

# Hayabusa

## Perfectly Poised

Famed for its abundant power, agility and majestic presence. Legendary for establishing levels of ultimate sport performance and retaining its position atop the class it created for over two decades. The latest generation provides even smoother power delivery, nimbler handling, and a collection of electronic assist systems that make the Hayabusa more controllable, predictable and reliable. And all this wrapped in a package with breathtaking style and grace.



\* The images include an optional accessory.

### Key Features

The Hayabusa employs an advanced version of the Suzuki Intelligent Ride System (S.I.R.S.); a comprehensive collection of electronic rider aids, such as the Cruise Control and Bi-directional Quick Shift Systems. Only the Hayabusa offers this premium suite of aids that simultaneously boosts performance and comfort.

The latest iteration of the Hayabusa's legendary 1340cm<sup>3</sup>, four-cylinder, DOHC engine is fed by Ride-by-wire Electronic Throttle bodies with dual fuel injectors feeding each cylinder, mixing with pressurized air from the Suzuki Ram Air Direct (SRAD) intakes in the nose of the aerodynamic fairing.

Optimized aerodynamics and wind protection provide comfort while improved braking performance inspires rider confidence.

The Hayabusa is instantly recognizable for its wind-cutting body and styling cues inspired by the peregrine falcon – the world's fastest animal. To bring a sophisticated appearance to the iconic Hayabusa, Suzuki's design team incorporated distinct lines and shapes to achieve an expression of refinement and ultimate performance.

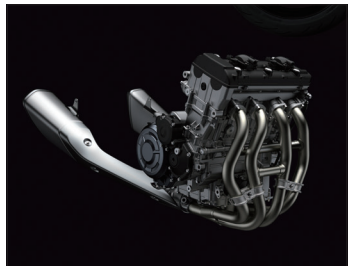
The Hayabusa's familiar instrument cluster skillfully blends large analog gauges flanking a multifunction TFT LCD display to offer outstanding functionality and premium styling in a familiar layout you are sure to love.

### Engine Features

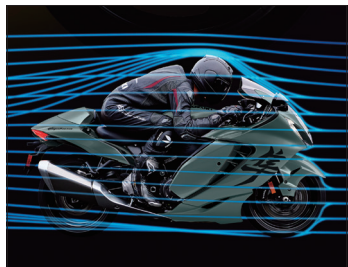
The powerful 1,340cm<sup>3</sup> liquid-cooled, inline-four-cylinder, DOHC



Suzuki Intelligent Ride System (S.I.R.S.)



1,340cm<sup>3</sup> liquid-cooled inline-four engine



Aerodynamic bodywork



The beauty of fine instrumentation

engine has been fully revised to supply a seamless surge of torque for effortless acceleration.

Using techniques developed for the supersport GSX-R1000, the redesigned crankcase features lubrication passages that provide 54% more oil flow to the crankshaft for increased durability.

U-shaped cutouts in cylinder's bores, Suzuki Composite Electrochemical Material (SCEM), and Physical Vapor Deposition (PVD), are all engineered for reducing friction and improving strength and durability.

The lightweight design of the crankshaft, connecting rods and pistons reduces internal vibration, which in turn contributes to greater engine durability.

Changes to the design of the Twin Swirl Combustion Chamber (TSCC) promote faster and more efficient burning of the fuel-air mixture.

The exhaust camshaft's lift has been increased and timing for both camshafts updated to reduce valve opening overlap, boosting low- to mid-range engine performance.

Lightweight titanium valves with higher rate valve springs match the camshaft changes to maintain accurate valve control.

The redesigned cam chain tensioner minimizes chain runout and includes a Teflon coating on the slipper surface to reduce mechanical loss.

Fired by independent ignition coil-caps in each cylinder, iridium spark plugs produce more complete combustion and last longer than conventional plugs.

Changes to the Hayabusa's body permit higher air flow through the radiator, increasing cooling efficiency. The air flow is increased by 8% when the Hayabusa is in motion and approximately 7% when the cooling fan is moving air during low- to mid-speed riding.

The Hayabusa is equipped with Suzuki's Ride-by-wire Electronic Throttle System, which provides light, natural response with linear control similar to that of a conventional throttle.

The precision control achieved over the action of the throttle valves by leveraging the 32-bit ECM makes possible other advanced control systems, including Cruise Control, Launch Control, Anti-lift Control, the Bi-directional Quick Shift System, cold-start up and Idle Speed Control, while also simplifying service procedures.

The electronic throttle bodies made it possible to increase the air cleaner assembly's capacity to 11.5 liters and increase air supply to the engine. The air cleaner's rigid lid and simplified internal structure enhances the intake air sound quality.

The two Suzuki Ram Air Direct (SRAD) intake ducts in the upper fairing route high-pressure, fresh air to the air cleaner boosting performance in a linear fashion as the road speed increases.

The Suzuki Pulsed-secondary AIR-injection (PAIR) system introduces fresh air into the exhaust to ignite unburned hydrocarbons (HC) and reduce carbon monoxide (CO) emissions.

The exhaust system features a lightweight design and styled mufflers that complement the

Hayabusa's look.

The four-into-two-into-one-into-two exhaust system configuration adds pipes connecting the #1 and #4 head pipes to help deliver more power and torque at low- to mid-range speeds.

The exhaust uses a two-stage catalytic converter system that positions a high-flow elliptical converter in the collector followed by a cylindrical one in each of the right and left mufflers to further reduce HC, CO, and nitrogen oxide (NOx) emissions. Dual O<sub>2</sub> sensors provide instantaneous feedback to the ECM for smooth, clean electronic fuel injection operation.

The Hayabusa's 6-speed, close-ratio, constant-mesh transmission can be shifted conventionally or using the Bi-directional Quick Shift System, which allows you to shift up or down more quickly and easily without operating the clutch or throttle.

Hydraulic clutch activation further reduces the lever pull while providing you with a good sense of the clutch's friction zone.

Oil jets in the crankcase spray lubricating oil on the fourth, fifth, and sixth gears to reduce friction, wear, and mechanical sounds during high-speed operation.

The extended length of the countershaft accommodates the SCAS clutch, and longer needle bearings increase durability.

Developed for the Hayabusa, the unique and strong RK GB50GSVZ4 drive chain has larger pins and rollers for reliable and quiet operation.



## Chassis Features

The Hayabusa’s twin-spar aluminum frame and swingarm incorporate aluminum castings along with extruded aluminum sections that provide the right amount of suppleness and strength to its overall rigid alloy frame structure.

The lightweight, redesigned sub-frame is made of longer rectangular steel tubing for ample weight-carrying capacity.

Fully –adjustable KYB inverted forks, featuring a revised internal structure that improves shock absorption, provide a smoother ride with optimum grip.

The forks’ 43mm inner tubes feature Diamond-Like Carbon (DLC) coating to reduce friction and improve reaction to small road surface irregularities.

The rear shock absorber has threaded spring preload adjustment collars plus rebound and compression damping force adjusters.

A steering damper attached to the frame and the lower fork bracket suppresses unwanted vibration and steering forces to provide a light steering feel at lower speeds.

The 7-spoke cast aluminum alloy wheels help improve grip and feel.

Bridgestone’s BATTLAX HYPERSPORT S22 tires use a compound and construction that help improve grip on dry roads and performance in wet conditions, and provide greater all-round agility, as well as excellent straight-line stability and braking grip to deliver a more exciting and confidence-inspiring

ride.

Innovative Brembo Stylema 4–piston front brake calipers feature a light, compact and carefully sculpted design that is intended for use on high–performance motorcycles. They increase airflow around the brake pads to cool more quickly and deliver immediate response.

The Stylema front brake calipers grasp a pair of 320mm stainless–steel full-floating discs with a hole pattern that further helps optimize cooling efficiency.

The handlebars are mounted 12mm closer to the rider. This vastly improves comfort and reduces fatigue when touring, while also enhancing control.

The black-anodized, adjustable clutch and front brake levers have carefully crafted shapes to aid rider control, and feature slots at the ends that reduce the chance of wind pressure pushing against the levers.

The passenger grab rail is positioned to make it easy to grasp.

The passenger seat and grab rail can be replaced by an optional, color matched single seat cowl that acts as a lumbar stop for the rider during solo rides, while enhancing the Hayabusa’s performance-related styling.

## Body & Styling Features

The styling of the bodywork vividly conveys a modern image of advanced performance and features, the wind-cutting silhouette and overall quality look.

• These lines trace from the front

fairing and fuel tank through to the tail section, projecting the aura of high quality and luxury, yet with an aggressive performance stance.

• Adding cleanliness and flair to the bold tail design is a sharp, wide LED rear combination light that incorporates running, brake and turn signal functions.

Extensive wind tunnel testing to ensure the bodywork offers superb wind protection, both for normal and completely tucked-in seating positions, helps achieve the necessary top speed potential and stability by realizing one of the best drag coefficients found on any street legal motorcycles.

• The vertically stacked headlight is a bold styling feature contributes to performance as its location between the large Suzuki Ram Air Direct (SRAD) intake ducts provides high pressure air at speed that boosts engine power.

• Complementing the slippery styling is an aerodynamic windscreen that is shaped to reduce wind blast while permitting a good view of the instrument cluster.

• The black plastic accent pieces that extend from the sides of the upper cowl near the handlebars deflect air away from your elbows and knuckles.

• The streamlined mirrors are positioned low and wide to provide you with a clear rear view.

Small, tasteful versions of the Hayabusa’s Japanese logo are incorporated on the ignition key fob and within the LED headlight housing.

## Electrical Features

Riders adore the outstanding functionality and familiar layout of the Hayabusa’s instantly recognizable instrument cluster.

An update to the large analog tachometer and speedometer give them a fresher, more attractive appearance with larger and bolder numbering that improves readability.

An exceptional feature of the instrument cluster is the TFT LCD panel centrally mounted between the speedometer and tachometer, which displays a variety of information such as the current SDMS-α systems settings, an Active Data display that shows lean angle (with a peak-hold function), front and rear brake pressure, rate of vehicle acceleration or deceleration, and the current accelerator position, as well as the time, gear position, odometer, dual trip meter, ambient air temperature, instantaneous fuel consumption, riding range, trip time, average fuel consumption, and battery voltage displays.

Key to the operation of S.I.R.S. and other electrical features is a Computer Area Network (CAN) style wire harness that functions as an interconnected information network rather than using a more complex and slower conventional wiring harness.

The 400W charging system uses a durable, oil-cooled three-phase stator. A high-capacity, maintenance-free style battery and fuses under the rider’s seat are easily accessible.

Another component supporting S.I.R.S. and other Hayabusa

technology is the Inertial Measurement Unit (IMU) supplied by Bosch.

• The IMU measures six directions of movement along three axes, detecting pitch, roll, and yaw movement based on the motorcycle’s position, movement, and acceleration.

The Hayabusa is equipped with the latest compact Antilock Brake System (ABS) unit from Bosch. Working in conjunction with the IMU, the ABS-unit realizes features such as the Motion Track Brake System, Slope Dependent Control System and Hill Hold Control System.

Highly functional and attractive lighting befits the Hayabusa’s premium sportbike status.

• The two upper and two lower LEDs for the low-beam are mounted in the corners where they shine across a reflector panel and fill the light assembly with attractive illumination.

Hayabusa’s front turn signals are incorporated in the position lights, a first for a Suzuki motorcycle.

• An illumination scheme using white lighting for the position light with the turn signals flashing in orange when signaling creates a unique overall effect that heightens the sense of a luxurious riding experience.

The bold LED taillight and rear turn signal design creates a single wide, sharp accent running horizontally across the bottom of the Hayabusa’s tail section.

## Suzuki Intelligent Ride System (S.I.R.S.) Features

### 1. Control over engine output characteristics

• The Suzuki Drive Mode Selector Alpha (SDMS-α) system provides you with a choice of three factory preset (A, B & C) and three rider-defined mode settings for the Power Mode Selector, Motion Track Traction Control, Anti-lift Control, Engine Brake Control and Bi-directional Quick Shift Systems.

• Factory preset mode A is for active, sporty use, mode B is for general, all-around riding, and mode C is for comfort and touring.

• You can also create three user-defined settings (U1, U2, and U3). These unique settings allow you to quickly and easily tune S. I.R.S. to match your riding style or favorite road.

• The Power Mode Selector (PW) permits selection between three different engine output characteristic modes (1,2 & 3) to match the riding conditions or your preferences.

• Mode 1 provides the sharpest throttle response up to maximum engine power for experienced riders for riding on good road conditions.

• Mode 2 provides a softer throttle response with a more linear power delivery up to maximum engine power for most riders riding on average road conditions.

• Mode 3 provides the softest throttle response and a gentler power curve with reduced maximum output for riders with less experience, or for any rider facing poor road conditions (wet

or dirty surfaces with limited traction).

### 2. Control over engine acceleration characteristics

• Adopted directly from the system developed for Suzuki’s MotoGP racing machines, the Motion Track Traction Control System (TC) was designed to provide greater stability and help you confidently control the Hayabusa in varying riding conditions by limiting rear wheel spin.

• The TC system offers 10 mode settings and can also be switched off. The higher the mode number the more the system is sensitive to rear wheel spin and the faster it will intervene to limit spinning.

• The ECM continually monitors front and rear wheel speed, engine RPM, plus throttle position and gear position, and lean angle data from the IMU. When the system determines that loss of traction is imminent, the ECM adjusts engine power to prevent wheel spin.

• The Anti-lift Control System (LF) adds control reassurance by helping prevent the front wheel from lifting off the ground when accelerating.

• The Launch Control System (LC) helps ensure efficient launch and acceleration from a standing start. Launch Control for the Hayabusa offers three modes (1, 2 & 3) from which you can choose to match your level of experience or confidence.

• LC Mode 1 limits engine speed on launch to 5,000 RPM for softer acceleration, LC Mode 2 revs to 6,000 RPM for a stronger acceleration, and LC Mode 3 lets the engine rev to 7,000 RPM for the strongest and quickest

acceleration.

### 3. Control over engine deceleration characteristics

• The Engine Brake Control System (EB) offers a selection of three modes (plus an OFF setting) that provide control over the effective strength of engine braking to match your riding preferences. The higher the setting, the smoother and more controllable behavior becomes as the effect of engine braking is diminished to help eliminate rear tire sliding or skipping when decelerating after releasing the throttle grip or downshifting. The system can also be switched off when you wish to experience the full effect of engine braking during deceleration.

### 4. Control over the engine at steady speeds

• The Cruise Control System maintains the selected road speed without having to hold the throttle open.

• Cruising speed can be set from approximately 31 km/h to 200 km/h while riding at 2,000 to 7,000 RPM in second gear or higher.

• Suzuki’s Active Speed Limiter is a first in the motorcycle industry, as this highly practical system allows you to set a speed limit you do not wish to exceed, which helps lessen concerns about speeding or driving faster than intended.

### 5. Control over engine operations

• The dual mode Bi-directional Quick Shift System (QS) allows you to shift up or down quickly and easily, without operating the clutch or throttle.

• QS Mode 1 reacts quickly, like a racing style response, while QS Mode 2 offers a lighter reaction for casual riding.

• The assist & slipper clutch functions of SCAS help ensure even smoother up and down shifts when using QS or manual clutch operation.

• The Suzuki Easy Start System lets you start the motorcycle with a short press of the starter button.

• The Low RPM Assist System seamlessly increases engine speed when launching from a standing start or riding at low speeds to help ensure smoother power delivery and better control in stop-and-go traffic.

### 6. Control over braking

• The Combined Brake System lets you brake more confidently, as operating the front brake lever provides braking power to both the front and rear brakes.

• Using the brake pedal (with the right foot) operates the rear brake only.

• The Motion Track Antilock Brake System (MT-ABS)\*\* uses vehicle posture data from the IMU to not only activate in a straight line but also when the vehicle is leaning or turning.

• By reducing the impact of sudden braking force, the Hayabusa is less likely to try to push itself upright or lose traction, instead maintaining the turning radius and lean angle to better follow your intended line through the corner.

• Even if you are startled and brake heavily in a corner, MT-ABS assists in helping maintain stability

while stopping or slowing the motorcycle.

• The MT-ABS system cannot be switched off – it is always active.

• The Slope Dependent Control System prevents rear wheel lift when braking when travelling downhill. The ABS unit continually measures brake pressure while the IMU constantly monitors vehicle posture, even as the Hayabusa is traveling downhill. When you operate the brake lever or pedal when riding downhill, the system adjusts brake pressure to prevent rear wheel lift and provide more stable braking.

• The Hill Hold Control System helps hold the Hayabusa still when it is stopped on an incline, providing confidence so you can focus on pulling away more smoothly to proceed up the hill. When stopping upward on a hill and applying the brakes, the system automatically operates the rear brake for around 30 seconds to prevent the motorcycle from rolling backward, even if you release the brake lever or pedal.

• Another first on a Suzuki motorcycle, the Emergency Stop Signal\*\*\* rapidly flashes the front and rear turn signals to alert following vehicles if you brake suddenly at speeds of 55 km/h or higher.

\*\* ABS is not designed to shorten the braking distance. ABS cannot prevent wheel skidding caused by braking while cornering. Please ride carefully and do not overly rely on ABS.

\*\*\* Emergency Stop Signal is not available on North American, Indian or Canadian specification units.



Suzuki Genuine Accessories

The Hayabusa is the world’s Ultimate Sportbike with premium components, styling and unmatched performance so it is fitting that a wide selection of Suzuki Genuine Accessories are available so you can personalize your ride to match your taste and reflect your style.

The optional, color matched single seat cowlings delivers function and great styling by continuing the wind cheating shape of the Hayabusa.

A taller touring windscreen is available for reduced wind blast on longer rides.

Suzuki fuel filler-mount tank bags clip on and off in seconds to let you take your personal items with you everywhere, even when you walk away from your bike.

A special rider’s seat is also available with different foam for comfort, and a different texture and colored cover that enhances the bike’s appearance.

Multi-level heated grips help deliver comfort during colder rides (and are specially designed to function with the Hayabusa’s CAN-style wire harness).

Hayabusa and Suzuki logo decals can add a splash of color and an impression of speed to the wheel rims.

Billet brake and clutch levers, a stylized and strong aluminum chain adjuster block and front axle sliders blend a look of performance and real function.

Poised to Create a New Legend



\* The images include an optional accessory.



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Colors



Metallic Mat Steel Green / Glass Sparkle Black (COT)



Glass Sparkle Black / Metallic Mat Titanium Silver (BLG)



Metallic Mystic Silver / Pearl Vigor Blue (ASU)

- SDMS-n Motion Track Brake System
- PW S-SFI
- ALCS SCAM
- Bi-directional Quick Shift System LOW RPM ASSIST
- EBCS SCAS
- Motion Track TCS Launch Control System
- ASL EASY START
- ESS SRAD
- HHCS SAIS
- SDCS EURO5
- Cruise Control System ABS
- Ride-by-wire

Poised for Action