

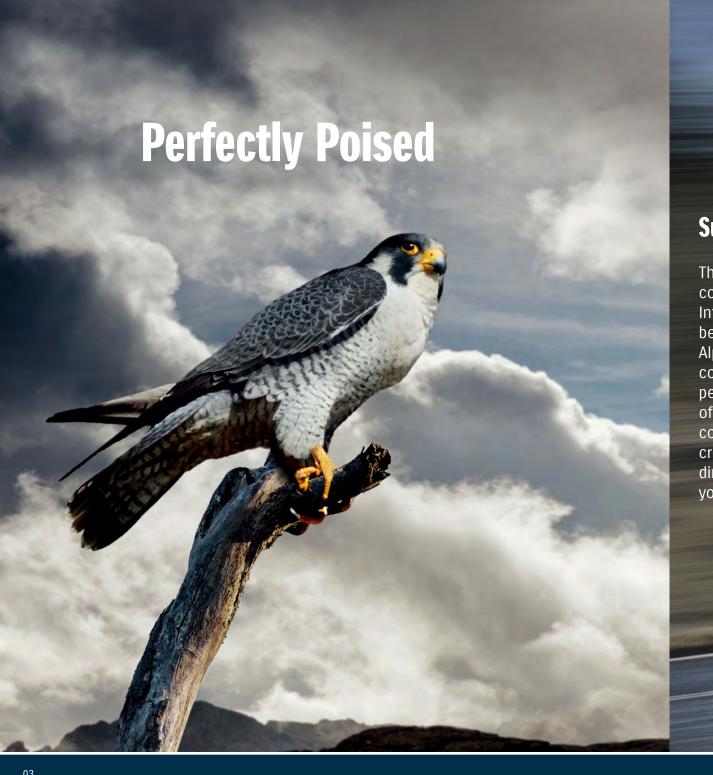
# **Contents**

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Famed for its abundant power, agility and majestic presence. Legendary for establishing new levels of ultimate sport performance, and for retaining the number one position for the past two decades in the class it created. The enhanced riding experience features even greater power delivery and nimbler handling, a collection of the latest electronic systems designed to optimise performance characteristics and make the Hayabusa more controllable and predictable, as well as unshakeable reliability.





# Suzuki Intelligent Ride System (SIRS)

The complete collection of advanced electronic control systems that comprise the Suzuki Intelligent Ride System (SIRS) extend well beyond those of Suzuki Drive Mode Selector Alpha (SDMS-a). Each is designed to add convenience, build rider confidence or optimise performance characteristics to match the needs of the moment and make the Hayabusa more controllable and predictable. These systems create a stronger sense of communicating directly with the bike's heart and brain as you explore Ultimate Performance.



# 1. Launch Control System

Turn the throttle and experience a thrilling launch and acceleration like a racer leaving the starting line. A selection of three mode settings let you match the engine speed at launch to your level of experience or confidence. Mode 1 limits engine speed on launch to 4,000 rpm, Mode 2 operates at 6,000 rpm, and Mode 3 – the fastest mode – operates at 8,000 rpm.

# 2. Active Speed Limiter

This system lets you set a speed you do not wish to exceed and then accelerate and decelerate as you please up to that speed. This helps lessen worries about the bike exceeding your chosen speed limit.

# 3. Cruise Control System

Cruise Control reduces fatigue on long rides by allowing you to maintain a set speed without operating the throttle. The speed can be easily adjusted upward or downward using the mode/set switch on the left handlebar and set from 19mph to 124mph while riding at 2,000 to 7,000 rpm in second gear or higher. The handy resume function re-engages the system and accelerates to the most recent speed setting after braking.

# 4. Emergency Stop Signal

Another first on a Suzuki motorcycle, this function rapidly flashes the indicators to alert following vehicles if you brake suddenly at speeds of 34mph or higher.

### 5. Motion Track Brake System

The system combines vehicle posture data from the IMU with front and rear wheel speed sensor data to allow ABS activation not only in a straight line but also when leaning into a corner. The bike is therefore less likely to try to push itself upright or lose traction, instead maintaining its radius and lean angle to better trace your intended line through the corner. Note: ABS is not designed to shorten the braking distance. Please always ride at a safe speed for road and weather conditions, including while cornering.

### 6. Slope Dependent Control System

Monitors the motorcycle's posture and angle to help prevent rear wheel lift by using the ABS to control brake pressure and compensate when applying the brakes while travelling downhill.

# 7. Hill Hold Control System

Hill Hold Control is designed to automatically engage the rear brake for 30 seconds after coming to a stop while facing uphill on an incline, even when you release the brake lever or pedal. This helps ensure a smother restart free of worries that the bike will roll backward. The system is disengaged either by quickly squeezing the front brake lever twice, or by accelerating to pull away from a standing start.



# 8. SDMS-a

Suzuki Drive Mode Selector Alpha (SDMS-a) groups together five advanced electronic control systems while enabling riders to select individual settings for each. It optimises performance characteristics and behaviour to best suit varying road surfaces, riding conditions and preferred riding styles. Experiment with the different settings and benefit from the feedback each offers to hone your riding skills and build greater confidence while enjoying the ultimate riding experience. In addition to three factory presets, (A, B, C), SDMS-a offers a choice between three user-defined groups of settings (U1, U2, U3). Modes and settings can be changed using switches on the left handlebar and the current settings are displayed on the colour TFT screen located in the centre of the instrument cluster.



# IMU

A 6-axis, Bosch IMU (Inertial Measurement Unit) combines accelerometers and gyroscopes in a single compact package that constantly monitors pitch (forward or backward tilt), roll (leaning from side to side), and yaw (turning in relation to initial direction). These measurements are compared against one another as well as readings from wheel speed sensors to keep the Hayabusa aware of its situation at all times and realise several of the advanced SIRS controls.

# **Suzuki Drive Mode**

# 11. Bi-directional Quick Shift System

Shift up or down more quickly and easily without the need to operate the clutch or throttle. Quick Shift offers two modes. Mode 1 reacts more quickly to replicate racing-style response, while Mode 2 offers a lighter touch. To ensure smooth shift action when using Quick Shift, the ECM retards ignition when accelerating or maintaining steady speed and opens the throttle valve when decelerating. Performance of the new assist & slipper clutch ensures even smoother shifts.





# 9. Power Mode Selector

Select between three different engine output modes that control power delivery to match road and riding conditions. Mode 1 provides the sharpest throttle response and delivers maximum power. It's a solid choice for the experienced rider out for a sporty run. Mode 2 provides softer throttle response and more linear power delivery. That makes it a practical mode for daily riding. Mode 3 provides the softest throttle response and features a more gentle power curve with reduced maximum output. It's well suited to riding on wet or slippery roads, or while still getting used to Ultimate Performance.



# 10. Anti-lift Control System

Suzuki has successfully developed an advanced system that maximises acceleration performance while preventing the front wheel from lifting off the ground. The system offers a choice of 10 mode settings when turned on, with Mode 1 providing minimal control and Mode 10 making it virtually impossible to lift the front wheel, even when fully opening the throttle with a passenger on the back.

# Selector Alpha (SDMS-a)

# 12. Engine Brake Control System

This system cancels out the effect of engine braking to suppress rear tyre sliding or skipping and provides smoother, more controllable behaviour. A choice of three modes plus an OFF setting lets you control the effective strength of engine braking to match riding conditions or your preference.

(B) (B)



# 13. Motion Track Traction Control System

This takes traction control to a new level by employing data from the IMU to constantly monitor the amount of lean angle and effectively limit slip in corners as well as on straightaways. It provides greater stability at all times, enabling confident control in varying riding conditions while reducing stress and fatigue. The system offers a choice of 10 mode settings, and it can be turned off when preferred. The higher number the mode, the faster traction control is engaged and the more proactive the system is in limiting wheel spin.

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







## Legendary power

Refinements implemented throughout the Hayabusa's legendary 1,340cc liquid-cooled inline-four engine achieve an even better balance of overall performance, yet greater efficiency and durability, while also satisfying Euro 5 emissions standards. Inheriting the proud legacy of the Ultimate Sport Bike that established the category in 1999, the Hayabusa continues to deliver more torque and power at the engine speeds typically used in daily riding. A symbol of engineering pride and prowess, it is built to deliver the ultimate riding experience for the long run.

#### **Optimum power and control**

Though the engine is already renowned for its power, to improve durability and longevity, the following refinements aim to take it to another level. New pistons and connecting rods reduce the weight of moving parts within the engine. Changes to the crankshaft oil passages improve engine lubrication. The transmission shaft needle bearings are extended in length. Attention to detail goes as far as changing the way the engine case bolts are tightened, and even to the threading for the screw holes in the upper crankcase.

The new pistons and Twin Swirl Combustion Chamber (TSCC) design fully leverage advances in CAE analysis to bring in more air as the valves begin to lift and thereby increase combustion efficiency. Suzuki Side Feed Injectors (S-SFI) feature a new dual injector design that positions the secondary injector so its spray strikes a reflecting plate in the funnel and enters the combustion chamber as a fine mist. This combines with the increased capacity of a new air cleaner and longer intake pipe design to optimise low- to mid-range power output and make the Hayabusa more controllable in typical daily riding situations.

Suzuki's ride-by-wire throttle control system provides natural response with linear control, while a related change to a 43mm bore size for the throttle bodies boosts low-and mid-range power output. Also helping to improve performance and controllability at the most commonly used low- to mid-range speeds are the new engine's reduced valve lift overlap and a new pipe on the exhaust header connecting cylinders #1 and #4.



Ultimate performance is born of the perfect balance between power and poise, and between the rider and the bike. The Havabusa delivers this in spades. Abundant power and torque offer a more confident ride in any gear and at any speed. Its chassis and running gear ensure the nimble handling to put the rider in full control. All this is skillfully wrapped in a bold design with an aggressive stance that highlights its luxurious details and speaks of fine craftsmanship. Like its namesake, the Japanese for peregrine falcon, the Hayabusa earns its position as the fastest, most agile predator in the wild. It's far more than the sum of its parts.



# **Ultimate Performance**



#### Superior strength

The Hayabusa's chassis is designed to empower you with sure footing, nimble handling and predictable control that combine to build confidence and enhance the riding experience. It delivers a smooth and comfortable ride that absorbs irregularities in the road surface and responds faithfully to your will. It effectively transfers the abundant power of its legendary powerplant to the pavement while fully leveraging its onboard intelligent control systems to run and brake effectively, whether barreling down a straight section of road or leaning through corners. At the core of this outstanding chassis is the Hayabusa's tried-and-true twin-spar aluminium frame and swingarm. Though Suzuki built and track-tested a number of different prototype frames during the development phase, the proven combination of extruded aluminium sections and aluminium castings continues to lend the right amount of suppleness and strength to the overall rigid alloy frame structure. While more costly and demanding to fabricate, extruded aluminium sections pay off in achieving the overall balance required by a machine that delivers Ultimate Performance and reaches a nominal top speed of 186mph.

# **Optimised suspension**

KYB inverted cartridge forks provide 120mm of front wheel travel and feature Diamond-Like Carbon (DLC) coating on the 43mm outer diameter inner fork tubes to reduce friction and improve reaction to small irregularities in the road surface. Spring preload, compression damping and rebound damping are all fully adjustable. The internal structure has been upgraded to better absorb the road surface and ensure an even smoother, more stable ride with optimum grip. The internal structure of the fully adjustable KYB link-type rear suspension was also revised to maximise comfort and straight-line stability. In addition, settings for both the front and rear suspension are optimised to achieve a stable ride with neutral feel at all speeds.







Featuring a lighter, more compact and carefully sculpted design intended for use on high-performance motorcycles, these new calipers increase airflow around the brake pads to cool more quickly and deliver immediate response. These are paired with front discs with a diameter increased from 310mm to 320mm and featuring a new hole pattern that further helps optimise cooling efficiency.





HYPERSPORT S22 tyres especially to meet the true needs of the Hayabusa. The new tyres boast improved dry grip, performance in wet conditions, greater all-round traction and agility, while retaining a great level of durability. Featuring a new compound and construction, the marked difference these tyres demonstrate in straight-line stability and cornering grip offers every rider a more exciting and confidence-building experience. The tyres are mounted on new 7-spoke wheels that not only look great, but also help improve grip feel.







# Poised and ready to fly

The sleek, aerodynamic silhouette is unmistakably that of the Hayabusa. But the modern look of its styling and luxurious attention to the finest details say it's a whole lot more. True to its design concept, "The Refined Beast", the new Hayabusa's long, low stance screams of the power, performance, poise and keen perceptive abilities possessed by a bird of prey. With an upswept tail and mufflers lending to the aggressive stance of its mass-forward image, this Hayabusa appears to be poised and ready to take flight on an exciting ride. Splashes of colour and chrome accents contrast blacked-out panel sections to create a visual impression of the incredible performance potential waiting to be tapped. Even the new English and Japanese logos speak of speed. The Hayabusa. It's a true tour de force. Aerodynamic performance is critically important on a motorcycle capable of reaching top speeds nearing 186mph. Extensive wind tunnel testing, full use of the latest CAE tools and years of experience all contribute to achieving refined styling by which the rider and bike become one wind-cutting beast. The Hayabusa features one of the best drag coefficients found on any street legal motorcycle, while also achieving excellent CdA and lift values to maximise top speed potential and stability at top speed. By any measure, Ultimate Performance is what the Hayabusa is all about.



# Lighting your way in style

The Hayabusa's vertically stacked low beam and projector-type high beam headlights adopt LEDs. The distinctive signature of their lighting pattern provides clear illumination at night and makes the Hayabusa highly visible to pedestrians and other traffic. Position lights with integrated indicators, a first on a Suzuki motorcycle, neatly flank the outer edges of the large SRAD air intakes. In the rear, a bold new LED taillight and rear indicators creates a single wide, sharp accent running horizontally across the bottom of the tail section.



# **Hvbrid TFT instruments**

Riders love the familiar layout and outstanding functionality of the Hayabusa's instrument cluster. Now it benefits from a number of carefully considered touches that make its functional brilliance shine even brighter. Bigger, bolder numbering on the analogue tachometer and speedometer improve readability, as do the backlit raised scale markings around the periphery. One standout item is the new colour TFT panel mounted in the centre. In addition to the current SDMS-a systems settings, it features an Active Data display that enhances the ride by offering a bird's-eye view of the bike's current operating status. This includes real-time display of the lean angle (with peak-hold function), front and rear brake pressure, rate of acceleration, and throttle position.



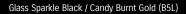






# Vayabrusa







Metallic Matt Sword Silver / Candy Daring Red (B5M)

#### SPECIFICATIONS

2,180mm (85.8in.)
735mm (28.9in.)
1,165mm (45.9in.)
1,480mm (58.3in.)
125mm (4.9in.)
800mm (31.5in.)
264kg (582lbs.)
Four-stroke, liquid-cooled, DOHC, in-line four
81.0mm x 65.0mm (3.189in. x 2.559in.)
1,340cc (81.8cu.in.)
190PS (140kW) @ 9,700rpm
150Nm @ 7,000rpm
42.1mpg
12.5:1
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		23° 00' / 90mm (3.54in.)
Brakes	Front	Brembo Stylema®, 4-piston, twin disc, ABS-equipped
	Rear	Nissin, 1-piston, single disc, ABS-equipped
Tyres	Front	120/70ZR17M/C (58W), tubeless
	Rear	190/50ZR17M/C (73W), tubeless
Ignition system		Electronic ignition (transistorised)
Fuel tank capacity		20L (4.4Imp Gal)







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

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