

GSX650F



Glass Splash White / Pearl Vigor Blue (CWH)



Pearl Nebular Black / Metallic Mystic Silver (EGR)



Pearl Nebular Black (YAV)

SPECIFICATIONS

|                         |                                       |
|-------------------------|---------------------------------------|
| Engine type             | 4-stroke, 4-cylinder,                 |
|                         | liquid-cooled, DOHC                   |
| Bore x stroke           | 65.5 mm x 48.7 mm                     |
| Displacement            | 656 cm <sup>3</sup> (656 cc)          |
| Compression ratio       | 11.5 : 1                              |
| Carburetion             | Fuel Injection 36 mm                  |
| Oil capacity (overhaul) | 3.7 L (1.0 US gal.)                   |
| Ignition                | Fully transistorized                  |
| Starter system          | Electric                              |
| Lubrication system      | Wet sump                              |
| Transmission            | 6-speed constant mesh                 |
| Primary drive ratio     | 1.700 (85 / 50)                       |
| Final drive ratio       | 3.200 (48 / 15)                       |
| Frame type              | Double-cradle (High-tensile steel)    |
| Rake/trail              | 26 degrees / 108 mm (4.3 in.)         |
| Suspension              | Front                                 |
|                         | oil damped, adjustable spring preload |

|                |       |                                                                                             |
|----------------|-------|---------------------------------------------------------------------------------------------|
| Suspension     | Rear  | Swingarm, link type, coil-spring, oil damped, adjustable spring preload and rebound damping |
|                |       |                                                                                             |
| Wheels         | Front | 17 M/C x MT3.50, cast aluminum alloy                                                        |
|                | Rear  | 17 M/C x MT5.00, cast aluminum alloy                                                        |
| Brakes         | Front | disc, twin                                                                                  |
|                | Rear  | disc                                                                                        |
| Tyres          | Front | 120/70ZR17M/C (58W), tubeless                                                               |
|                | Rear  | 160/60ZR17M/C (69W), tubeless                                                               |
| Fuel tank      |       | 19.0 L (5.0 US gal.)                                                                        |
| Overall length |       | 2,130 mm (83.9 in.)                                                                         |
| Overall width  |       | 760 mm (29.9 in.)                                                                           |
| Overall height |       | 1,225 mm (48.2 in.)                                                                         |
| Wheelbase      |       | 1,470 mm (57.9 in.)                                                                         |
| Seat height    |       | 770 mm (30.3 in.)                                                                           |
| Dry weight     |       | 216 kg (476 lbs.)                                                                           |

OPTIONAL PARTS



Center Stand

Specifications, appearances, equipments, colors, materials and other items of "SUZUKI" products shown on this catalog are subject to change by manufacturers at any time without notice and they may vary depending on local conditions or requirements. Some models are not available in some territories. Each model might be discontinued without notice. Please inquire at your local dealer for details of any such changes. Actual body color might differ from the colors in this catalog.

■ Always wear a helmet, eye protection and protective clothing. ■ Enjoy riding safely.  
■ Read your Owner's Manual carefully. ■ Never ride under the influence of alcohol or other drugs.

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**GSX650F**





# A Sporty All-Arounders

There's a reason why 650cm<sup>3</sup> is an engine displacement rooted in the history of motorcycling.

There's something about 650cm<sup>3</sup> that just seems right, from engine torque to throttle response, from overall size to visceral feel. Which is why 650cm<sup>3</sup> motorcycles once were the standard, for riding to work on a weekday, or escaping from work on a weekend. For a quick run to the store, an evening cruise, or a sporty Saturday trip along a twisty shoreline to enjoy the view and the cooling breeze. And for everything else a rider would want to do on pavement.

That was then. And this is now.

Introducing a modern incarnation of the classic 650cm<sup>3</sup> motorcycle. The 2008 Suzuki GSX650F, a sporty all-arounder, combining 650cm<sup>3</sup> displacement with exciting styling, advanced technology, modern four-cylinder performance and efficient fuel injection. With the dynamic look of a fully faired sportbike and all-day comfort, thanks to higher handlebars, lower footpegs and a longer, lower one-piece seat.

It has the right look. The right size. The right feel.

Ready to deliver great fun, and great value.

## Modern Four-cylinder Performance



The 2008 GSX650F's efficient fuel-injected engine is packed with race-winning technology developed in Suzuki's famous GSX-R line: four cylinders, liquid cooling, double overhead camshafts, four valves per cylinder, set at a narrow 17-degree angle in compact, clean-burning combustion chambers with an 11.5:1 compression ratio, smooth-acting bucket tappets and a quieter hydraulic cam chain tensioner system. An oversquare bore and stroke of 65.5 x 48.7mm for a racy bore/stroke ratio of 0.744:1 and a full 656cm<sup>3</sup> of displacement working through a six-speed transmission to deliver more performance across the entire rev range, from idle to redline.

A symmetrical cylinder layout, with centered cam drive and tighter spacing between the outside pairs of cylinders, reduces cylinder head width. The aluminum-alloy upper crankcases carry cylinder bores plated with Suzuki's own tough, race-proven nickel-phosphorous-silicon-carbide coating known as Suzuki Composite Electrochemical Material, or SCEM, to improve heat transfer and ring seal while reducing blowby and mechanical losses compared to conventional cast-iron cylinder liners.

The upper compression and oil control rings on each high-compression three-ring slipper piston are electro-plated with a chrome-nitride coating applied in a vacuum chamber using a Physical Vapor Deposition (PVD) system. The chrome-nitride PVD coating is harder and smoother than conventional chrome plating, reducing friction and wear while improving cylinder sealing.

Vertically staggered transmission shafts reduce engine length front-to-rear, and a powerful, compact and lightweight generator is mounted on the left end of the crankshaft to minimize mechanical losses.

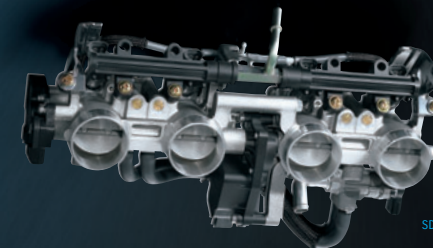
The multi-plate clutch's friction material compound and area have been optimized to improve feel, and the clutch assembly is hydraulically actuated with master cylinder/slave cylinder piston ratios carefully selected to make it easier to pull in the clutch lever. Pressurized engine oil is sprayed onto the fourth, fifth and sixth gearsets inside the transmission, to reduce noise and enhance durability at highway speeds. The use of both inner and outer countershaft sprocket covers reduces mechanical noise from the drive chain, making the GSX650F quieter overall.

A large-capacity water pump feeds a high-efficiency rectangular radiator measuring 380mm wide by 178.6mm tall and 24mm thick, with a heat-dissipation capacity of 24kW. An electrically driven, one-piece, 190mm plastic cooling fan has an integrated ring molded to the tips of the individual blades, eliminating gaps between the blades and their housing and making the fan more efficient. The engine management computer determines when to turn on the fan, based on coolant temperature inside the cylinder water jackets instead of using a conventional thermostat, thus more accurately controlling engine temperature.

The GSX650F powerplant is a case study in high-performance engine design. It is built to perform in the real world, with broad power and refined throttle response delivering smooth forward thrust at the twist of the grip, without grabbing downshifts or waiting for the engine rpm to build. While also producing fewer emissions and better fuel economy.

## Efficient SDTV Digital Fuel Injection And Engine Management

The Suzuki Dual Throttle Valve (SDTV) digital fuel injection system improves power delivery and makes throttle response more linear across the rpm range, while also maximizing fuel mileage and minimizing emissions. An example of Suzuki's advanced high-performance technology, each cylinder's 36mm SDTV throttle body carries two butterfly valves, a primary valve controlled by the rider using the twist grip and a secondary valve operated by a powerful, 32-bit, 256-kilobyte ROM engine management computer. The digital system reads engine rpm, primary throttle valve position and gear selection, then opens or closes the secondary valves incrementally to maintain the intake air velocity needed for optimum cylinder filling and maximum combustion efficiency. Each throttle body is fitted with a compact multi-fine-hole injector designed to improve fuel atomization and thus contribute to combustion efficiency.



SDTV throttle body

Ignition system mapping is also controlled by the engine management system, with separate maps for each cylinder based on crankshaft position, engine rpm and throttle position. A separate ignition coil is built into each spark plug cap, minimizing voltage losses encountered with traditional coils, spark plug wires and caps.

The engine management system also controls Suzuki's built-in Pulsed-secondary AIR-injection (PAIR) system, which injects fresh air from the large, 6.2-liter airbox through a solenoid control valve and a set of reed valves into the individual exhaust ports, igniting unburned hydrocarbons and reducing carbon monoxide. The exhaust system carries a catalyst and is fitted with an oxygen sensor to allow the engine management system to monitor combustion efficiency and adjust the fuel injection as needed to minimize emissions. The muffler is made of attractive stainless steel.

An automatic Idle Speed Control (ISC) system regulates the amount of air fed through the throttle body idle circuits, producing a stable idle while improving cold starting and reducing emissions immediately after start-up.

Working together, the control systems reduce hydrocarbon, carbon monoxide and nitrogen oxide emissions. The 2008 Suzuki GSX650F is one of the cleanest-running middleweight Suzuki motorcycles ever built, meeting tough Euro 3 and Tier 2 emissions standards.

## Leading Edge Styling

The 2008 GSX650F leads the way in styling, with a distinctive sporty look no other middleweight machine delivers. The GSX650F's Suzuki sportbike DNA is displayed by the full fairing and stacked headlights. The integrated lines of the fairing, fuel tank and tailsection make the GSX650F stand out from the would-be competition.



# Modern Running Gear, Designed For Comfort

The double-cradle tubular steel frame is designed with the optimum torsional rigidity to work with the GSX650F's generous power and torque output. Wheelbase is 1470mm (57.87 inches) with 26 degrees of rake and 108mm (4.25 inches) of trail.

The KYB front forks have 41mm stanchion tubes with adjustable spring preload and a full 130mm 5.12 inches) of travel. The GSX650F single-shock rear suspension features a KYB shock absorber with adjustable spring preload and rebound damping, working with a progressive linkage between the shock absorber and the rectangular-section swingarm. The linkage delivers softer initial suspension action to respond to small road irregularities, followed by progressively firmer suspension action as wheel travel increases, improving response to larger bumps. Rear wheel travel is 128mm (5.0 inches).



Front forks

Rear suspension

Cast aluminum-alloy wheels feature three spokes each and measure 3.50 x 17-inch in front and 5.00 x 17-inch in the rear. The tires are a 120/70ZR17 Bridgestone BT011F RADIAL N in front and a 160/60ZR17 BT020R RADIAL G.

Dual front disc brakes use four-piston Tokico calipers, with two pistons on each side of the caliper, and 310mm (12.2-inch) floating discs. The rear brake combines a Nissin caliper with a 240mm (9.45-inch disc).



Front disc brake



Rear disc brake

Seat height is a relatively low 770mm (30.35 inches), making it easier for the rider to touch the ground at a stop. The one-piece integrated rider/passenger seat is designed to be comfortable while riding solo and also when carrying a passenger. The relationship between the seat, the footpegs and the handlebars is a finely balanced mix of sportiness and all-around comfort, and the handlebars are rubber mounted to reduce vibration reaching the rider.

Fuel capacity is a full 19 liters (5.0 U.S. gallons).



One-piece seat

# Full Instrumentation And Advanced Lighting

The GSX650F's instrument cluster is anything but basic, with an analog tach and a digital LCD speedometer and odometer display. An LCD fuel gauge, clock, dual trip meters, reserve trip meter and gear position indicator are joined by a GSX-R racing-inspired bright shift light that can be programmed to remind the rider to upshift at any engine speed up to redline. LED indicator lights include neutral, turn-signal and high-beam indicators as well as an oil pressure, coolant temperature and fuel injection system warning.

The vertically stacked multi-reflector halogen headlight combines a 55-watt H7 low beam and a 60-watt HB3 high beam. The taillight is built into the tailsection, and sporty turn signals feature clear lenses and amber bulbs.



Instrument cluster



Headlight



# Ready For Your Ride, With Style



The 2008 Suzuki GSX650F is a great all-around sporting motorcycle.

Featuring exciting style, with a sporty full fairing and all-day comfort. A strong, four-cylinder engine, in a classic 650cm<sup>3</sup> displacement.

Built using advanced technology developed on the racetrack, including Suzuki's efficient SDTV digital fuel injection system. Delivering smooth power, and fuel efficiency.

High style. High performance. High value.

Waiting for you, at your local Suzuki dealers.