



Way of Life!

SUZUKI

V-Strom 650
ABS

Technical Information





Time For Real Adventures

The spirit of adventure beckons you to new destinations.
To new sights, sounds and sensations.
The V-Strom 650 ABS is built to get you there with more
enjoyment and excitement, in greater comfort.
Performance. Handling. Styling.
Redesigned throughout.
Upgraded throughout.

1. Development story	3
2. Concept	4
3. Styling design	
3-1 Sophisticated shape based on the keywords of "Tough x Smart"	5
3-2 Adjustable windscreen with excellent wind protection	6
3-3 Seat with high degree of freedom, providing comfortable riding positions	7
3-4 Design around fuel tank with an emphasis on slim image and riding comfort	8
3-5 Stylish and functional rear design (newly-designed muffler and carrier with integrated grab bars)	9
3-6 Front and rear fenders designed for smooth air flow and convenience	10
4. Engine design	
4-1 V-Twin engine that offers ample low-to-mid range torque and powerful output in the high rpm range	11
4-2 SCEM-plated cylinder with excellent heat dissipation and superb resistance to abrasion	12
4-3 Cylinder head that increases torque in the low-to-mid rpm range and decreases mechanical losses (Redesigned camshaft, valve spring and twin iridium spark plug)	13
4-4 Throttle body with integrated ISC achieving excellent startability, high output and low fuel consumption	14
4-5 Cam-type clutch release featuring high quality and direct operating feel	15
4-6 Radiator with wind-directing plates to let off heat from the rider's feet and liquid-cooled oil cooler	16
4-7 Crankshaft and primary drive gear that emphasize the V-Twin feel	17
4-8 Power train that delivers riding comfort (Redesigned transmission and transmission gear with revised final reduction ratio)	18
4-9 ECU that calculates fuel injection volume based on information from sensors	19
5. Chassis design	
5-1 Aluminum twin-spar frame and swingarm for smooth handling and steady maneuverability	20
5-2 Lightweight, high-performance ABS	21
5-3 Front and rear suspensions for a comfortable, sporty ride	22
5-4 Wheels and tires that deliver sporty, light handling	23
6. Electrical design	
6-1 Convenient multi-function instrument cluster that can be operated with a switch on the handlebar	24
6-2 Horizontally arranged dual headlights inheriting the V-Strom identity	25
6-3 Suzuki Advanced Immobilizer System (SAIS) for theft protection	26
7. Rich set of accessories	
Top and side cases	27
Touring windscreen	28
Knuckle covers	28
Accessory bar	28
Under cowlng	28
Chain guard	29
Handlebar grip heater	29
High/Low seat	29
Centerstand	30
12-volt accessory socket	30
Navi-bracket	30
Alarm kit	30
Mirror extension	31
Carriers for top and side cases	31
8. Specifications	32

1 Development story



In 2002, Suzuki introduced the V-Strom 1000 in a new motorcycle category, the Sport Enduro Tourer. Its running performance and packaging earned worldwide acclaim. In 2003, we then released the V-Strom 650 targeting a wider range of users. This versatile model covers not only daily use such as commuting but also weekend long touring. With the addition of an ABS-equipped model in 2006, the V-Strom 650 has always been the best-selling model in its class. To further improve its running performance and riding comfort, we decided to develop a new model.

The development concept was "The Comfortable Adventure Tourer". While enhancing the proven running performance and in-town versatility of the current model, we improved the riding comfort even further. The engine performance in the low-to-mid rpm range was improved and the styling design was revamped for better wind protection. In addition, fuel economy and environmental performance were also enhanced.

2012 will mark the 10th anniversary of the V-Strom series since its introduction. We hope the new V-Strom 650 ABS will be welcomed by many more riders.



*Top and side cases, touring windscreen, knuckle covers, accessory bar and under cowlings are optional parts.

2 Concept



The development concept of the V-Strom 650 ABS was "The Comfortable Adventure Tourer".

The current model, which was developed with the concept of "The Middleweight (or Lightweight) Sport Enduro Tourer", succeeded in differentiating itself from competitors by focusing on features such as long touring performance and riding comfort. In this new model, with additional focus on riding comfort, we enhanced the ease of handling by improving the running performance in the low-to-mid rpm range as well as wind protection. We also revamped the styling design to create a more adventurous image and increased the environmental performance as well.

Comfortable Adventure Tourer

Class-leading touring comfort

- Class-leading, long riding range between refueling stops
- Comfortable riding position (seat, foot reach, handlebar position)
- Newly-designed seat for increased comfort
- Excellent wind protection (adjustable windscreen)
- Rear suspension equipped with spring preload adjuster
- Convenient instrument cluster
- High-quality feel of gearshift operation
- Rich set of accessories

Easy-to-handle, well-balanced design for riding comfort

- Powerful and easy-to-handle V-Twin engine (improved feel in low-to-mid rpm range)
- Suzuki Dual Throttle Valve (SDTV) delivering smooth throttle response
- Lightweight aluminum twin-spar frame and swingarm
- Front and rear suspensions with long stroke setting for riding on a wide range of riding scenes
- Cast-aluminum wheels for sporty and agile handling
- Compact and lightweight Antilock Brake System (ABS)
- Chassis layout for mounting 3 bags

Revamped adventurous styling

- Sporty and dynamic front fairing
- Horizontally arranged dual headlights with a sharp image inheriting the V-Strom identity
- Compact fuel tank
- Newly designed muffler with an adventurous appearance
- Front and rear fenders of slim and compact style
- Frame cover designed to be sporty and agile

Improvement in environmental performance and fuel economy (10% improvement), essential for long-distance tourers

- Twin iridium spark plug
- Throttle-body integrated Idle Speed Control (TI-ISC)
- 10-hole fine atomization fuel injector
- Large, 300-cell catalyst
- Engine Control Unit (ECU) powered by high-performance 32-bit CPU



3-1 Sophisticated shape based on the keywords of "Tough x Smart"

Overview

Pursuing the functionality demanded by adventure tourers based on the keywords of "Tough x Smart", we created a new model shape that conveys a refined sense of integrity.

Features

The styling design features a tough image and sporty lightness with well-balanced proportions achieved by reducing the overhang and by combining painted parts of expressive shape and black resin parts with different textures, plus details that emphasize functionality.

Wind protection performance in the front and side sections is improved, while its shape satisfies the requirements of both heat control for the rider and engine cooling.

The fuel tank section, seat, frame cover and grab bars are designed for maximum riding comfort. The instrument cluster, now incorporating multi-function LCD display, offers improved visibility and a quality feel.

The model logo in a solid font delivering tool imagery is expressed in 3D, which together with solidly finished details, produces a sense of superb quality.

The accessories developed for the new model are designed for optimum matching with the bodywork to further emphasize the adventurous image.



3-2 Adjustable windscreen with excellent wind protection

Overview

For enhanced comfort of the rider and pillion rider on long-distance cruising, the windscreen shape designed through extensive wind tunnel testing reduces wind noise and rider fatigue.

Features



By setting back the upper edge of the windscreen 30 mm compared with the current model, wind turbulent flow is reduced, achieving excellent wind protection. The windscreen position can be adjusted in 3 steps; it can be moved up 24 mm (8 mm rearward) and down 18 mm (18 mm forward) from the middle STD position, providing a comfortable riding environment to suit the rider's body size, riding position and running conditions.

The windscreen mount and "SUZUKI" logo feature a grain finish (texturing), emphasizing a transparent feel. Also, the windscreen locking mechanism is simplified to facilitate position adjustment and reduce weight.

Windscreen angle is fixed



All position images overlapped

Standard position

High position

Low position



3-3 Seat with high degree of freedom, providing comfortable riding positions

Overview

The seat offers great freedom of riding position in the longitudinal direction, and the seat is shaped to make it easier for the rider to reach the ground. The pillion rider's seat is shaped to prevent slipping forward and firmly holds the pillion rider's hips to make long-distance tandem touring supremely comfortable.

Features

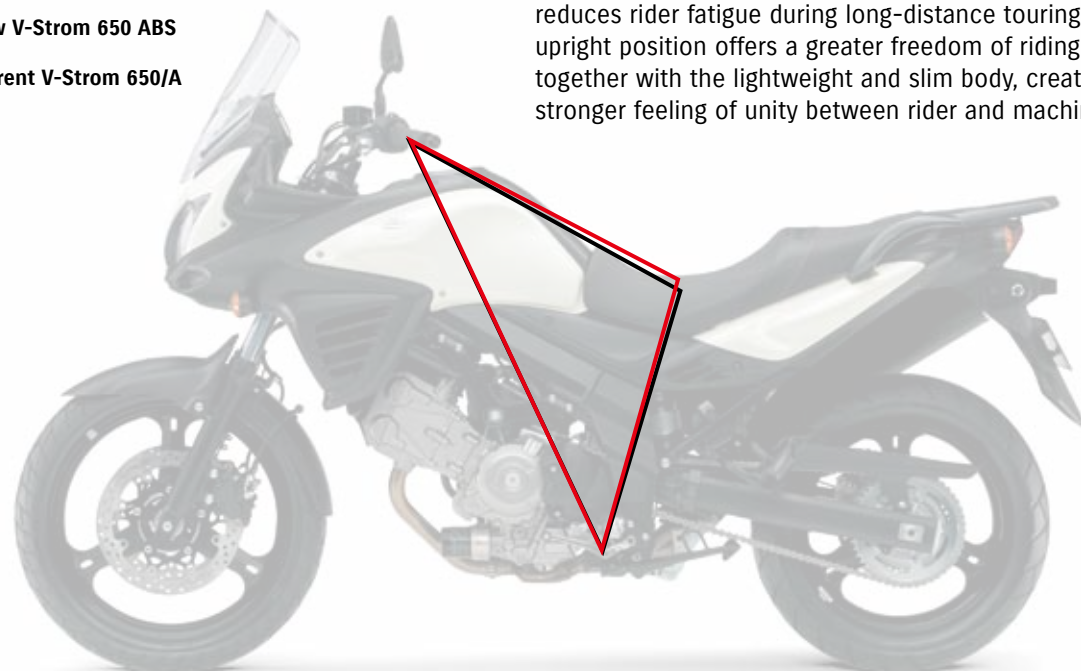


The seat covering features a leather touch finish with a "V-Strom" emboss logo and red stitching, combined with a suede-touch finish that prevents slipping, thus delivering a higher sense of ownership and greater functionality.

In addition, a low seat (20 mm lower than the standard seat) and a high seat (20 mm higher than the standard seat) with the same finish as the standard seat are available as options to accommodate a wide range of user preferences and body sizes.

As a result of a change in the rider's saddle height and suspension settings, the seat height is 15 mm higher than the current model. This provides the rider with a more natural positional relationship with the handlebars. Thus, the seat, handlebars and footrests are optimally configured to ensure a comfortable riding position that reduces rider fatigue during long-distance touring. The upright position offers a greater freedom of riding which, together with the lightweight and slim body, creates a stronger feeling of unity between rider and machine.

— New V-Strom 650 ABS
— Current V-Strom 650/A



3-4 Design around fuel tank with an emphasis on slim image and riding comfort

Overview

The fuel tank is shaped to give a sense of integrity with the side cowlings to make its large capacity less obtrusive. The fuel tank and frame cover are narrowed down to a slim shape, ensuring the correct riding position and optimal foot reach to the ground.

Features



The 20-liter fuel tank is the largest in its class (as of June 2011). The tank side and seat tail covers are made of resin with paint finish. Taking advantage of a high degree of forming freedom, these covers feature sleek, expressive curved surfaces that incorporate edges. They are also designed to allow for easy repair in case of damage.

The side cowlings and frame cover are made of black resin with a newly developed grain finish (texturing). These components express fluid character lines and are arranged so as to embrace painted parts, thereby emphasizing the sense of protection. The air outlets on the side cowlings and folded ends not only improve cooling and wind protection performance but also enhance the V-Strom 650 ABS's unique characteristics.





3-5 Stylish and functional rear design (Newly-designed muffler and carrier with integrated grab bars)

Overview

The muffler overhang is reduced by moving the muffler body forward to follow the seat rail line, emphasizing the cohesive feel and sporty image. The material of the rear carrier has been changed to resin from aluminum used on the current V-Strom 650/A to reduce the weight. The carrier is designed for attaching a Suzuki genuine top case.

Features



The muffler is equipped with a buff-finished end cap, and the silver metallic muffler cover delivers an enhanced texture quality. It is also designed to allow a side case to be attached. An adapter plate for a top case can be fixed to the rear carrier with bolts, allowing the case to be easily attached. The rubber mat on top of the carrier features a "SUZUKI" emboss logo and has nonslip dots that make it easy to fix luggage with a rope hook.



By removing the mat, the adapter plate can be fixed using the holes and notches provided. The grab bars, integral with the carrier, are shaped and contoured to make them easy to hold. Since the grab bars are made of resin, they are less affected by the ambient temperature, contributing to increased comfort.

3-6 Front and rear fenders designed for smooth air flow and convenience

Overview

The shape of the front fender which blends into the fork chipping guards is designed to allow smooth airflow to the radiator. The license plate on the rear fender is moved upward due to the layout change of the muffler and key cylinder, resulting in a distinctive form that is narrow in the middle.

Features



The shape of the front fender is redesigned to allow smooth airflow to the radiator.



The key cylinder for opening/closing the seat is located at the left of the rear fender for easy access to the cylinder. A space for storing a U-lock or small items is provided under the seat. Both front and rear fenders are designed to be sporty by combining multiple types of grain finish (texturing).



4-1 V-Twin engine that offers ample low-to-mid range torque and powerful output in the high rpm range

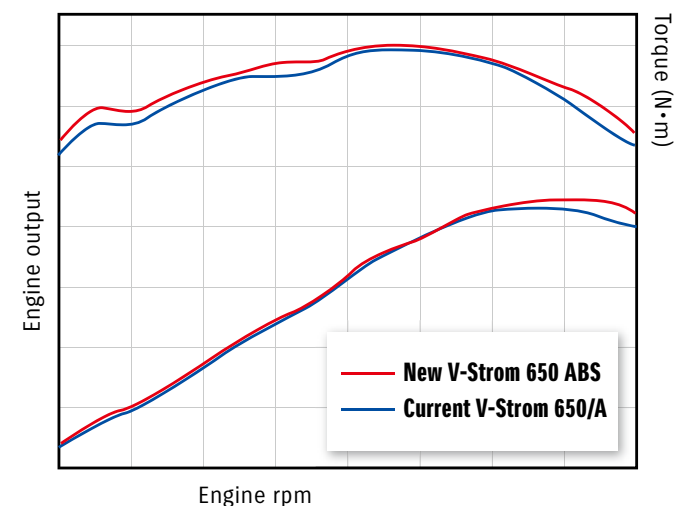
Overview

The newly developed engine delivers a higher torque in the low-to-mid rpm range thanks to the modified cam profile. While offering the distinctive beat feel of the V-Twin engine and ample torque for easy handling in the low-to-mid rpm range, the engine also exhibits powerful performance in the high rpm range. The new engine runs smoothly up to high rpm and features powerful engine characteristics (i.e. a wide power band), ensuring easy handling in a wide range of riding scenes from climbing a steep mountain pass to highway cruising and riding along a congested street. In addition to the improved clutch, shifting operation feel and reduced mechanical noise, the engine sound at idle has been refined to convey a higher sense of quality. Improvements in environmental performance and fuel economy have also been taken into consideration. Thanks to the increased fuel economy while keeping the advantage of the class-leading, long cruising distance, it was possible to reduce the tank capacity, allowing the fuel tank to be redesigned (lighter and more compact). This has resulted in the slim and sporty body design, contributing to ease of handling. The new engine not only offers versatility to the rider, but delivers thrilling satisfaction as well as a sense of quality.

Features



Although the bore x stroke (81.0 mm x 62.6 mm) is the same as the current V-Strom 650's, the new engine comes with new types of pistons, piston rings and cylinders. The new engine features a compact combustion chamber with large-diameter valves (31.0 mm for the intake and 25.5 mm for the exhaust) set at a narrow angle (14° for the intake and 16° for the exhaust) and shot-peened conrods. The cam profiles and crankshaft were also reviewed. While using the Suzuki Dual Throttle Valve (SDTV) fuel injection system and twin plugs of the current model, Suzuki Composite Electrochemical Material (SCEM)-plated cylinders and iridium plugs are newly employed, resulting in output characteristics with large torque in the low range, smooth revving up to the mid range, and leading to powerful output in the high range.



4-2 SCEM-plated cylinder with excellent heat dissipation and superb resistance to abrasion

Overview

The V-Strom 650 ABS's cast-aluminum cylinder employs unique Suzuki Composite Electrochemical Material (SCEM) plating which achieves excellent heat dissipation and superb resistance to abrasion.

Features



The SCEM plating provides a hard coating. While ensuring excellent heat-dissipation characteristics, it reduces friction and improves resistance to abrasion of the cylinder and sealing performance of the piston rings.



4-3 Cylinder head that increases torque in the low-to-mid rpm range and decreases mechanical losses (Redesigned camshaft, valve spring and twin iridium spark plug)

Overview

The cam profiles of the new V-Strom 650 ABS's engine were modified to increase the low-to-mid range rpm torque. The engine employs single valve springs instead of double valve springs, and uses iridium spark plugs with superior ignition performance. By quickly igniting for improved combustion efficiency, the new plugs not only increase engine output and improve throttle response (meaning better acceleration) and fuel economy, but also enhance the startability of the engine and contribute to idling stability.

Features



The cam profiles were modified as follows:
Intake side:
(20° BTDC - 72° ABDC)
Exhaust side (no change):
(43° BBDC - 24° ATDC)



The reduction of inertial mass and spring load results in lower mechanical losses, enabling more accurate valve control.



An iridium spark plug has a fine electrode with superior sparking performance to produce a large amount of energy and improve ignition performance. It also contributes to lower emissions. By employing a twin iridium plug system, ignition performance and combustion efficiency are enhanced over a wide range of riding situations.

4-4 Throttle body with integrated ISC achieving excellent startability, high output and low fuel consumption

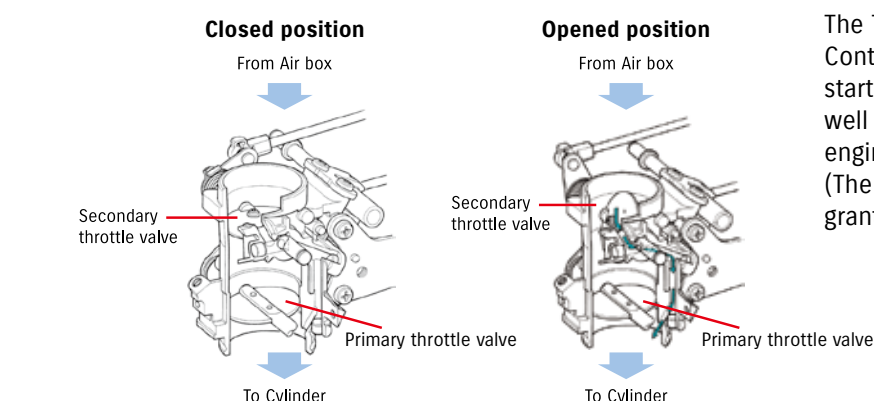
Overview

As with the current model, the new engine employs the Suzuki Dual Throttle Valve (SDTV) system which uses two throttle valves on each of the 39-mm diameter throttle bodies. The main throttle valve fitted on the intake valve side is opened/closed by the rider's throttle operation. Instead of the Idle Speed Control (ISC) system on the current model, the engine employs the Throttle-body Integrated Idle Speed Control (TI-ISC) system. The secondary throttle valve shaft was extended to provide a notch where an air passage and valve mechanism were added. Idle air is controlled with the secondary throttle valve drive motor. An extra-fine atomization fuel injector is employed.

Features



In order to enable the secondary throttle valve mounted on the air box side to maintain an ideal intake speed depending on the running conditions such as engine rpm, gear position and primary throttle valve opening, the Engine Control Unit (ECU) calculates the optimum throttle valve opening and opens/closes the valve with a small and lightweight DC motor (stepping motor). The SDTV system optimizes the flow velocity of fuel/air mixture in each rpm range, improving combustion efficiency from low-to-mid to high rpm ranges. In addition, it offers increased low-to-mid range torque, linear and smooth throttle response, and lower emissions.



Idling airflow is regulated by the shaft's notch section through rotating the secondary throttle valve.

The Throttle-body integrated Idle Speed Control (TI-ISC) contributes to better startability and stability in cold weather as well as lower emissions after starting the engine. It is also compact and lightweight. (The TI-ISC was developed by Suzuki; patent granted.)



The 10-hole fine atomization fuel injector achieves high combustion efficiency.



4-5 Cam-type clutch release featuring high-quality and direct operating feel

Overview

The clutch release mechanism is changed to a cam type to improve the operating feel of the clutch lever. The operating feel of the gearshift pedal is also improved.

Features




The clutch release mechanism is changed from a ball-screw (ball-nut) type to a cam type for crisp and reliable operation, providing a more direct operating feel. In addition, the new double-layer clutch cover reduces mechanical noise.

4-6 Radiator with wind-directing plates to let off heat from the rider's feet and new liquid-cooled oil cooler

Overview

Wind-directing plates for the radiator are added for improved cooling performance and riding comfort. The oil cooler is changed from the air-cooling to liquid-cooling type.

Features



Wind-directing plates

Cooling efficiency is increased by the addition of wind-directing plates. In addition, the holes in the wind-directing plates let the heat at the rider's feet escape (Developed by Suzuki patent granted).

New V-Strom 650 ABS	Current V-Strom 650/A
300 X 197 X 22 mm	320 X 188 X 24 mm



A new liquid-cooled oil cooler enhances the stability of oil temperature.



4-7 Crankshaft and primary drive gear that emphasize the V-Twin feel

Overview

The newly designed crankshaft and scissors-type primary drive gear deliver impressive power output characteristics, with abundant torque and easier handling while reducing mechanical noise at idle.

Features



The redesigned crankshaft enhances the beat feel of the V-Twin engine featuring unequal-interval firing, while delivering power output characteristics such as abundant torque and easier handling. It also raises the high-quality operating feel of the engine.



The scissors-type primary gear reduces mechanical noise generated due to variations in engine rpm inherent to the V-Twin engine, resulting in a high-quality, sophisticated idling feel.

4-8 Power train that delivers riding comfort (Redesigned transmission and transmission gear with revised final reduction ratio)

Overview

The 1st to 5th gears are set to a somewhat closer gear ratio, achieving a dynamic feel during gear shifting. The 6th gear, which can also be used as an overdrive mode, restrains the engine rpm during high-speed cruising. The dog shape on the transmission gear side is changed to improve the gearshift feel, while the reduction ratio is designed to achieve a smooth ride even when climbing steep mountain roads or riding on a crowded streets.

Features

Item	New V-Strom 650 ABS	Current V-Strom 650/A
Primary reduction ratio	2.088 (71/34)	←
Gear ratios Low	2.461 (32/13)	←
2nd	1.777 (32/18)	←
3rd	1.380 (29/21)	←
4th	1.125 (27/24)	←
5th	0.961 (25/26)	←
6th	0.851 (23/27)	←
Final reduction ratio	3.133 (47/15)	←

The gear ratios are the same as those of the current model. The 6-speed transmission offers an active, sporty ride as well as comfortable highway cruising.

4 Engine design

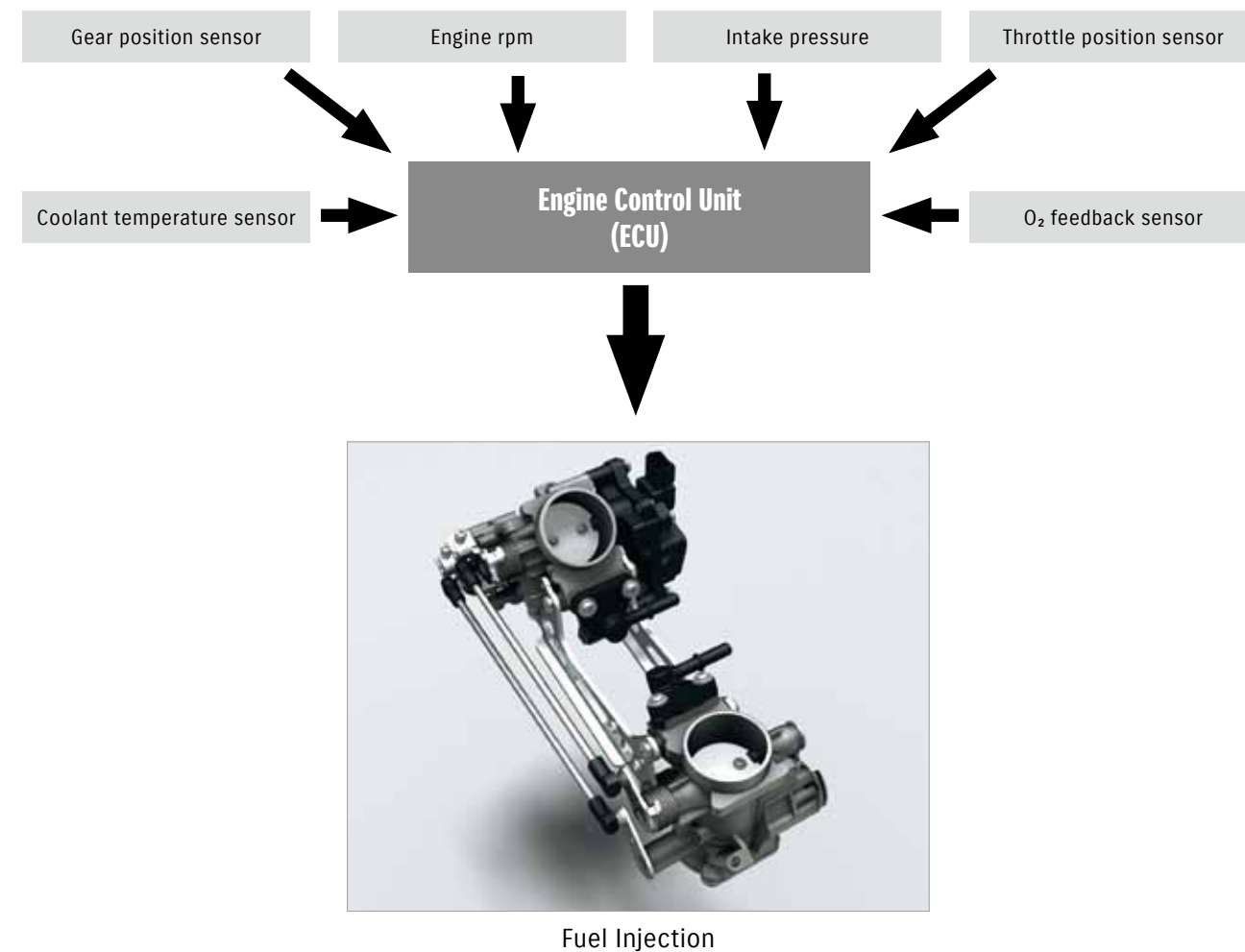


4-9 ECU that calculates fuel injection volume based on information from sensors

Overview

The Engine Control Unit (ECU), which is powered by a high-performance 32-bit CPU, calculates the basic fuel injection amount based on information such as engine rpm, intake pressure and throttle position. It then makes corrections using data from the O₂ feedback sensor mounted on the muffler to determine the final injection volume that best matches the engine conditions and running conditions. Fuel injection and ignition maps are provided for each cylinder, coolant temperature and gear position to ensure accurate combustion control. As compared with the current V-Strom 650/A, the new engine offers 10% better fuel consumption (WMTC mode, Suzuki in-house research).

Features



5 Chassis design



5-1 Aluminum twin-spar frame and swingarm for smooth handling and steady maneuverability

Overview

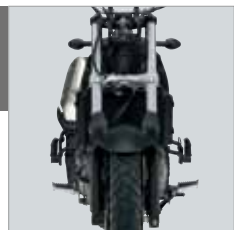
The new V-Strom 650 ABS inherits the lightweight and rigid aluminum twin-spar frame and swingarm of the current model. As compared with the steel frames used on competing models, the lightweight frame with superior rigidity and balance perfectly complements the smooth and powerful engine, for steady handling and maneuverability.

Features

The frame is constructed of cast and extruded pieces. The swingarm (length: 598.3 mm) consists of extruded arm and pivot and a cast joint section, and provides 159 mm of rear-wheel travel.

The new V-Strom 650 ABS is the only one model in the 600-800cc class with an aluminum frame (as of June 2011). The moderately large yet lightweight body delivers comfortable touring performance.





5-2 Lightweight, high-performance ABS

Overview

The new V-Strom 650 ABS is equipped with an electrically controlled Antilock Brake System (ABS) that produces stable braking force under various road surface conditions. A lightweight and compact ABS unit specially designed for motorcycles is adopted.

Features



The lightweight ABS reduces weight and helps avoid wheel locking when there is a sudden change in road surface during braking or when an excessive braking force is applied. Thus, excessive force during braking control by the rider is alleviated while still achieving stable braking performance.



New V-Strom 650 ABS	Current V-Strom 650/A
0.7 kg	1.5 kg

*Please note that ABS is a supplemental device for brake operation, not a device for shortening stopping distance. Always remember to reduce speed sufficiently before approaching curves and corners.

5-3 Front and rear suspensions for a comfortable, sporty ride

Overview

The front fork, with its inner tube diameter of 43 mm, delivers both a sense of rigidity and smooth operating feel. As in the current model, the rear suspension uses a linkage type mono shock absorber, which displays progressive load characteristics with respect to suspension stroke and thus achieves superior road contact. It is equipped with a stepless rebound damping adjuster and 5-way spring preload adjuster.

Features



The front fork is equipped with a 5-way spring preload adjuster, allowing the spring tension to be adjusted to suit the rider's preferences. The stroke is 150 mm, the same as the current model. In addition, the fork upper bracket has a new design that, combined with the silver metallic handlebars, produces a greater feel of quality.



The spring preload adjuster on the rear suspension is located under the frame cover (right side) for convenience. The spring preload can be increased or decreased by turning a knob. Fine adjustment of the suspension can be made to suit various conditions such as tandem riding, load weight and road conditions, thus providing a ride that suits the rider's preference for comfort.

5 Chassis design



5-4 Wheels and tires that deliver sporty, light handling

Overview

Lightweight aluminum wheels and specially designed tires are equipped.

Features



The lightweight aluminum three-spoke front wheel is combined with a 110/80R19M/C 59H radial tire.



The lightweight aluminum three-spoke rear wheel is combined with a 150/70R17M/C 69H radial tire. The radial tire is specially designed for this model. The aluminum wheel, in conjunction with the lightweight aluminum swingarm, reduces the unsprung weight and enhances suspension response and road contact. It also boosts riding comfort, sporty and agile handling, and steady maneuverability.

6 Electrical design



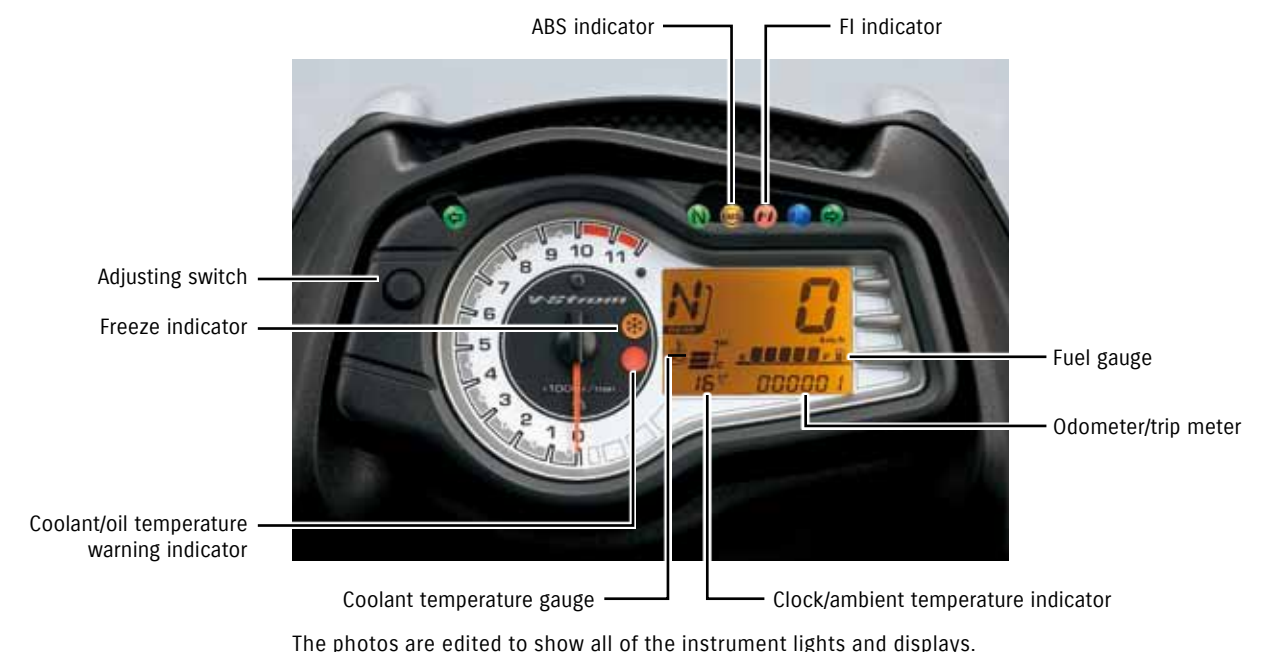
6-1 Convenient multi-function instrument cluster that can be operated with a switch on the handlebar

Overview

As compared with the current model, a more convenient, compact and multi-function instrument cluster is adopted. An analog tachometer is provided on the left side and a large-size LCD display with brightness adjustment on the right side.

Features

The gear position indicator allows the rider to see the current gear position at a glance. The freeze indicator and ambient temperature indicator alert the rider to the road conditions and clothing required. The freeze indicator lights below 3°C and goes out above 5°C. The fuel consumption meter helps the rider to plan refueling when traveling in areas where gas stations are scarce. The meter select switch is located on the left switch box to allow operation without releasing the handlebar.



- | | |
|--|---|
| LCD display: <ul style="list-style-type: none"> •Speedometer •Odometer •Dual trip meter •Fuel gauge •Coolant temperature gauge •Clock •Gear position indicator (new feature) •Ambient temperature indicator (new feature) •Fuel consumption meter (new feature; switchable to average fuel economy, odometer & trip meter) •Brightness adjustment (new feature, 6-way adjustment) | Indicators (LED): <ul style="list-style-type: none"> •Neutral indicator •High beam indicator •Turn signal indicators •FI indicator •ABS indicator •Coolant temperature/oil pressure indicator •Freeze indicator (new feature) |
|--|---|



6-2 Horizontally arranged dual headlights inheriting the V-Strom identity

Overview

Dual multi-reflector headlights with 12V 60/55W halogen-bulbs are horizontally arranged. They produce the same level of light distribution that is highly acclaimed on the current model (for its superior visibility compared with competing models, Suzuki in-house research), for safe riding at night.

Features



Both bulbs are illuminated at both low and high beam. The headlights contain two 12V 5W position lights. Even with a compact design, the brightness is the same as the current model.



New V-strom 650 ABS Sketch

6-3 Suzuki Advanced Immobilizer System (SAIS) for theft protection

Overview

A transponder type immobilizer system (SAIS) is newly equipped.

Features



The IC chip embedded in the key owned by the user allows the ID code to be checked instantly. Fuel injection and ignition are disabled in the event of tampering such as breaking the key cylinder or unauthorized operation using a duplicated key. By making it impossible to start the engine, this feature helps prevent theft. (This feature is not provided on models for North America.)

7 Rich set of accessories



Overview

To support the many ways that the new V-Strom 650 ABS will be used, we developed a wide variety of accessories as listed below. The top case and side cases are designed to be attached in positions that lower the center of gravity and centralize the vehicle mass.

*SUZUKI MOTOR CORPORATION reserves the right to add any improvement to change the design or to discontinue any Suzuki Genuine Accessories at any time without notice. Some Suzuki Genuine Accessories might not be compatible with local standards or statutory requirements.

Top and side cases

Resin



Aluminum



Touring windscreen



Knuckle covers



Accessory bar



Under cowl



7 Rich set of accessories



Chain guard



Handlebar grip heater



Centerstand



12-volt accessory socket



High/Low seat

High seat



Low seat



Navi-bracket



Alarm kit



7 Rich set of accessories



Mirror extension



Carriers for top and side cases



8 Specifications



Pearl Mirage White (YPA)



Metallic Fox Orange (YUK)



Glass Sparkle Black (YVB)



Dimensions and curb mass	
Overall length	2290 mm (90.2 in)
Overall width	835 mm (32.9 in)
Overall height	1405 mm (55.3 in)
Wheelbase	1560 mm (61.4 in)
Ground clearance	175 mm (6.9 in)
Seat height	835 mm (32.9 in)
Curb mass	214 kg (472 lbs)
Engine	
Engine type	4-stroke, liquid-cooled, DOHC, 90° V-Twin
Number of cylinders	2
Bore x stroke	81.0 mm x 62.6 mm (3.2 in x 2.5 in)
Displacement	645 cm ³
Compression ratio	11.2 : 1
Fuel system	Fuel injection
Air cleaner	Non-woven fabric element
Starter system	Electric
Lubrication system	Wet sump
Drive train	
Clutch	Wet multi-plate type
Transmission	6-speed constant mesh
Gearshift pattern	1-down, 5-up
Primary reduction ratio	2.088 (71/34)
Gear ratio, Low	2.461 (32/13)
2nd	1.777 (32/18)
3rd	1.380 (29/21)
4th	1.125 (27/24)
5th	0.961 (25/26)
Top	0.851 (23/27)
Final reduction ratio	3.133 (47/15)
Drive chain	RK525SM0Z8, 118 links
Chassis	
Front suspension	Telescopic, coil spring, oil damped
Rear suspension	Link type, coil spring, oil damped
Front fork stroke	150 mm (5.9 in)
Rear wheel travel	159 mm (6.3 in)
Caster	26°
Trail	110 mm (4.3 in)
Steering angle	40° (right & left)
Turning radius	2.7 m (8.9 ft)
Front brake	Disc brake, twin
Rear brake	Disc brake
Front tire size	110/80R19M/C 59H, tubeless
Rear tire size	150/70R17M/C 69H, tubeless

Electrical	
Ignition type	Electronic ignition (Transistorized)
Spark plug	NGK CR8EIA-9 or DENSO IU24D
Battery	12V 36.0 KC (10 Ah)/10HR
Generator	Three-phase A.C. generator
Fuse	15/15/10/10/15/15A
ABS fuse	25/15A
Headlight	12V 60/55W (H4) x 2
Position light	12V 5W x 2
Brake light/Taillight	12V 21/5W
License plate light	12V 5W
Turn signal light	12V 21W x 4
Speedometer light	LED
Turn signal indicator light	LED
Neutral indicator light	LED
High beam indicator light	LED
Oil pressure/Coolant temperature indicator light	LED
Fuel injection indicator light	LED
Freeze indicator light	LED
ABS indicator light	LED
Capacity	
Fuel tank	20.0 L(5.3 / 4.4US / Imp gal)
Engine oil / oil change	2400 ml (2.5/2.1 US/Imp qt)
With filter change	2750 ml (2.9/2.4 US/Imp qt)
Overhaul	3000 ml (3.2/2.6 US/Imp qt)
Coolant	1950 ml (2.1/1.7 US/Imp qt)

