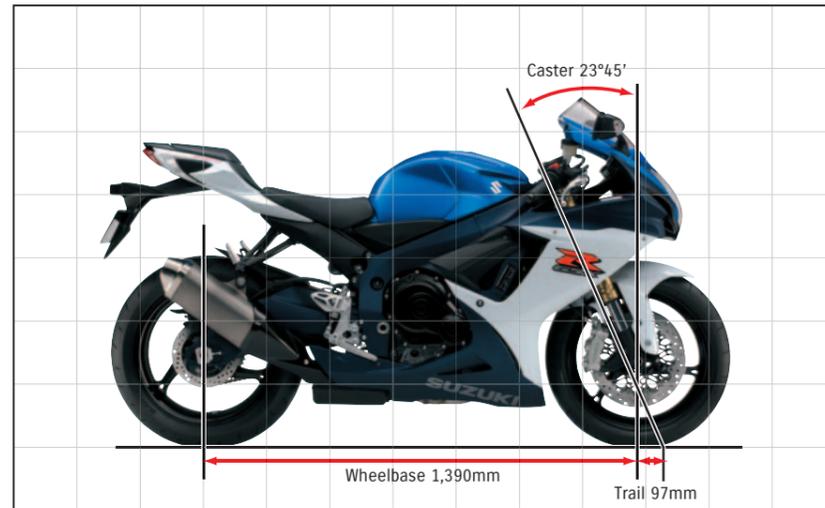
- A more compact and lightweight rear brake caliper helps reduce unsprung weight.

3. Adjustability

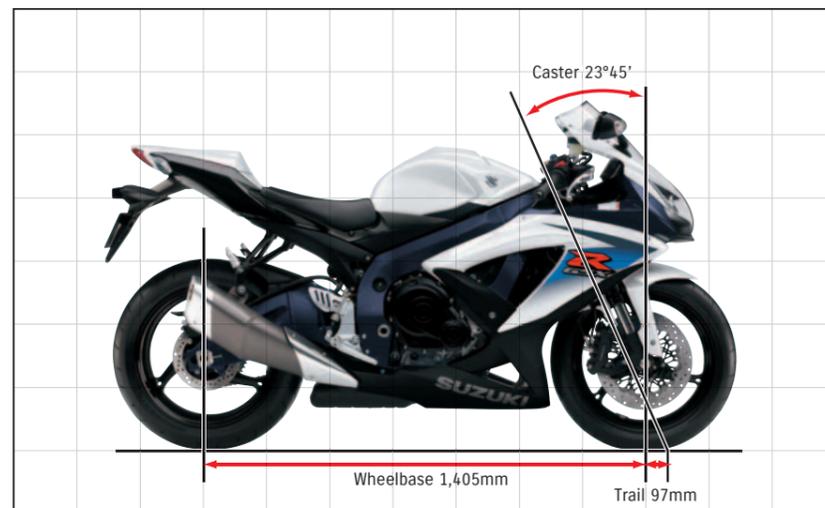
(1) Riding position

Features

- Taking advantage of the 15mm-shorter wheelbase, the new riding position puts the handlebars at a shorter distance from the rider's hip point, and the handlebars are placed relatively low. The new riding position offers a high degree of comfort and freedom of rider movement.
- The handlebars are positioned at a 1-degree wider angle and the fuel tank shape has been reviewed taking into account various riding situations, such as tucked-in at racetracks, sport riding, handling through streets, long rides where comfort becomes more important, etc.



2011 GSX-R750



2010 GSX-R750

Benefits

- The changes contribute to a better-centered vehicle/rider mass, ease of changing directions through corners, and nimble handling.

(2) Seat

Features

- For user convenience, the GSX-R750 has a relatively low seat height (810mm, carried over from the current model).
- The sections around the seat are shaped slim for easy straddling and knee grip.
- The seat is shaped to allow much freedom of moving the rider's hip point, and to help make the rider's knee and angle positioning comfortable.
- The seat and surrounding sections are shaped to allow smooth rider weight transfers on racetracks.
- The seat skin is upgraded.
- The weight of the seat section is reduced by 244 grams, by reducing the material thickness at the bottom of the front seat and by using a more compact pillion seat.



2011 GSX-R750



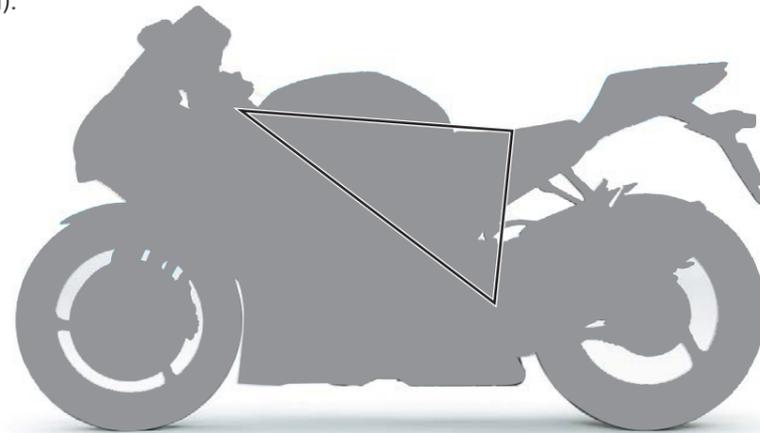
2010 GSX-R750

(3) Adjustable footpegs

Features

- As with the current model, the footpegs are 3-way adjustable, enhancing the freedom of assuming different riding positions. The related components are now reduced in weight (53 grams lighter compared to the current model).

← forward



(4) Electronically controlled steering damper

Features

- An electronically controlled steering damper contributes to handling stability and a more agile feel by increasing the damping force at higher speeds and reducing the damping force at slower speeds (carried over from the current model).

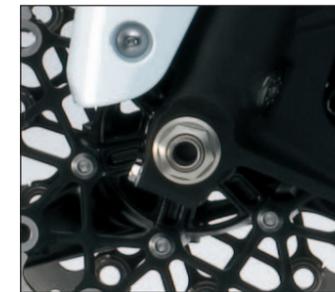


4. Lightweight wheels and high-grip tires

(1) Front axle

Features

- The front axle shaft diameter is reduced from 25mm to 22mm, reducing weight by 46 grams (tightening structure changed from an inside-axle screw/hollow bolt type to an outside-axle screw/nut type).



2011 GSX-R750 front axle



2010 GSX-R750 front axle

(2) Front wheel

Features

- Hub and bearing sizes are reduced in accordance with the smaller-diameter front axle, resulting in a weight reduction of 210 grams as a whole.
- Only the hub section is changed to match the change in axle size; design remains unchanged.
- Wheel sizes remain the same as the current model, 17 M/C x MT3.50.

Benefits

- Lighter weight helps reduce unsprung weight which contributes to better smoothness of suspension operation, helping enhance road-surface contact and nimble handling.



(3) Rear axle

Features

- Rear axle diameter is reduced from 28mm to 25mm.



(4) Rear wheel

Features

- Hub and bearing sizes are reduced in accordance with the smaller-diameter rear axle. Along with the sprocket drum, the total weight was reduced by 240 grams.
- Wheel sizes remain the same as the current model, 17 M/C x MT5.50.



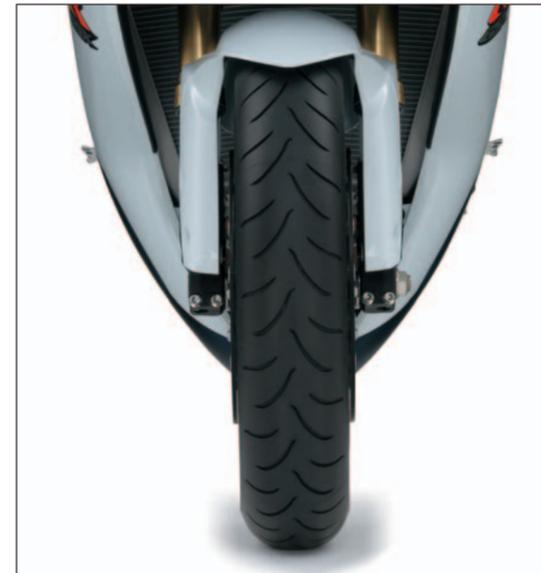
Benefits

- Lighter weight helps reduce unsprung weight which contributes to better smoothness of suspension operation, helping enhance road-surface contact and nimble handling.

(5) Tires

Features

- Carried over from the current model, Bridgestone's high-performance sport tires are employed to realize running performance – the handling and grip – befitting the model's concept "The Top Performer". Sizes remain the same as the current model:



Front



Rear

| | |
|------------------|-------------------------------|
| Front tire size | 120/70ZR17M/C (58W), tubeless |
| Front tire brand | Bridgestone |
| Rear tire size | 180/55ZR17M/C (73W), tubeless |
| Rear tire brand | Bridgestone |

Engine



Engine

1. Outline of engine

(1) Outstanding low-to-mid rpm range performance

Redesigning of various moving parts results in reduced mechanical losses and enhanced low-to-mid rpm range performance, as well as enhancement of overall engine performance potential. The reduced chassis weight results in a further enhanced engine/chassis balance and an even more upgraded overall running performance. The weight of the engine and air intake/exhaust system is reduced by 1,410 grams.

Features

1. Enhanced running performance

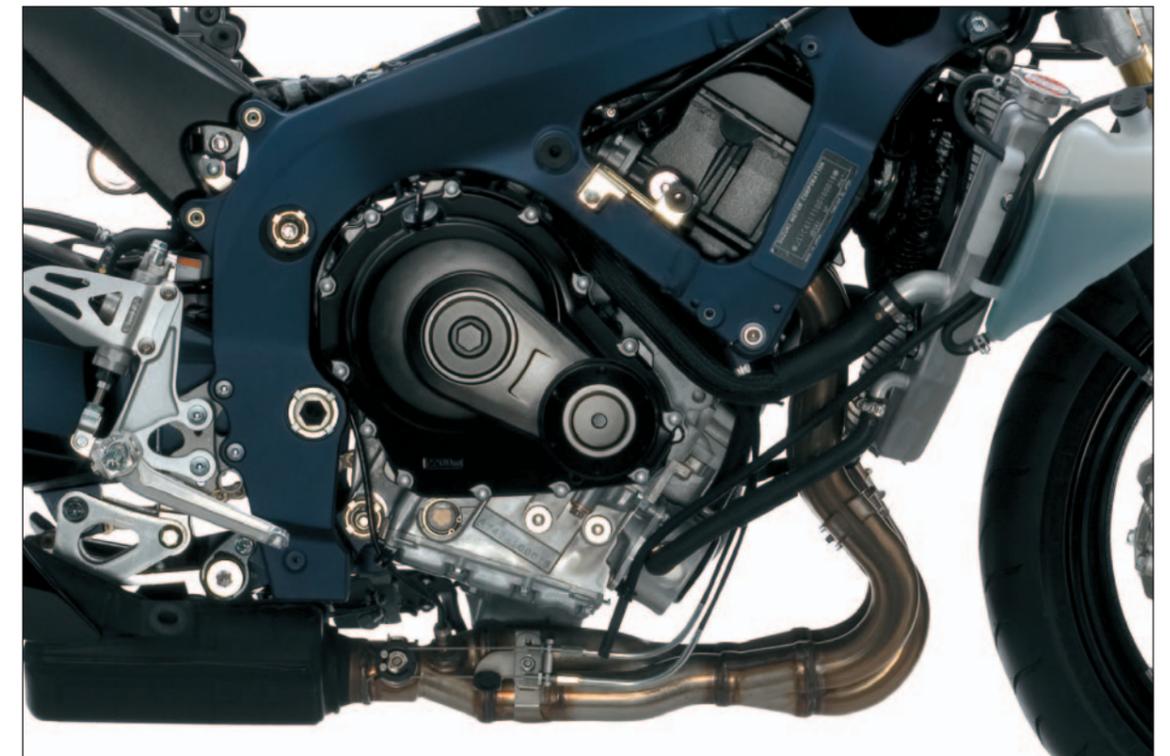
- Highly refined balance of a state-of-the-art 750cm³ machine.
- Lighter weight and reduced mechanical losses result in enhanced running performance.
- Upgraded engine performance in the low-to-mid rpm range (more torque and power) results in a more accessible, more controllable engine performance characteristics.

2. Enhanced environmental performance

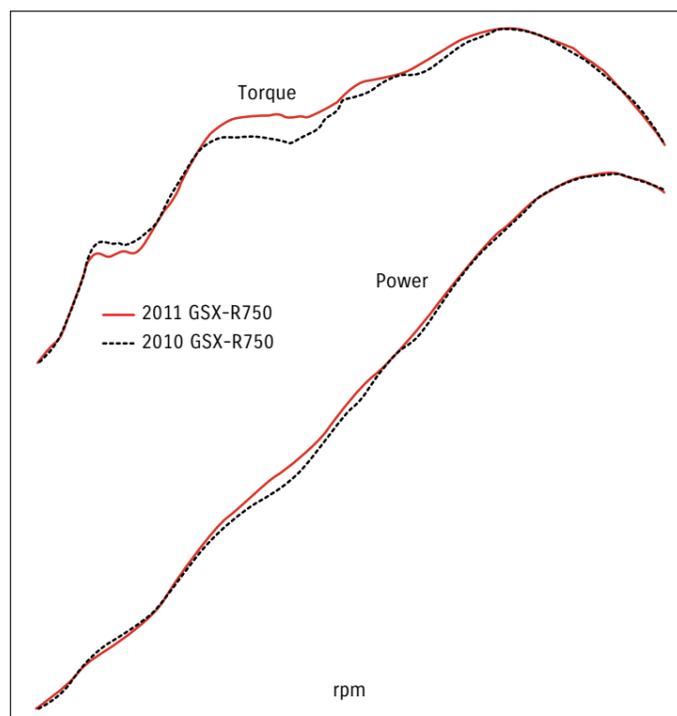
- Fuel mileage is improved by approximately 10% (WMTC mode, Suzuki in-house research). In addition to a combination of lighter engine weight and reduced mechanical losses, the progression of combustion efficiency and the reduction of overall weight also contributed to this improvement.

3. Adjustable performance, with an easy-to-use system

- Suzuki Drive Mode Selector (S-DMS) system with further-refined two-map selection.



(2) GSX-R750 engine performance



| | 2011 | 2010 |
|-------------------|-----------------------|------|
| Maximum power | 110.3 kW / 13,200 rpm | ← |
| Maximum torque | 86.3 Nm / 11,200 rpm | ← |
| Bore × Stroke | 70 mm × 48.7 mm | ← |
| Compression ratio | 12.5 | ← |

2. Lighter engine, enhanced running performance

(1) Piston rings

Features

- As with the current model, the upper compression ring and the oil control ring are chrome-nitride-coated using a Physical Vapor Deposition (PVD) system.

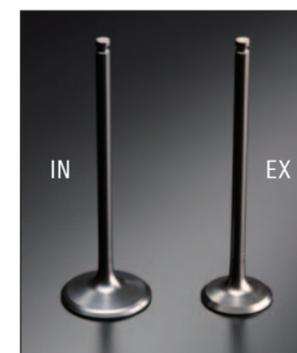
Benefits

- PVD system involves vaporizing chrome nitride inside a vacuum chamber and letting it attach to a surface. Compared to conventional chrome-plating, PVD system makes possible a more uniform plating-surface thickness and a smoother surface processing, resulting in reduced friction losses and reduced oil consumption, together with increased durability.

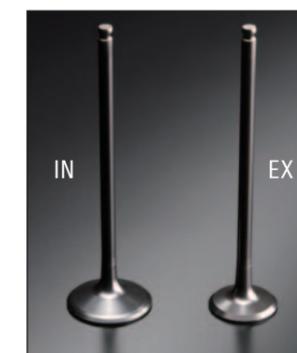
(2) Valve design

Features

- The intake valve is now made of the same titanium quality as the new GSX-R600. The intake valve-head taper angle is also changed.



2011 GSX-R750



2010 GSX-R750

| | 2011 | 2010 |
|---------------------|--------------|------|
| Valve Material (IN) | Titanium | ← |
| (EX) | " | ← |
| Valve Diameter (IN) | 29 mm | ← |
| (EX) | 23 mm | ← |
| Valve Angle (IN) | 10.5 degrees | ← |
| (EX) | 12 degrees | ← |

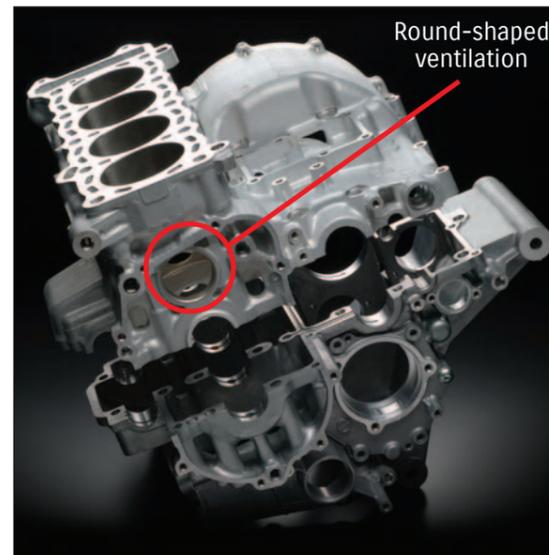
(3) Crankcase

Features

- The pentagonal-shaped ventilation holes at the top of the cast crankcase are both more functional and larger, thus contributing to both weight reduction and airflow.



2011 GSX-R750



2010 GSX-R750

Benefits

- Further reduction of pumping losses and enhanced combustion efficiency, resulting in increased low-to-mid rpm range torque.

(4) Suzuki Composite Electrochemical Material (SCEM)-plated cylinders

Features

- As on the current model, the cylinders are plated with SCEM, Suzuki's well-proven, racing-derived, nickel-phosphorus-silicon-carbide coating technology.

Benefits

- SCEM offers efficient heat dissipation and allows smaller piston-to-cylinder clearances, resulting in superb wear resistance for increased durability.

(5) Compactly designed engine layout

Features

- The engine is rotated rearward by 3 degrees around the driveshaft to reduce the wheelbase to further heighten racetrack performance.



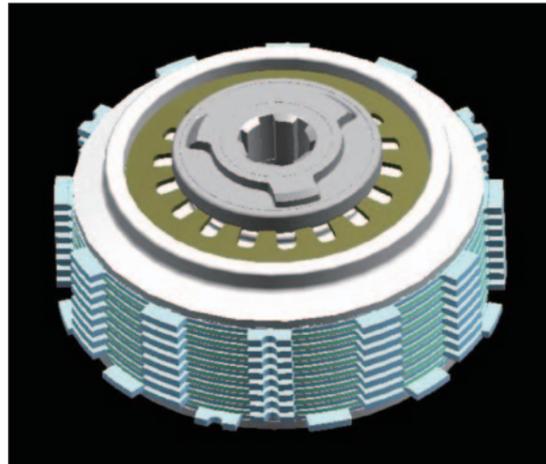
Benefits

- The rotated engine position helped shorten the wheelbase by 15mm, contributing to enhanced handling stability and upgraded cornering performance.
- The shorter wheelbase helps shorten the overall vehicle length, contributing to keeping the chassis compact and reducing inertial moment.
- These upgrades effectively increase racetrack performance to an all-time high.

(6) Back-torque limiter

Features

- The back-torque limiter makes for smoother downshifting operation, and helps the rider make effective use of the powerful engine output and chassis performance.



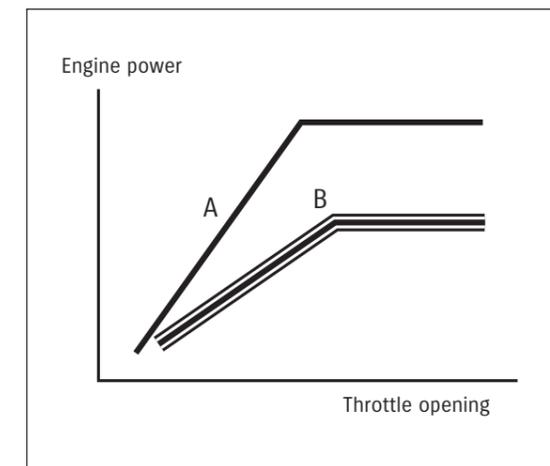
Benefits

- Helps make quick and smooth downshifts on racetracks, etc.

(7) Suzuki Drive Mode Selector (S-DMS)

Features

- S-DMS allows the rider to select a power character to suit the rider's personal preferences in various situations. The latest version features a 2-map selection designed pursuing performance merits and ease of use.
- The S-DMS selection switch is moved to the left handlebar for smoother operation.



Schematic graph



The photo is edited to show all of the instrument lights and displays.



Benefits

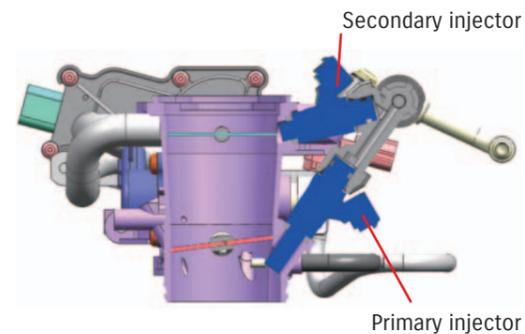
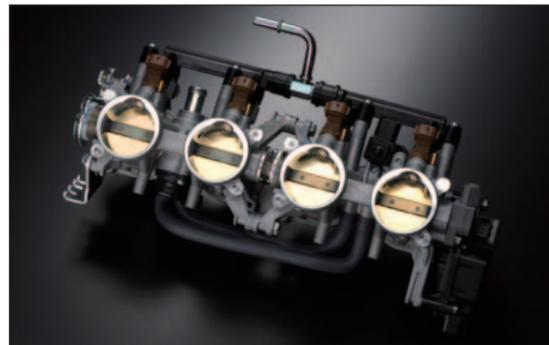
- Map A: Delivers full power performance.
- Map B: Fuel injection setting is modified, delivering a more moderate throttle-response feel.

3. Precise engine control and environmental performance

(1) Suzuki Dual Throttle Valve (SDTV)

Features

- The SDTV system uses two butterfly valves in each throttle body to realize fine control of fuel injection.
- The primary injector angle is changed from 41 to 35 degrees to optimize the direction of fuel spray.
- The system uses fine-spray-type primary and secondary injectors. The injectors are now more compact, allowing more freedom of layout (the new layout also resulted in the air cleaner attaching section changed to a flange type).



Benefits

- Prompt, linear throttle response allowing quick action of the much lighter latest GSX-R750.
- Makes for stable combustion when decelerating, transitioning from deceleration to acceleration, etc, and contributes to allowing sophisticated engine-power control feel.

(2) Idle Speed Control (ISC)

Features

- ISC is carried over from the current model.
- ISC constantly maintains stable idling operation, greatly enhancing user comfort. The Engine Control Module (ECM) senses and calculates the difference between actual idling rpm and normal idling rpm; an ISC valve located in the throttle body bypass circuit is opened/closed by a stepping motor to regulate the amount of intake airflow and thus compensate to reach the normal idling rpm.

Benefits

- When starting in cold climates, the system also conducts fast-idle control by increasing the volume of intake airflow based on engine coolant temperature information from the sensor.

(3) Engine Control Module (ECM)

Features

- Using feedback from MotoGP technology, the ignition driver is changed to an advanced transistorized ignition control circuit, improving performance. The ignition circuit has been reviewed. Countermeasures against heat have been taken.
- The ECM is now located near auxiliary equipment, and the wire harness routing has been improved to reduce the amount of wires, resulting in weight reduction of 250 grams.

Benefits

- The changes allow more detailed control of the ignition logic. In particular, combustion efficiency when throttle is slightly open is heightened and operating feel is improved.



(4) Iridium plugs

Features

- As with the current model, the engine uses efficient and durable iridium spark plugs (NGK-made CR9EIA-9).

Benefits

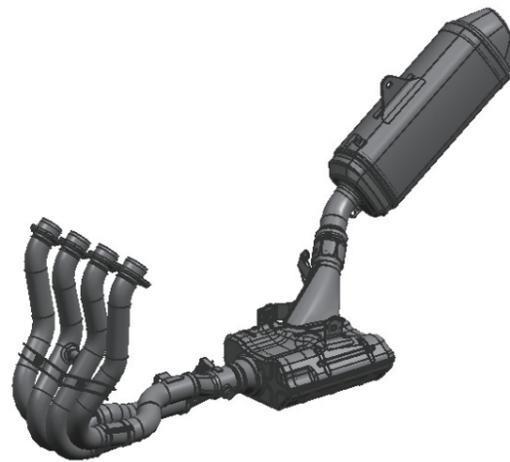
- The efficient and durable iridium spark plugs help realize detailed engine control.



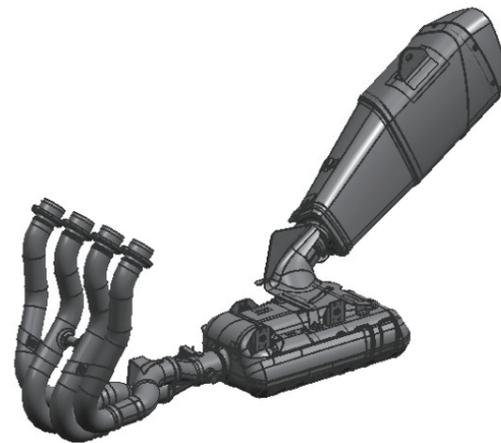
(5) Muffler

Features

- The new-design muffler is more compact and lighter. The 4-into-1 exhaust system is composed of stainless-steel exhaust pipes, an exhaust chamber and a titanium muffler. Thinner exhaust-pipe wall thickness (reduced from 1.2mm to 1.0mm) and more compact chamber and muffler save weight (the exhaust pipes and chamber together are 600 grams lighter, while the muffler is 500 grams lighter).



2011 GSX-R750



2010 GSX-R750

Benefits

- The design realizes Euro3 environmental performance together with compact, sporty looks.

(6) Suzuki Exhaust Tuning (SET)

Features

- As with the current model, the exhaust system is fitted with SET system, an exhaust device that opens/closes a butterfly valve in accordance with the engine rpm.

Benefits

- SET maximizes the exhaust-pulse effect, especially at low-to-mid rpm range, to increase power output.

(7) Pulsed-AIR (PAIR) injection

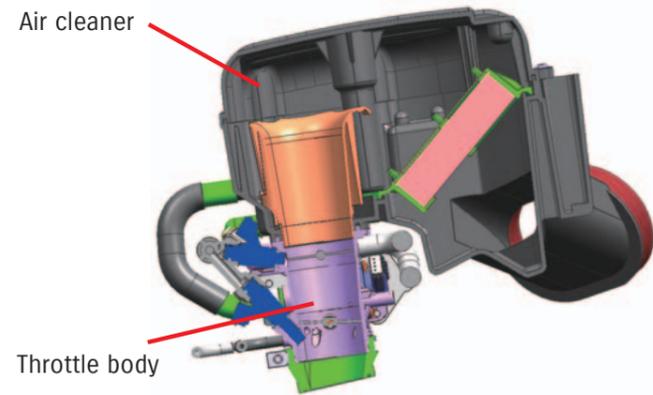
Features

- Built-in PAIR system greatly contributes to environmentally conscious performance.
- The PAIR system directly injects fresh air from the air cleaner box into the cylinder head exhaust port – through a PAIR control solenoid valve which is controlled by the ECM in accordance with throttle position and engine rpm – to react with unburned hydrocarbons (HC) and thus reduce carbon monoxide (CO) emissions.

(8) Air cleaner

Features

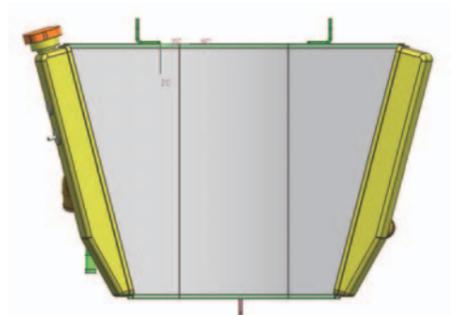
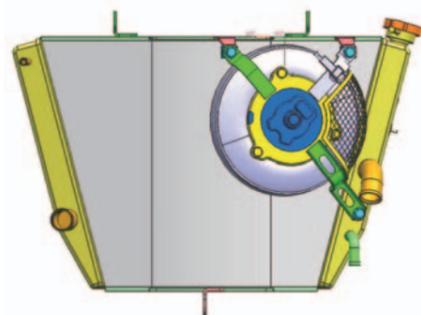
- To further optimize the air-cleaner layout, the shapes of the air cleaner and intake pipe are changed. The changes also realize a weight reduction of 60 grams.



(9) Radiator

Features

- The radiator fan is enlarged (diameter increased from 171mm to 180mm) for better cooling performance.



4. Instruments

(1) Instrument cluster

Features

- The instrument cluster is a full function type shared with the 2010 GSX-R1000.
- A gear position indicator is carried over from the current model.
- Stopwatch and lap timer are newly added, and the LCD is enlarged.
- The engine rpm indicator is derived from MotoGP machines. Unlike that of the current model which can be programmed at only one rpm setting, the indicator can be programmed for four different rpm settings. The indicator can be used as a reference for up-shift timing on racetracks and on winding roads.

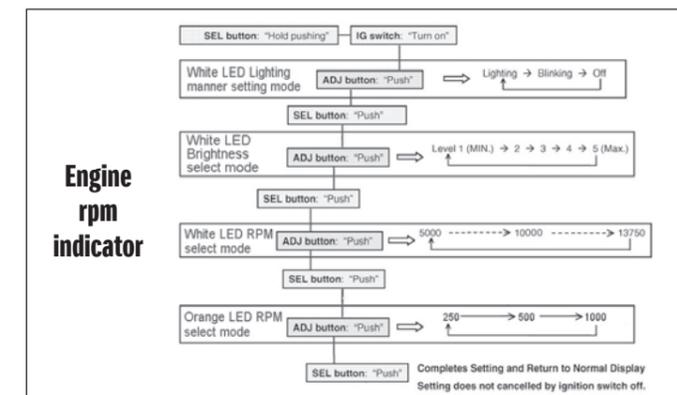


2011 GSX-R750



2010 GSX-R750

The photos are edited to show all of the instrument lights and displays.



(2) Handlebar controls

Features

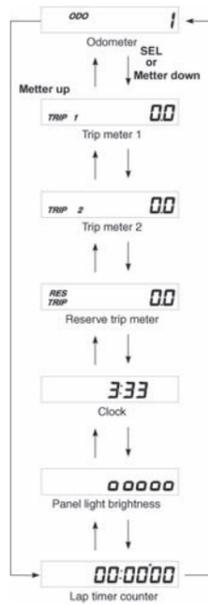
- The S-DMS selection switch is moved to the left handlebar, from the right handlebar in the current model.
- Meter display selection switch on the right handlebar can control the stopwatch and lap timer, and measure times up to 99 minutes and 59.99 seconds.



S-DMS selection switch



Meter display selection switch



(3) Immobilizer

Features

- Immobilizer is standard equipment (except for the North American market). The immobilizer is the rolling-code type: the immobilizer communicates with the ECM using a different code each time the ignition switch is turned on – a complex signaling system that makes for a highly effective theft prevention measure.



1. Styling concept

Features

- A lightweight and compact styling design created with the development goal of delivering, just like the engine and chassis, a truly state-of-the-art racetrack performance. While inheriting the highly popular styling themes of current and previous models, the latest model embodies further refinements that heighten its functionality.
- Styling highlights inherited from previous models, such as the rearview-mirror-integrated turn signals and the vertically-stacked dual headlights.
- Further refinements to realize a more compact, lightweight and functional styling design to help make the latest GSX-R750 more functional not only on racetracks but in a variety of riding situations.

1. More compact

- A compact bodywork. The front overhang is reduced by 55mm, while the rear overhang is reduced by 35mm. Use of a more compact muffler.

2. Lighter

- While pursuing further aerodynamic refinement, the new bodywork is much lighter, realizing a 3,400 gram (35 percent) weight reduction for the plastic bodywork components by reducing the number of parts (eight less parts), reducing overlapping sections, etc.

3. More functional

- A relatively low 810mm seat height. Seat and surrounding sections designed to allow rider much freedom of movement. Side-panel center section shaped with added parts to improve the airflow.
- A combination of smooth curved sections and sharp, edgy sections creates a trim, functional form.



2011 GSX-R750 sketch



2011 GSX-R750



2010 GSX-R750

2011 GSX-R750



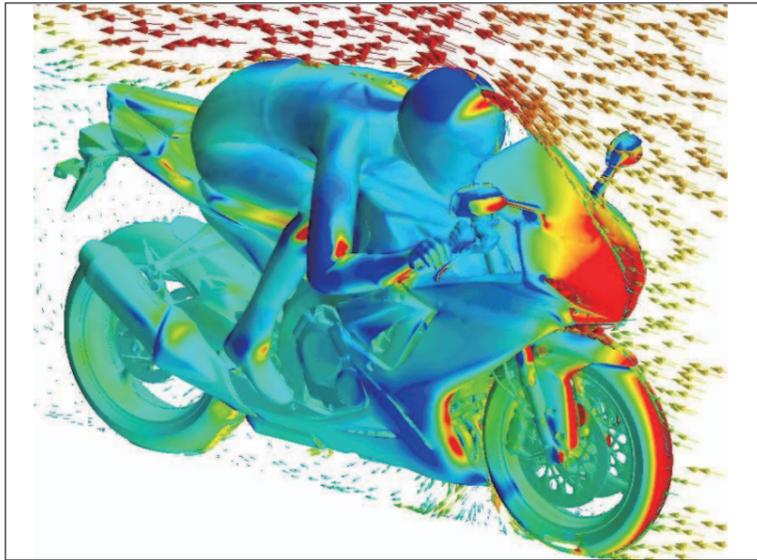
2010 GSX-R750



2. External components

Features

- The front cowling is designed to provide effective wind protection while pursuing compactness and light weight.
- The design, aimed at keeping the frontal area as much as possible to reduce weight, maintains a favorable CdA (aerodynamic) figure and high wind-protection performance (similar to the current model).



Benefits

- Sophisticated airflow management realized with thoroughgoing wind-tunnel testing.

(1) Lower cowling

Features

- The compact and lightweight lower cowling helps smooth the airflow toward the muffler cover.



(2) Fuel tank

Features

- The newly designed fuel tank has the top lowered, to make the shape more convenient for the rider to tuck-in on racetracks. Fuel capacity is 17 liters.
- The tank cover is reshaped for a fresh new styling image.



3. Trademark styling

(1) Headlights

Features

- The latest model inherits the vertically stacked dual headlights layout, the trademark of the GSX-R series. Designed for both aerodynamic refinement and light weight, the headlights now weigh 1,338 grams instead of the current model's 1,900 grams, a weight reduction of 562 grams.
- The headlights deliver ample light distribution with a 12-volt 55-watt low-beam, 12-volt 65-watt high beam and two 12-volt 5-watt position lights.



2011 GSX-R750



2010 GSX-R750

(2) Turn signals

Features

- The latest model inherits the characteristic rearview-mirror-mounted turn signals.



(3) Rear combination lamps

Features

- The LED combination lamp is built into the tailsection that's slim-styled and thin-shaped.
- The rear turn signals are shaped to wrap around well onto the top of the seat cowling, accentuating the impression of the tail section sweeping up rearward to a minimum-sized tail end.



4. Body colors



Metallic Triton Blue / Glass Splash White (GLR)



Glass Sparkle Black (YVB)



Specifications

| Dimensions and curb mass | |
|--------------------------|---|
| Overall length | 2,030 mm (80.0 in.) |
| Overall width | 710 mm (28.0 in.) |
| Overall height | 1,135 mm (44.7in.) |
| Wheelbase | 1,390 mm (54.7 in.) |
| Ground clearance | 130 mm (5.1 in.) |
| Seat height | 810 mm (31.9 in.) |
| Curb mass | 190 kg (419 lbs.) |
| Engine | |
| Engine type | 4-stroke, 4-cylinder, liquid-cooled, DOHC |
| Number of cylinders | 4 |
| Bore × Stroke | 70.0 mm (2.8 in.) × 48.7 mm (1.9 in.) |
| Displacement | 750 cm ³ (45.8 cu. in.) |
| Compression ratio | 12.5 : 1 |
| Valve angle IN. | 10.5 degrees |
| Valve angle EX. | 12 degrees |
| Fuel system | Fuel injection |
| Throttle body size | 42 mm (1.7 in.) |
| Air cleaner | Paper element |
| Starter system | Electric |
| Lubrication system | Wet sump |
| Idle speed | 1200 ± 100 r / min |
| Drive train | |
| Clutch | Wet multi-plate type |
| Transmission | 6-speed constant mesh |
| Gearshift pattern | 1-down, 5-up |
| Primary reduction ratio | 1.761 (74/42) |
| Gear ratio, Low | 2.785 (39/14) |
| 2nd | 2.052 (39/19) |
| 3rd | 1.714 (36/21) |
| 4th | 1.500 (36/24) |
| 5th | 1.347 (31/23) |
| Top | 1.208 (29/24) |
| Final reduction ratio | 2.647 (45/17) |
| Drive chain | RK525 ROZ5Y, 116 links |

| Chassis | |
|--|--|
| Frame | Twin-spar (aluminum alloy) |
| Front suspension | Inverted telescopic, coil spring, oil damped, spring preload fully adjustable, rebound and compression damping force fully adjustable |
| Front fork | SHOWA (BPF) |
| Front fork stroke | 120 mm (4.7 in) |
| Rear suspension | Link type, coil spring, oil damped, fully adjustable spring preload and rebound and compression damping force, compression damping force 2-way (high-speed and low-speed) adjustable |
| Rear wheel travel | 130 mm (5.1 in) |
| Caster | 23°45' |
| Trail | 97.0 mm (3.82 in.) |
| Steering angle | 27° (right & left) |
| Turning radius | 3.4 m (11.2 ft) |
| Front brake | Disc brake, twin |
| Rear brake | Disc brake |
| Front brake disc | 310 mm |
| Rear brake disc | 220 mm |
| Master cylinder Front | NISSIN 17.46 mm |
| Master cylinder Rear | NISSIN 14 mm |
| Caliper cylinder Front | Brembo, 4-piston, 32/32 mm, radial mount |
| Caliper cylinder Rear | NISSIN 1-piston 30.23mm |
| Front tire size | 120/70ZR17M/C (58W), tubeless |
| Rear tire size | 180/55ZR17M/C (73W), tubeless |
| Electrical | |
| Ignition type | Electric ignition (Transistorized) |
| Spark plug | DENSO IU27D / NGK CR9EIA-9 |
| Battery | MF12V 10AH |
| Generator | Three phase AC generator |
| Main fuse | 30A |
| Fuse | HI/LO/IGNITION/SIGNAL/FUEL: 10A FAN:15A |
| Headlight | 12V65W (Hi) / 12V55W (Lo) |
| Turn signal light | 12V21W × 4 |
| License plate light | 12V5W |
| Position / Parking light | 12V5W × 2 |
| Tail light | 13.5V/0.5W LED |
| Brake light | 13.5V/4.9W LED |
| Instrument cluster | Analog tachometer, digital speedometer, odometer, dual trip meter, reserve trip meter, clock, coolant temperature, oil pressure warning indicator, lap timer/stopwatch, S-DMS indicator, gear position indicator, engine rpm indicator |
| Speedometer light | LED |
| Tachometer 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 |
| Engine RPM indicator light | LED |
| Immobilizer indicator light | LED (Except for North American market) |
| Capacity | |
| Fuel tank | 17.0 L (4.5/3.5 US/Imp gal) |
| Engine oil / Oil change | 2.2 L (2.3/1.9 US/Imp qt) |
| With filter change | 2.5 L (2.6/2.2 US/Imp qt) |
| Overhaul | 2.9 L (3.1/2.6 US/Imp qt) |
| Coolant | 2.65 L (2.8/2.3 US/Imp qt) |

