



PRESS INFORMATION

November 2022

VETROM 800 DIE



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The V-STROM 800DE is Ready to Break New Ground

Since the launch of the original V-Strom 1000 (DL1000) in 2002, Suzuki's V-STROM series has continued to break new ground and set standards for excellence in adventure touring.

The resounding success of the V-Strom 1000 inspired the release of the V-Strom 650 in 2004. Growth and evolution of the series continued throughout the subsequent years, up to and including the recent launch of the 2022 V-STROM 1050DE, which added yet further capability to explore beyond where the pavement ends. To date, overall worldwide sales have totaled more than 440,000 units. And now the V-STROM 800DE is ready to break new ground once again, in more ways than one.

For development of the new V-STROM 800DE, Suzuki followed a series of basic steps aimed at creating superior value that focuses on our customers.

In response to the demands from riders of varying experience levels, Suzuki engineers figured out the ideal package, with engine/body size plus features and specifications suitable for riding on both paved and gravel roads.

To realize such needs in one model, countless optimization tests were conducted and adjustments implemented across all related departments to achieve a balance between highly challenging and seemingly contradicting factors at various development stages. The new V-STROM 800DE was hammered out through such tough but constructive processes, and this results in one ideal package for Suzuki customers.

The result represents just as big a step forward. The V-STROM 800DE features Suzuki's brand-new parallel twin 776cm³ DOHC, 4-valve-per-cylinder engine, a rugged new frame, the longest amount of suspension travel, and the tallest ground clearance of any V-STROM model to date. Every aspect of the design is geared to deliver a satisfying experience to riders who desire more power than 650cm³ class can deliver, and who desire the ability to tour comfortably and confidently explore the unpaved surfaces of country roads, green lanes, and camp trails.

The chassis and free-revving engine respond faithfully to the rider's will in a nonassertive fashion that makes the rider's style and preferences the focus of riding pleasure on every outing. Riders can easily tap its full potential and enjoy a pure riding experience they will continue to enjoy for many years. The new V-STROM 800DE is ready to enrich the lives of its owners and serve as a dependable partner, wherever its rider wishes to go.

Adventure is its Purpose

The product concept of “Adventure is its Purpose” intends to convey a sense that the V-STROM 800DE will make every outing feel like an interesting adventure that riders will find inspiring and fun, whether that ride is a simple commute to work or school, a shopping trip, or an exciting day out to enjoy touring. It also suggests how the characteristics of the new parallel twin engine and chassis layout deliver power, nimble handling and comfort that faithfully follow the will of the rider, offering a quirk-free riding experience for a new era for the V-STROM series that makes the rider the star.

The V-STROM 800DE builds on the solid reputation earned by other models in the V-STROM family, yet offers something different for riders seeking more power and advanced features than on the V-STROM 650.

The V-STROM 800DE instantly sends the message that it is a new adventure tourer truly set to usher in an exciting new era of dual-purpose riding pleasure. Highlight features include the longest suspension travel and tallest ground clearance in the V-STROM family, wide tapered aluminum handlebars, a uniquely shaped aluminum swingarm, 21-inch front tire, inverted front forks, and color TFT LCD multifunction instrument panel. They include advanced electronic control systems such as Suzuki Drive Mode Selector, the Suzuki Traction Control System with G (Gravel) mode, Rear ABS OFF mode, and Suzuki’s Bi-Directional Quick Shift system. The concept is also clearly reflected in the V-STROM 800DE’s thoroughly modern interpretation of aggressive adventure styling.

2. PRODUCT CONCEPT

V-STROM 800DE

KEY PRODUCT FEATURES

Engine Features:

- Newly developed 776cm³ parallel twin DOHC engine delivers a fine balance of smooth, controllable power from low rpm and the pleasant feeling of free-revving performance through to the high end.
- It demonstrates tenacious staying power at extremely low speeds, which makes it easy to control on forest roads and trails.
- The 270-degree crankshaft configuration helps maintain a pleasant feeling in common with the model's V-twin brethren.
- Suzuki Cross Balancer, the first of its type on a production motorcycle, contributes to smooth operation and a compact, lightweight engine design.
- Cooling system inlet control helps maintain consistent engine temperature and eliminate rough idle while warming the engine in cold weather.
- The electronic throttle bodies help achieve faithful response and a linear feeling to throttle action.
- The 2-into-1 exhaust system features a dual-stage catalytic converter inside the collector that helps satisfy Euro 5 emissions standards, and a long, upswept muffler.
- The six-speed transmission realizes smooth shifting and improved controllability.
- Suzuki Clutch Assist System (SCAS) helps reduce fatigue on long rides and contributes to smoother shifting.

SUZUKI Intelligent Ride System (S.I.R.S.) Features:

- Suzuki Drive Mode Selector (SDMS) better supports the rider in matching performance to the conditions of the riding scene, road conditions, or preferred riding style.
- In addition to its 3 standard mode settings (+ OFF), Suzuki Traction Control System (STCS) for the V-STROM 800DE introduces G (Gravel) mode as a fourth setting designed to help riders better negotiate gravel roads and flat trails.
- Suzuki's ride-by-wire electronic throttle control system realizes throttle action that responds faithfully to the rider's every intention.
- Suzuki's Bi-directional Quick Shift System (with ON/OFF settings) provides quicker, smoother, more assured shifting, without operating the clutch lever while in motion.
- The ABS system features a choice of two mode settings for differing road conditions, as well as Rear ABS OFF mode, which offers more control over braking on gravel by letting the rider switch off rear ABS.
- The Suzuki Easy Start System starts the engine with one quick press of the starter button.
- Suzuki's Low RPM Assist function helps maintain engine idle speed for smoother and easier starts.

2. PRODUCT CONCEPT

V-STROM 800DE

Chassis Features:

- A rugged new steel frame developed for the V-STROM 800DE contributes to comfort, straight-line stability, and nimble handling.
- The seat rails are engineered to withstand the rigors of riding on unpaved surfaces, even with the optional top and side cases mounted, and also feature a narrow profile.
- Fully adjustable Hitachi Astemo (SHOWA) inverted front forks featuring a long 220mm stroke deliver a smooth, controllable ride.
- Adjustable Hitachi Astemo (SHOWA) rear suspension with link, with its 220mm of travel contributes to agility and stability. The spring preload can be adjusted easily by hand, which is beneficial when preparing to ride tandem or carry a load.
- The longest front and rear suspension stroke on any V-STROM model enhances performance on unpaved surfaces.
- Its 220mm ground clearance is the tallest of any V-STROM model.
- Dual front disc brakes with ø310mm floating-mount discs provide sure stopping power and controllability.
- Wire-spoked wheels with corrosion-resistant coating on the spokes.
- Large 21-inch front and 17-inch rear Dunlop TRAILMAX MIXTOUR adventure tires feature a new semi-block pattern and custom-engineered internal structure.
- Adopts a uniquely shaped lightweight aluminum swingarm with enhanced torsional rigidity to support the increased suspension travel and contribute to straight-line stability.
- The fuel tank features a large 20L capacity that helps deliver superior touring range.
- Wide tapered handlebars use a strong yet flexible aluminum that absorbs shocks on rough surfaces.
- The solid-mount rider seat is designed to withstand the input load of riding on unpaved, surfaces to be comfortable and to allow the rider freedom of movement.
- The riding position is designed for comfort and to offer the rider plenty of room, even when riding tandem with the optional top and side cases mounted. The design also enables the rider to shift their weight forward for greater control on unpaved surfaces.
- Wide rubber-covered steel footpegs feature a textured surface that prevents slipping.
- The short windscreen is designed to maximize visibility when exploring gravel roads or trails, and also to protect the rider from buffeting when touring at higher speeds.
- Fitted with a plastic under cover as standard equipment.
- Rear carrier makes it easier to load gear or mount the optional top case.

Electric Equipment Features:

- A custom 5-inch color TFT LCD multi-function instrument panel features a clearly legible display of a rich variety of information.
- Vertically stacked LED headlights in hexagonal housings topped by an LED position light provide a clear view of the road ahead and create a sharp look with bold presence.
- Compact LED position lights, turn signals and tail light ensure clear visibility and practical durability.
- A USB port is built into the left side of the meter cluster.

2. PRODUCT CONCEPT

V-STROM 800DE

Styling Features:

- Styling for the V-STROM 800DE aims to set a new trend and usher in a new era of functional beauty that symbolizes the future of Suzuki design, even as it pays full respect to the distinctive features of its V-STROM heritage.
- Stays true to the Suzuki design ethos of creating unique styling expressions that gave birth to the distinctive character of the V-STROM series.
- The distinctive V-STROM “beak” is positioned higher to visually convey the extended suspension stroke and the model’s ability to handle gravel roads and flat trails.
- The bodywork features flatter surfaces with sharp lines that emphasize the model’s look of toughness.
- The headlight, rear combination light and long muffler accentuate the image of readiness to perform on unpaved surfaces.
- Dynamic decals create an iconic presence that is instantly recognizable.
- Riders can choose from trio of body colors carefully chosen to convey the appeal of the V-STROM 800DE’s distinctive character and accentuate its functional beauty.

A New Engine for a New Era

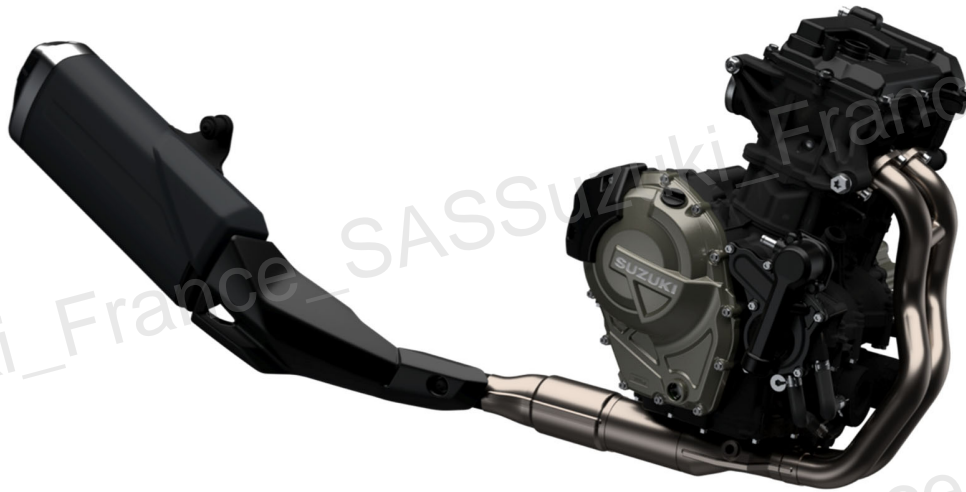
Creating the adventure tourer for a new era began with designing a brand-new engine. Suzuki's first goal was to design a slim, compact powerplant that would expand the possibilities for overall design flexibility and help realize the most effective chassis geometry for performance gains. That includes realizing an optimum riding position, both for traversing gravel roads and trails, and for long-distance touring. The second goal was to deliver dynamic go-anywhere performance that riders would find easy to control and smooth running, even when carrying luggage. The new engine must provide plenty of torque and power, yet must also be easy for even novices to control, with smooth throttle response. Overall, it must fill the rider's personal adventuring experience with fun and pleasure, even when carrying a passenger and luggage.

With these objectives in mind, Suzuki designed a brand-new parallel twin 776cm³ DOHC, 4-valve-per-cylinder engine. This powerplant helped achieve the first goal, as it features a compact front-to-rear size that enabled us to optimize weight distribution and chassis geometry, and also to move the rider's hip point forward and achieve optimal riding position. It delivers a fine balance of smooth, controllable power from low rpm and the pleasant feeling of free-revving performance through to the high end. And it demonstrates tenacious staying power at extremely low speeds, which makes the V-STROM 800DE easy to control on forest roads and trails.

The engine features a 270-degree crankshaft design, which delivers a smooth ride with plenty of torque, positive traction, and a pleasing rumble. It also introduces the Suzuki Cross Balancer, an innovative new primary balancer design that contributes to smooth operation and helps achieve a compact and lightweight package that enhances the V-STROM 800DE's nimble handling. Additionally, the long, upswept muffler design created exclusively for the V-STROM 800DE is both striking to look at and designed to not interfere with the bike's long suspension travel.

3. ENGINE

V-STROM 800DE



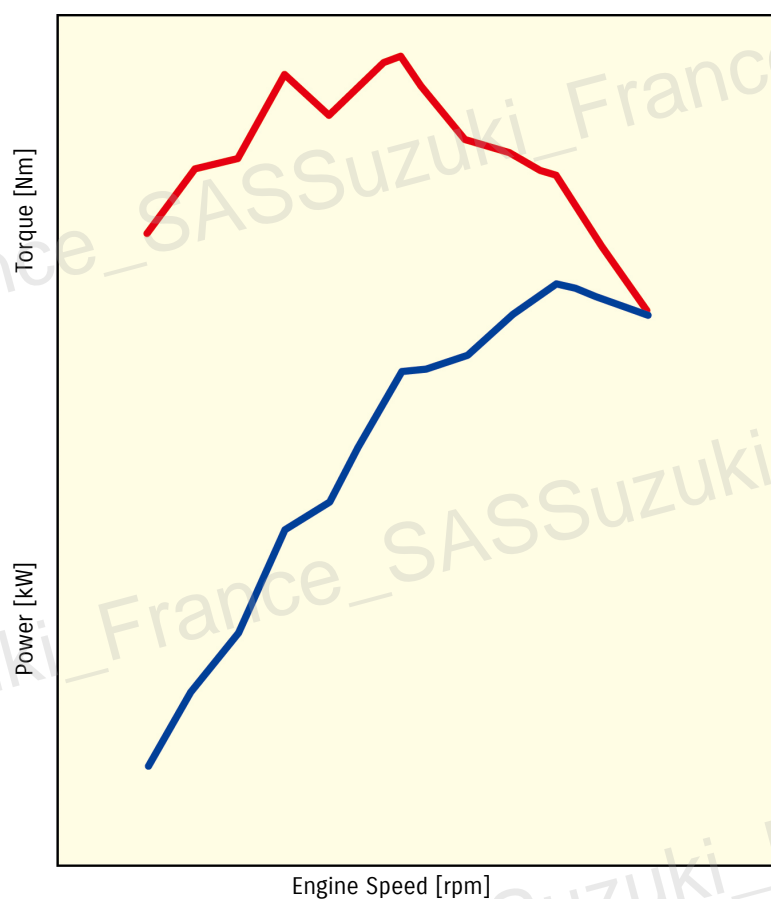
776cm³, 4-stroke, 2-cylinder, Liquid-cooled, DOHC, Parallel Twin Engine

3. ENGINE

V-STROM 800DE

Engine type	4-stroke DOHC parallel twin
Cooling system	Liquid-cooled
Displacement	776cm ³
Bore x Stroke	84.0mm x 70.0mm
Maximum output	62kW/8500rpm
Maximum torque	78Nm/6800rpm
Emissions level	Euro 5
Fuel consumption	22.7km/L (4.4L/100km) in WMTC

Note: Actual fuel economy may differ owing to conditions such as the weather, road, rider behavior and maintenance.



Engine Performance Curve

3. ENGINE

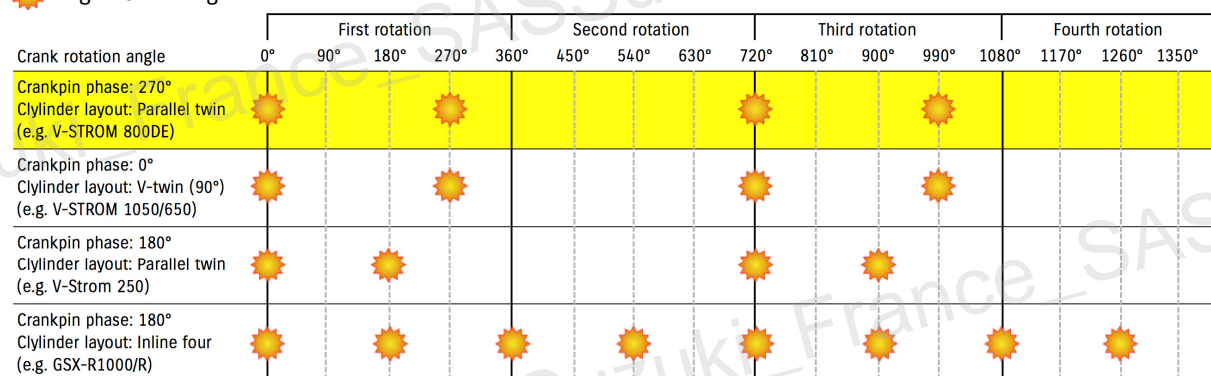
V-STROM 800DE

270-degree Crankshaft

The ignition timing of the engine's 270-degree crankshaft layout is the same as that on Suzuki's (90°) V-twin engines. That means it produces the same pleasing rumble and sound for which V-twins are favored.

In addition, the 450 degrees of crank revolution between cylinder firings, (between 270° and 720° in the chart below), extends the time between power pulses and gives the rear wheel the time it needs to regain traction. This is particularly beneficial when riding on unpaved surfaces or powering out of corners.

 = Ignition timing



Suzuki Cross Balancer

The new engine introduces Suzuki Cross Balancer. This patented biaxial primary balancer positions its two balancers at 90° to the crankshaft^{*1}, marking a first among production motorcycles^{*2} to position its two balancers at 90° to the crankshaft. This patented mechanism suppresses vibration to contribute to smooth operation, and it also helps realize a lightweight powerplant that is more compact from front to rear.

Balancer No.1 cancels the primary vibration generated by the piston (reciprocating weight) of the first cylinder, while balancer No.2 cancels the primary vibration of the second cylinder. Adopting a 270-degree crankshaft angle cancels secondary vibration, contributing to even smoother engine operation. Furthermore, placing the two balancers at 90° to the crankshaft with each positioned equidistant from the crankshaft cancels primary couple vibration.

*1: Patent granted for biaxial primary balancer that positions its two balancers at 90° to the crankshaft.

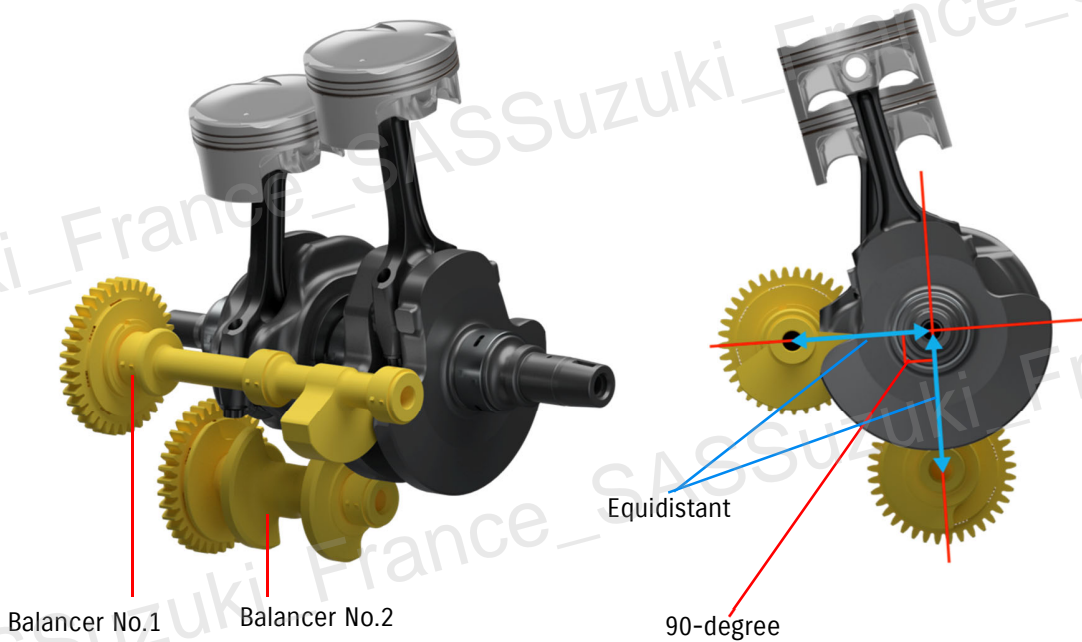
*2: Based on Suzuki research as of November 2022.

3. ENGINE

V-STROM 800DE



Suzuki Cross Balancer



Suzuki Cross Balancer

3. ENGINE

V-STROM 800DE

Pistons and Connecting Rods

The engine employs forged pistons engineered using FEM (Finite Element Method) analysis to maximize strength and minimize weight, despite the engine's 84mm bore. Conical machining inside the wrist pin holes transfers load and mitigates stress transferred to the crowns, so contributes to enhanced durability.

The connecting rods also feature the reliability and high level of technical prowess for which Suzuki is known. This is backed up by thorough analysis conducted to ensure a balance of weight and rigidity, and to stabilize the rods' behavior during stroke action.

Suzuki Composite Electrochemical Material (SCEM)

The cylinder bores inside the aluminum die-cast cylinders are plated using Suzuki's SCEM process. Originally developed for racing and proven on the track, the SCEM cylinder promotes better heat dissipation, reduces friction and achieves a consistent wear resistant seal on the piston rings for greater durability.

3. ENGINE

V-STROM 800DE

Ride-by-Wire Electronic Throttle Bodies

The two cylinders are fed by a pair of linked 42mm bore electronic-controlled throttle bodies. Accelerator position sensor play is optimized to deliver the best balance of performance for both daily on-road use and the demands of adventure touring

High-Pressure Fuel Injectors

The V-STROM 800DE employs 10-hole, long-nosed, 343kpa high-pressure-feed fuel injectors that maximize fuel atomization for better combustion efficiency and lower fuel consumption.

Transmission

The six-speed transmission adopts gear ratios that deliver smooth shifting and exciting acceleration, whether shifting normally or using the standard-equipment Bi-directional Quick Shift system to shift without clutch operation.

Air Cleaner Box

The 6.0L air cleaner box and intake pipe designs are optimized using CAE analysis to maximize power output characteristics and torque production at low rpm. To contribute to the realization of a slim and compact chassis design and enhance the freedom of rider movement, the box adopts a compact design and is positioned under the seat. Even so, the intake is optimized, using different lengths for the left and right pipes, which helps secure adequate flow to derive maximum power output.



Position of Air Cleaner Box

3. ENGINE

V-STROM 800DE



Air Cleaner Box (outside)

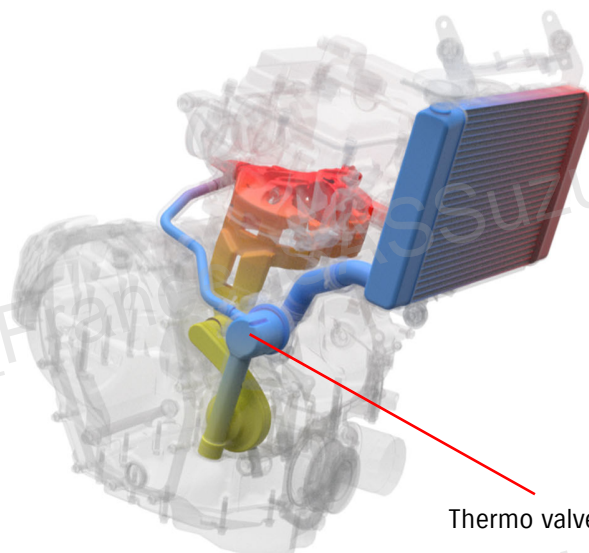


Air Cleaner Box (inside)

Highly Efficient Cooling

The radiator boasts high cooling capacity to support the parallel twin engine's powerful output. A cooling fan helps stabilize the coolant temperature.

Cooling water inlet control contributes to early stabilization of water temperature during engine warm-up. Since a thermo valve located at the inlet of engine cooling circuit, adjusts the temperature, before the coolant enters the engine, there is less temperature fluctuation during warm-up. This helps stabilize combustion and contributes to cleaner exhaust gas.



Thermo valve

Cooling System Inlet Control

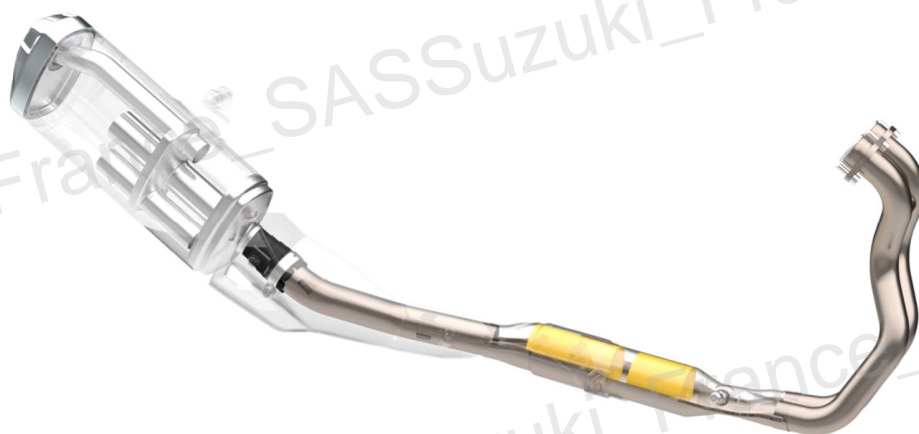
The V-STROM 800DE is also equipped with a lightweight, compact liquid-cooled oil cooler that helps keep lubrication temperatures cooler for even smoother and reliable engine operation.

3. ENGINE

V-STROM 800DE

Exhaust System

The 2-into-1 exhaust system for the V-STROM 800DE is designed to produce a pleasing note that befits the new parallel twin engine, whether enjoying a long touring run at highway speeds or heading down camp trails at low rpm. Better yet, the two-stage catalytic converter inside the collector helps limit emissions to a level that satisfies Euro 5 standards, while at the same time maximizing power output and overall performance.



Exhaust System

3. ENGINE

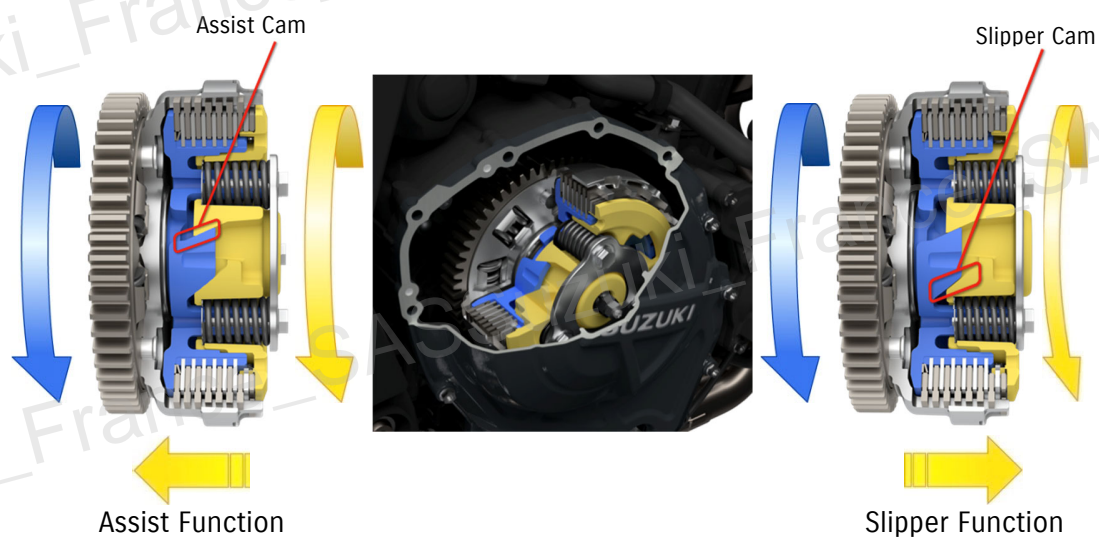
V-STROM 800DE

Suzuki Clutch Assist System (SCAS)

The assist function leverages precision-engineered ramps to force the clutch boss and pressure plate together and efficiently transfer torque to the rear wheel under acceleration, all while using softer clutch springs.

The slipper clutch partially disengages when downshifting to decelerate to mitigate the effect of engine braking. By helping to prevent the rear tire from hopping and providing smoother deceleration, this function enables the rider to shift down with greater confidence and maintain better control.

Suzuki Clutch Assist System Cam Operation Diagram



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

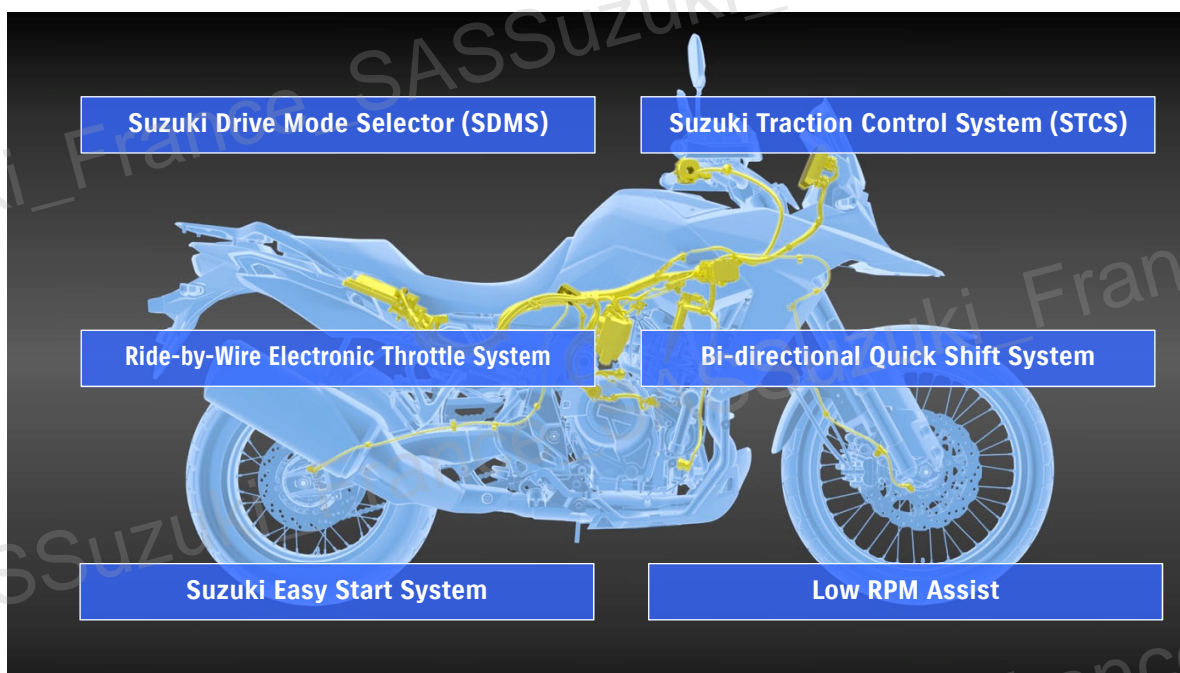
V-STROM 800DE

Introduction

The Suzuki Intelligent Ride System (S.I.R.S.) features a collection of advanced electronic rider assist systems. The rider can freely choose the settings for each system to best suit their level of skill and experience, and to optimize performance characteristics for the riding conditions and road surface at any given moment. These settings in turn help make the V-STROM 800DE more controllable, predictable, and less tiring to operate. This is true even when riding with the optional side and top cases attached, when touring for long distances, and when leaving paved roads behind to explore rural trails. With each system designed and thoroughly tested to operate the way the rider expects, S.I.R.S. helps realize a more exciting riding experience that inspires confidence and frees riders to concentrate on enjoying their adventures.

The robust collection of advanced S.I.R.S. electronic systems employed by the V-STROM 800DE include the Suzuki Drive Mode Selector (SDMS), Suzuki Traction Control System (STSC) with G (Gravel) mode, Ride-by-Wire Electronic Throttle System, Bi-directional Quick Shift System, Suzuki Easy Start System, and Low RPM Assist.

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



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

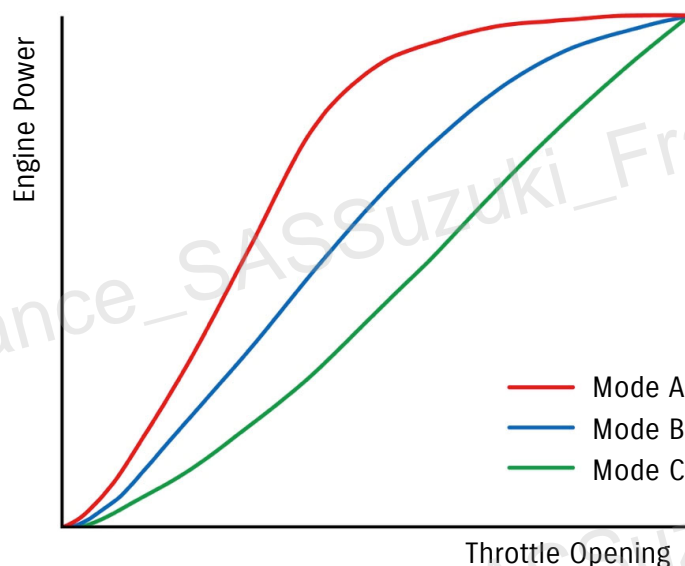
V-STROM 800DE

(1) Control over Engine Output Characteristics

Suzuki Drive Mode Selector (SDMS)

SDMS fully leverages the electronic throttle control system to offer a choice between three modes that deliver different power characteristics – especially when turning the throttle grip between a slightly open position to when it reaches the top of the mid-speed range under acceleration – to match the conditions of the riding scene, surface conditions, or preferred riding style for any given outing. The settings for each mode were custom-tuned and thoroughly tested to maximize the V-STROM 800DE's capabilities as a top-performing sports adventure tourer, to build in the flexibility to adapt well to changing weather, road and riding conditions, and to make the overall riding experience more enjoyable.

Power Delivery Image by Mode



Mode A (Active) provides the sharpest response as the throttle is opened. Settings for torque characteristics are tuned to deliver exciting acceleration and fully leverage the engine's power. It is well suited for enjoying aggressive runs on winding road surfaces in good weather.

Mode B (Basic) reaches the same level of maximum output, but features a more linear curve with softer throttle response. Planned as an ideal setting for touring, this mode aims to make the bike more controllable and instill confidence in the rider when accelerating, and to make a good fit for a wide range of riding styles and road conditions.

Mode C (Comfort) provides the softest throttle response and more gentle torque characteristics, which makes the V-STROM 800DE more obedient and controllable as the throttle is opened. This is particularly beneficial when touring for long distances, when riding with a passenger, when riding on wet or otherwise slippery surfaces, when road conditions are bad, or even when the rider wants to relax and enjoy a ride home after a long outing.

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

V-STROM 800DE

(2) Control over Engine Acceleration Characteristics

Suzuki Traction Control System (STCS)

STCS for the V-STROM 800DE enables the rider to better control the bike in diverse and varying conditions, whether riding alone or with a passenger, carrying a load of gear, or riding in inclement weather. STCS not only reduces stress and fatigue but, by giving the rider greater control over the bike's behavior, it instils greater confidence regardless of their level of experience.

The rider can select between 3 on-road modes, G (Gravel) mode, or opt to turn the system off. The higher number of the on-road mode, the faster the control takes effect and the more proactive the system is in limiting wheel spin. Mode 1 is for sport riding with minimal intervention from the system. Mode 2 offers a balance that is ideal for city riding and regular road conditions. And Mode 3 is well suited to wet or otherwise slippery road conditions.

The system is programmed to continuously monitor front and rear wheel speed, engine RPM (as calculated using data from the crank position sensor), throttle position and gear position. It is designed to immediately limit power and help prevent slipping when an imminent loss of traction is detected by retarding the ignition timing and limiting the throttle opening.

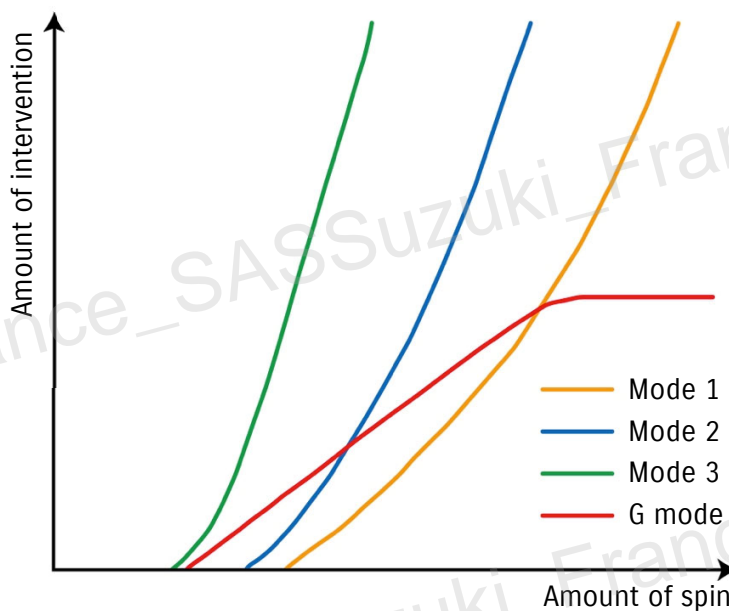
G (Gravel) Mode

G (Gravel) mode retards ignition timing to help the rider better negotiate gravel roads by allowing some slip when riding on unpaved surfaces. When selected, G mode activates when a slight degree of spin is detected, taking effect almost as quickly as the traction control system's Mode 3 setting. However, because G mode's maximum level of intervention is set to be less than that of Mode 1, spin is suppressed only enough to help prevent excessive wheel spin, so power continues to be delivered to the rear wheel with minimum interruption. As a result, the rider gets the consistent power output they want, the bike remains controllable, and it is less likely to try to push itself upright or lose traction while cornering. By allowing the rider to better maintain speed and power while cornering on flat trails, G mode promotes greater confidence and makes it more exciting and enjoyable to explore unpaved roads and country trails.

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

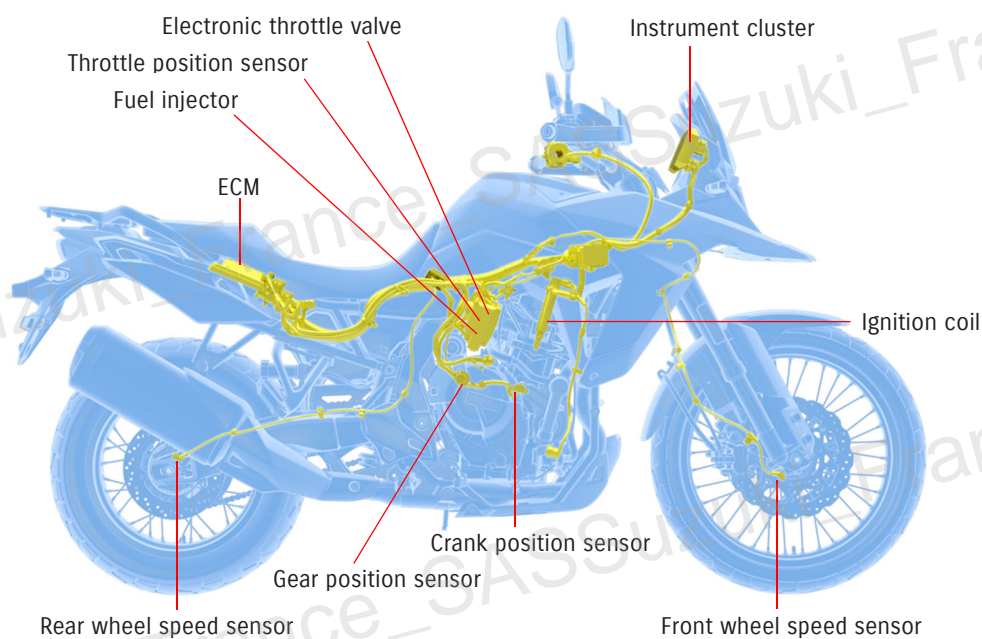
V-STROM 800DE

Image of Intervention by Mode



Note 1: The 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.

Note 2: Because G mode allows a certain amount of rear tire slip, it is not suitable for use on paved surfaces



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

V-STROM 800DE

(3) Control over Engine Operations

Ride-by-Wire Electronic Throttle System

Suzuki's electronic throttle control system takes advantage of the ECM to control the action of the throttle valves and make it possible for settings to more finely control the relationship between throttle action and engine output characteristics. One benefit is that individual settings can be tuned and thoroughly tested to match each of the SDMS modes and realize throttle action that responds faithfully to the rider's intention across the range of mode settings.

Throttle grip action is set to maximize controllability, with the faithful response of linear control, particularly when riding on gravel roads. This setting also makes throttle action feel more natural to riders not yet accustomed to systems that do not employ a mechanical cable. Adding to the benefits, the system is simpler and more compact than conventional mechanical systems and eliminates cables that would otherwise add clutter to the right side of the handlebars.

Bi-Directional Quick Shift System

The Bi-directional Quick Shift System enables the rider to shift up or down without operating the clutch lever while in motion. As standard equipment on the V-STROM 800DE, this distinctive feature is one the rider will find enhances the riding experience the minute they try it. And they will immediately feel the benefits of reduced fatigue and not missing shifts.

When activated, the system automatically interrupts power delivery when accelerating and maintaining steady speed just long enough to unload the transmission gear dogs, thereby producing a smoother ride when the rider shifts up. When decelerating the system automatically opens the throttle valves just enough to increase rpm and match engine speed to the next-lower gear ratio without manually blipping the throttle or using the clutch. This hands-free automatic blipping function combines seamlessly with engine braking to create a highly satisfying experience. While the ECM is programmed to control the electronic throttle valves and ignition timing to match the engine's operating speed and enable smooth shifting at any RPM, the gear shifting mechanism is optimized to provide a solid click with each shift that assures the rider a satisfying feeling that the gearbox has responded immediately to their action.

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

V-STROM 800DE

Suzuki Easy Start System

This system lets the rider start the motorcycle with one quick press of the starter button. There is no need to pull in the clutch lever when the transmission is in neutral, and the starter motor automatically disengages the instant the engine fires up. As a function used every time the engine is started, removing the bother of the above operations makes the riding experience more pleasurable and convenient.

Low RPM Assist

Suzuki's Low RPM Assist function monitors engine rpm, gear position, throttle position, and clutch switch data as the rider releases the clutch lever to pull away from a standing start, or when riding at low speeds. It is programmed to help prevent engine speed from dropping excessively as the rider launches the bike to ensure smoother starts. It also promotes more confident riding by helping counteract drops in engine speed when riding in stop-and-go traffic, or when doing U-turns.

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

V-STROM 800DE

(4) Control over Braking

Two-Mode Antilock Braking System (ABS)

The antilock braking system (ABS) contributes to more stable braking by helping prevent the wheels from locking up, even under hard braking. The system is programmed to monitor wheel speed and match stopping power to the available traction. The system offers two mode settings. Mode 1 provides minimal intervention, so is suited for riding on gravel roads and other unpaved surfaces. Mode 2 is ideal for city riding and regular road conditions. The ABS control unit has a compact, lightweight design that helps make the bike nimble.

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.

Rear ABS Off Mode

Rear ABS can be switched off to improve controllability when braking on gravel or other unpaved surfaces.

Note: Rear ABS OFF mode is not designed for on-road riding.

Supporting Technologies

Controller Area Network (CAN bus)

The V-STROM 800DE's robust CAN bus reduces the number of wires required by the harness, so contributes to reducing weight.

Engine Control Module (ECM)

A dual-core processor ECM provides optimal engine management that contributes to the operation and optimization of critical systems, including those to comply with Euro 5 emissions standards.

5. CHASSIS

V-STROM 800DE

Designed to Perform and to Please

The goal was to design a compact, lightweight chassis engineered to maximize agility, comfort, utility, and riding pleasure. One target set by the development team demanded the new chassis would contribute to comfort when riding on the road, to great breakout performance on gravel and other unpaved surfaces, and to providing sure and stable handling in both these riding environments. The new chassis also had to deliver reassuring straight-line stability when riding at highway speeds, even when carrying a passenger and when the bike is fitted with the genuine-accessory top and sides cases and loaded with gear.

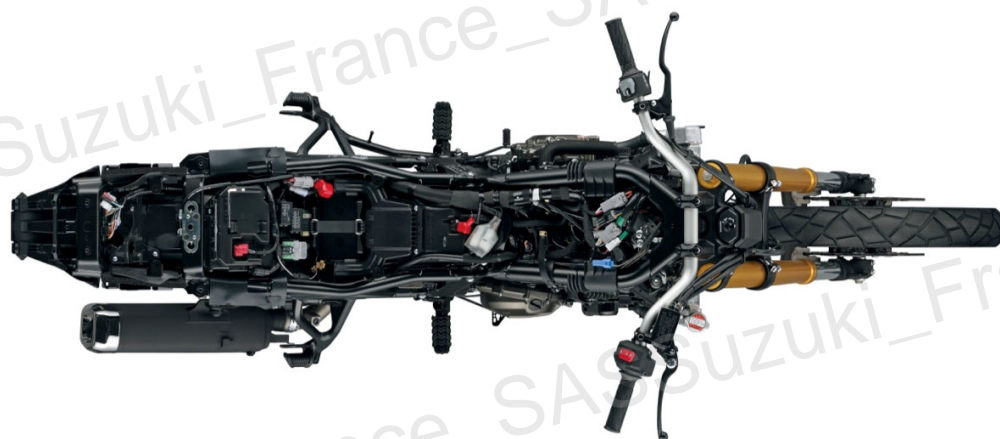


5. CHASSIS

V-STROM 800DE

Every aspect was planned to reflect a focus on great handling and control in a wide range of real-world riding conditions, from long-distance touring to heading down small trails with rougher unpaved surfaces, on supporting the high-performance parallel twin engine, and on maximizing comfort while minimizing fatigue. These features are critical in helping to establish the V-STROM 800DE's identity as a top-performing adventure tourer that is equally adept in daily on-road use as it is when exploring gravel roads and other unpaved surfaces.

The layout freedom provided by the compact front-to-rear dimensions of Suzuki's slim new parallel twin engine contributes to achieving optimum weight distribution and riding position. Of particular note was the ability it afforded in moving the rider's hip point forward. This makes it easier for the rider to use their body weight to ably negotiate tight corners, or to place more weight on the front wheel when standing on the footpegs to explore rougher trails.



5. CHASSIS

V-STROM 800DE



5. CHASSIS

V-STROM 800DE

Rugged Steel Frame

Designed around the new engine platform and made from rugged steel pipe, the frame for the V-STROM 800DE was engineered to provide all the strength needed for negotiating rougher trails, to provide excellent straight-line stability, to contribute to nimble handling, and to perform well at highway speeds when touring for long distances.

The seat rails are engineered to withstand the rigors of riding on unpaved surfaces and feature a narrow profile that helps riders better control the bike with their legs.



Frame and Seat Rails



Seat Rails



5. CHASSIS

V-STROM 800DE

Sure Stopping Power

Suzuki chose front brake calipers that best match for the V-STROM 800DE's fork pitch and wire-spoked tires. These are mated with 310mm outer diameter floating-mount dual discs to provide sure stopping power and controllable braking performance.

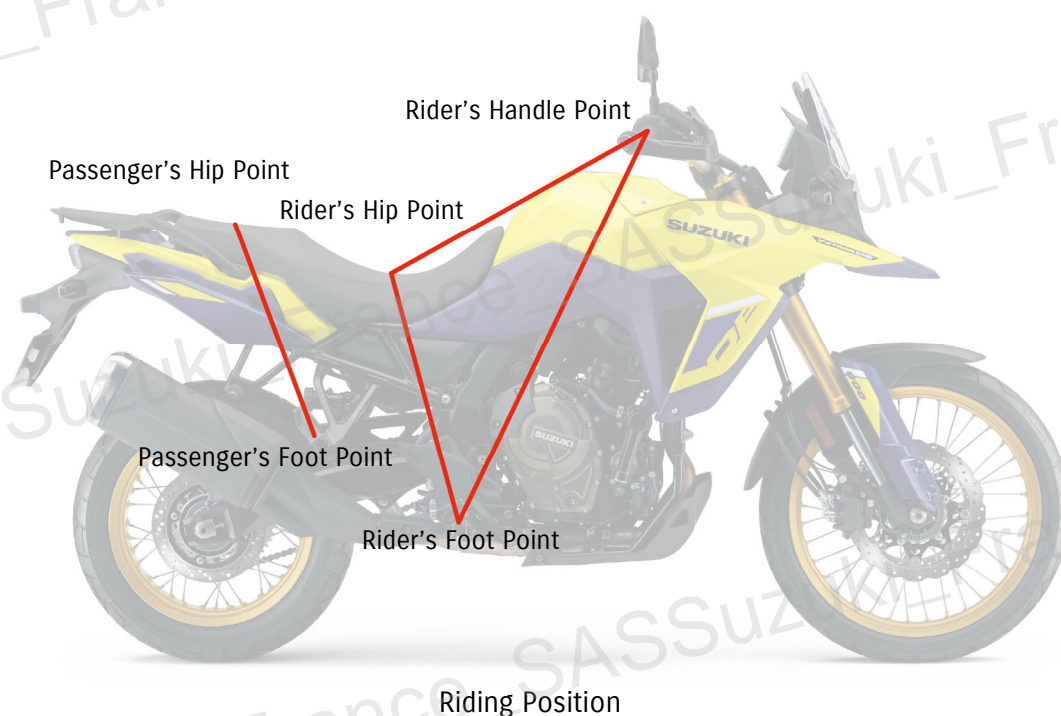
The rear brake has a 260mm outer diameter disc and uses a single-piston pin-slide caliper.

Chassis Geometry (dimensions)

The V-STROM 800DE's features a dedicated chassis geometry with a long wheelbase, long rake, tall ground clearance and a wide handlebar grip. The purpose is to provide maximum stability and controllability when riding on unpaved surfaces, as well as a comfortable riding position that effectively distributes weight to the front and rear.

As one result, the V-STROM 800DE lends the passenger added comfort because they have plenty of space and can sit without bending their knees too much. This is true even when the bike is fitted with the top and side cases available as genuine accessories. The geometry achieved also enhances handling stability, even when carrying a passenger and with the top and side cases mounted on the V-STROM 800DE.

The adoption of Suzuki's new parallel twin engine benefits the geometry because its shorter length allowed us to position the rider's hip point further forward than with a V-twin engine. This in turn enables the rider to shift their weight forward and more easily control over handling when traversing trails and other unpaved surfaces, or when negotiating tight corners.



5. CHASSIS

V-STROM 800DE

Optimized Front and Rear Suspension

Hitachi Astemo (SHOWA) inverted front forks deliver a smooth, controllable ride. They feature stable damping characteristics that make them suitable for adventure touring. The spring preload and compression/rebound damping can be adjusted, allowing the suspension to be set to best match the rider's preference or the usage conditions.



Front Compression Adjuster



Front Rebound Damping Adjuster

The Hitachi Astemo (SHOWA) mono-shock rear suspension with a piggyback remote gas reservoir contributes to agility and stability. Not only can the spring preload and compression/rebound damping be adjusted, but the spring preload can be adjusted by simply turning the dial by hand. This is particularly beneficial when preparing to ride tandem or carry a load.



Rear suspension



Rear Rebound Damping Adjuster



Rear Spring Preload Adjuster

Tuned Suspension with Long Travel

The front and rear suspension spring rate, valve, and piston settings are custom-tuned to maximize performance and comfort when riding on all surfaces, paved or gravel. The front and rear suspension realize a long 220mm front fork suspension stroke and 220mm of rear wheel travel. This is the longest amount of travel ever available on a member of the V-STROM family.

Wire-Spoked Wheels and Semi-Block Pattern Tires

The V-STROM 800DE rides on wire-spoked wheels and adopts a 21-inch aluminum front rim for greater stability and better control when tearing up gravel roads. The new 90/90-21 front and 150/70R17 rear Dunlop TRAILMAX MIXTOUR tires feature a new semi-block tread pattern with long, straight diagonal grooves that achieve both solid traction on unpaved surfaces and reduce pattern noise when riding on paved roads. The tread also features wider, deeper grooves exclusive to the V-STROM 800DE that achieve the optimal balance between on-road handling and longevity, and positive grip and nimble handling when the rider decides to explore gravel roads and trails. This custom tread pattern also gives the tires a more aggressive look appropriate to this dual-purpose adventure tourer. The custom-designed internal structure optimizes the balance between tread and side rigidity to improve resistance to shimmy, and to achieve solid stability at highway speeds.



Front Wheel and Tire



Rear Wheel and Tire

5. CHASSIS

V-STROM 800DE

Uniquely Shaped Lightweight Aluminum Swingarm

The V-STROM 800DE adopts a highly attractive and tough looking aluminum swingarm with a unique shape that enhances vertical, lateral, and torsional rigidity to support straight-line stability in keeping with the model's chassis geometry and long suspension travel.



Uniquely Shaped Lightweight Aluminum Swingarm

Large Capacity Fuel Tank

The fuel tank features a capacity of 20L that provides greater reassurance when touring for long distances by extending the riding range.



20L Fuel Tank

5. CHASSIS

V-STROM 800DE

Wide Tapered Aluminum Handlebars

The V-STROM 800DE adopts wide tapered handlebars made from a strong yet flexible aluminum that allows them to flex and absorb shock when riding on unpaved surfaces. Not only does this provide greater comfort, but the wide grip and positioning also provide positive control, particularly when standing on the pegs to run through rough surfaces.



Aluminum Tapered Handlebars

Seat Designed for Performance and Comfort

The V-STROM 800DE seat features a design with a bottom shape that achieves great rigidity. This durable seat stands up well to input load when riding on unpaved surfaces, as well as to weight shifts as the rider changes position. It uses a denser foam to improve comfort for both rider and passenger, whether touring for long distances or exploring unpaved roads and trails.



Seat

5. CHASSIS

V-STROM 800DE

Footpegs

The V-STROM 800DE is fitted with wide, tough-looking footpegs designed to offer greater stability when standing on them while riding. These steel footpegs are covered in rubber with a textured surface designed to prevent the rider's feet from slipping.



Footpegs

Grab Bars and Rear Carrier

Solid grab bars on each side provide the passenger with a firm grip and also add an attractive and tough-looking design accent. These extend from the integrated rear carrier,* which is handy for carrying extra gear and also makes it easier to mount one of the optional top cases made available as genuine accessories.

*Maximum load capacity: 10kg



Grab Bars and Rear Carrier

5. CHASSIS

V-STROM 800DE

Windscreen

The small windscreen is designed to maximize visibility when adventuring down country trails and on gravel roads. It has been thoroughly wind tunnel tested to assure comfort for the rider. The windscreen's 3-step height adjustment lets it be adjusted in 15mm increments using a hex key.



Windscreen

Front Fender

The V-STROM 800DE adopts a unique three-piece construction, which employs a pair of vertical skirt sections flanking the front fender. This structure forms a stronger, more rigid mount to the forks that is better capable of withstanding a pounding on gravel roads and other unpaved surfaces.



Front Fender

5. CHASSIS

V-STROM 800DE

Knuckle Covers and Radiator Guard

Beyond their practical purpose of helping protect the rider's hands from the elements, including rain, wind and cold, as well as objects such as flying stones, the standard-equipment knuckle covers accentuate the visual appeal of the V-STROM 800DE as an adventure tourer that is ready and capable for any journey.

The V-STROM 800DE is the first member of the V-STROM series that is also fitted with a radiator guard designed to protect against flying stones and other objects when riding on trails.



Knuckle Covers



Radiator Guard

Plastic Under Cover and Dedicated Stands

The V-STROM 800DE features a plastic under cover that protects the engine and matches the model's tough image, as well as a standard-equipment side and optional center stand designed to match the tall 220mm ground clearance of the chassis geometry.



Plastic Under Cover

6. ELECTRIC EQUIPMENT

V-STROM 800DE

5-inch Color TFT LCD Multi-Information Display

The V-STROM 800DE's custom 5-inch color TFT LCD multi-function instrument panel features a clearly legible display of a rich variety of information.

Not only does it keep the rider fully aware of all the bike's systems and settings, it also supplies critical real-time operating status information. The look is one of high quality that helps instill pride of ownership.



Day Mode

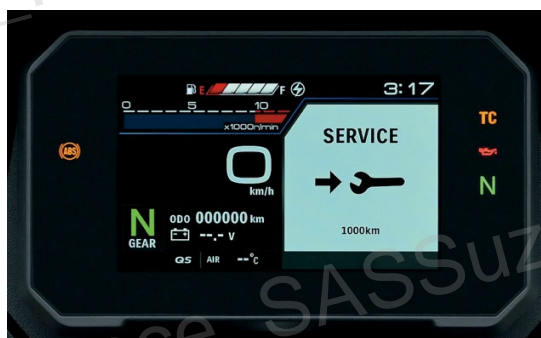


Night Mode

LCD readouts include:

- Speedometer
- Tachometer
- Riding range
- Odometer
- Dual trip meter
- Gear position
- Water temperature
- Ambient temperature
- Freeze indicator
- Engine rpm indicator
- Average fuel consumption (1&2)
- Instant fuel consumption
- SDMS mode
- ABS mode
- ABS rear OFF mode
- Traction control mode
- Quick Shift (ON/OFF)
- Fuel gauge
- 12-hour clock
- Voltmeter
- Service reminder

The LCD offers the ability to display large pop-up alerts and warnings.



Pop-up Display

6. ELECTRIC EQUIPMENT

V-STROM 800DE

The tachometer also serves as programmable engine rpm indicator. It blinks when the engine speed reaches the preset rpm entered by the rider. (It can be set in 250rpm increments within a range from 4000rpm to 9250rpm.)

LED indicators flanking the display include the turn signal indicator, MIL (Malfunction Indication Light), neutral indicator, master warning indicator, high-beam indicator, TC (Traction Control) indicator, low oil pressure warning indicator, ABS indicator, low voltage warning indicator, and coolant temperature warning indicator. All are designed for easy recognition.

The screen features a custom display with exclusive graphics, including blue background lines that add extra flavor and convey the appeal and spirit of the Suzuki brand identity. It also offers manual or automatic switching settings for the day (white) and night (black) display modes that maximize visibility at any hour and in any riding situation.

LED Lighting

The vertically stacked pair of distinctive hexagonal LED headlights employ a bright mono-focus LED light source that provides the rider with a clear view of the road ahead. In terms of design, the vertical orientation of the thin, compact headlight assembly topped by an LED position light creates a sharp look with unique character that makes the front end look light and ready for action. Compact LED position lights, LED turn signals and an LED taillight ensure clear visibility and practical durability.



Headlights OFF



Position light



Low beam



High beam



LED rear combination light & LED rear turn signals



6. ELECTRIC EQUIPMENT

V-STROM 800DE

USB Port

A USB port is built into the left side of the meter cluster. It can provide up to 5V output and 2A maximum current.



USB Port

- * Using the USB port while the engine is idling or stopped may drain the battery. Be aware of battery drain when using the USB port.
- * Do not use when washing the motorcycle or when it is raining.
- * Attach the cap when USB outlet is not in use.

Handlebar Switches Designed for Intuitive Operation

The ergonomic switch layout maximizes operating ease and efficiency, allowing the rider to access controls while remaining focused on the road ahead. Selecting modes and making settings and adjustments for each of the advanced electronic control systems simply involves operating the MODE and UP/DOWN switches, (which recognize long and short presses), on the left handlebar.



Left Handlebar Switch



Right Handlebar Switch

7. STYLING DESIGN

V-STROM 800DE

The V-STROM 800DE Design Concept is; “Adventure for a New Era”

In developing the styling for the new V-STROM 800DE, Suzuki's design team set their goal as follows. The design must carry on the tradition of the V-STROM series. At the same time, it must convey a thoroughly modern look in line with current trends, while breaking new ground that puts it ahead of the pack. And it must reflect the all-round capabilities of the product.

The first key element is to stay true to its V-STROM heritage and the Suzuki design ethos of creating unique styling expressions that gave birth to the series' distinctive character. For example, the V-STROM 800DE features the latest evolution of the “beak” design that was received as a radical new expression when first introduced to the world in 1988 on the DR-Z 800 desert racer.

In keeping with the goal of creating a new look that speaks of all-round capabilities, the sharper new beak is positioned higher to create greater distance between it and the front wheel, thereby visually conveying the extended suspension stroke and the model's ability to handle gravel roads and flat trails. The beak and other elements of the front end, including the new vertically stacked hexagonal LED headlight assembly, are designed to look slim, light and compact. This once again reflects the V-STROM 800DE's ability to excel when exploring further off the beaten track.



Image Sketch

7. STYLING DESIGN

V-STROM 800DE

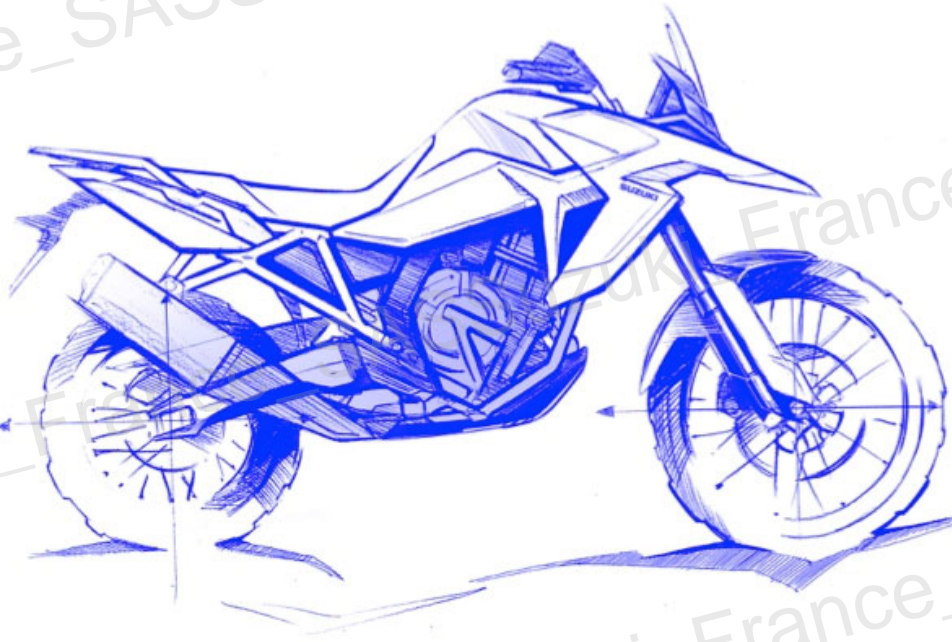


Image Sketch



Beak Design

7. STYLING DESIGN

V-STROM 800DE

Also following current trends, the lines of the body work are sharper with flatter surfaces to create a tough yet sophisticated look. Bold accents are introduced through the use of molded color parts at the tip of the prominent “beak” out front and below the fuel tank. And angled lines set into the knee grip area of the molded panel below the fuel tank lend yet another subtle accent.

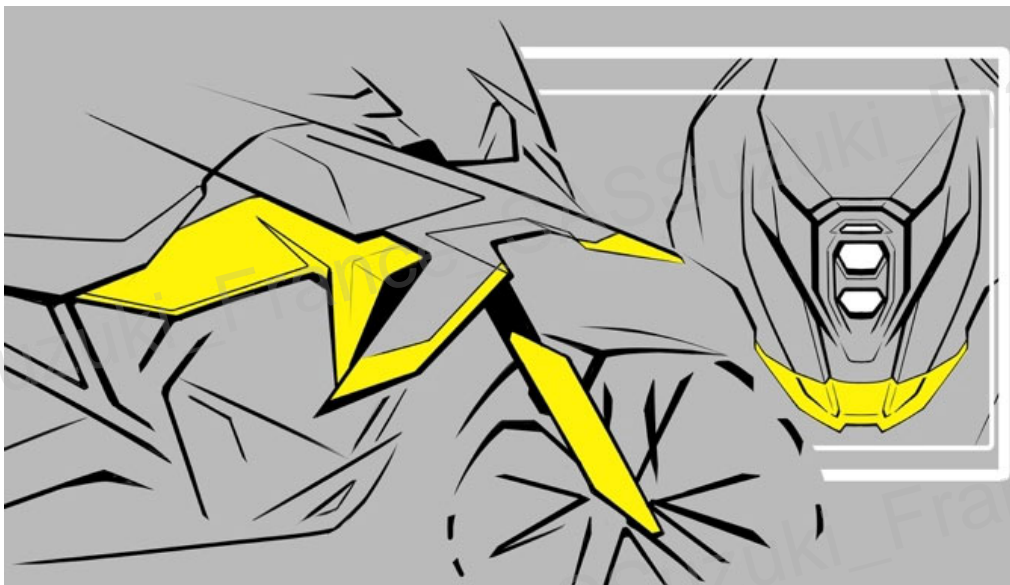


Image Sketch

7. STYLING DESIGN

V-STROM 800DE



7. STYLING DESIGN

V-STROM 800DE



8. COLOR & GRAPHICS

V-STROM 800DE

A Trio of Trendsetting Body Colors

The body color lineup for the V-STROM 800DE is comprised of three colors chosen to best express the appeal of the styling concept. They are intended to capture the expression of a “futuristic off-road racer” with looks that are both dynamic and iconic. Rather than apply two-tone paint, each body color is complemented by molded accent pieces in a different color for a sophisticated appeal that lets the beauty of the functional parts shine.

Champion Yellow No. 2 (YU1) harkens back to the heritage of the DR-Z desert racer and pays tribute to the heritage of Suzuki’s motocross machines. It is complemented by molded accent pieces in a dark blue shade that lends sophisticated contrast with aggressive, impactful appeal. Gold wheel rims add an extra accent and heighten the overall look of quality.

Glass Mat Mechanical Gray (QT7) features an “inorganic” (mechanical) look that establishes a distinctive character with a special charm that distinguishes the model as a cool long-distance adventure tourer. It is complemented with molded yellow accent pieces that borrow from Suzuki’s motocross heritage to convey the ability to take on trails and other unpaved surfaces.

Glass Sparkle Black (YVB) picks up on popular trends in the segment to convey a look of newness and quality. It is complemented with molded accent pieces in a dark blue shade that contrasts the main body color with a tasteful look of aggressiveness. Gold wheel rims add an extra accent and heighten the overall look of quality.



Champion Yellow No. 2 (YU1) Glass Mat Mechanical Gray (QT7) Glass Sparkle Black (YVB)

8. COLOR & GRAPHICS

V-STROM 800DE

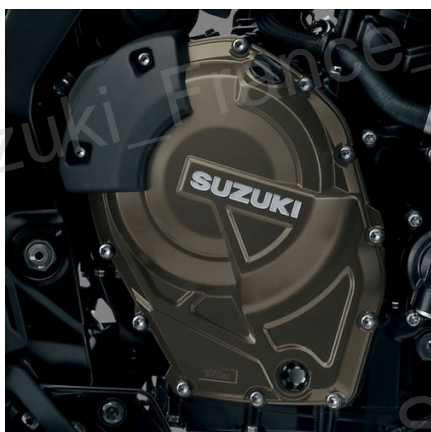
Body Graphics

The “DE” decals on the sides of the cowling pieces in front of the engine reflect the image of numbering used on motocross racers and other competition motorcycles, while the “V-STROM” logo is adopted from the V-STROM 1050/DE. Letters and numbering are applied subtly to not detract from the emphasis on functional beauty.

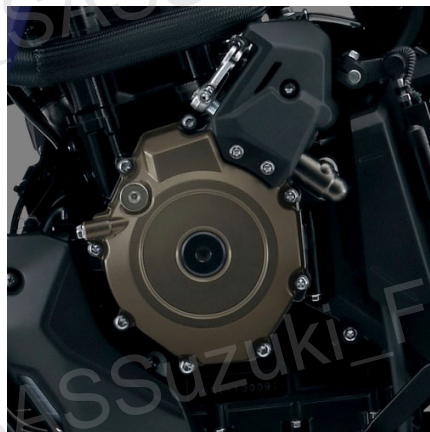


Body Graphics

The clutch cover and magneto cover are finished in a color selected to match the V-STROM 800DE's body color, while the SUZUKI name on the clutch cover is finished in a contrasting color to create an effective accent.



Clutch Cover



Magneto Cover

9. COLOR LINEUP

V-STROM 800DE



Champion Yellow No. 2 (YU1)



Glass Mat Mechanical Gray (QT7)



Glass Sparkle Black (YVB)

10. SPECIFICATIONS

V-STROM 800DE

Overall length		2,345 mm (92.3 in.)
Overall width		975 mm (38.4 in.)
Overall height		1310 mm (51.6 in.)
Wheelbase		1570 mm (61.8 in.)
Ground clearance		220 mm (8.7 in.)
Seat height		855 mm (33.7 in.)
Curb mass		230 kg (507 lbs.)
Engine type		4-stroke, 2-cylinder, liquid-cooled, DOHC
Bore x stroke		84.0 mm x 70.0 mm (3.3 in. x 2.8 in.)
Engine displacement		776 cm ³ (47.4 cu. in.)
Compression ratio		12.8 : 1
Fuel system		Fuel injection
Starter system		Electric
Lubrication system		Forced feed circulation, Wet sump
Transmission		6-speed constant mesh
Suspension	Front	Inverted telescopic, coil spring, oil damped
	Rear	Link type, coil spring, oil damped
Rake / trail		28° / 114 mm (4.5 in.)
Brakes	Front	Disc, twin
	Rear	Disc
Tires	Front	90/90-21M/C 54H tube type
	Rear	150/70R17M/C 69H tube type
Ignition system		Electronic ignition (transistorized)
Fuel tank capacity		20 L (5.3 / 4.4 US/Imp gal)
Oil capacity (overhaul)		3.9 L (1.0/4.1 US/Imp qt)
Fuel consumption		22.7 km/L (4.4L/100km) in WMTC
CO ₂ emissions		104 g/km

European Spec. shown

Actual fuel consumption and CO₂ emissions may differ owing to conditions such as the weather, road, rider behavior and maintenance.

Specifications, appearances, color (including body color), equipment, materials and other aspects of the SUZUKI products shown in this catalog are subject to change by Suzuki at any time without notice and they may vary depending on local conditions or requirements.