



TECHNICAL INFORMATION



C 109R



What is a classic cruiser? Perhaps an image of vehicle that most quickly comes to mind of the American people whenever they hear the word “motorcycle.” In other words, for many people, classic cruiser is one of the most familiar images of motorcycles.

Familiarity stemming from a timeless, common image. But timelessness and commonness can also easily lead to blandness, devoid of individual character.

In introducing Suzuki’s biggest-displacement classic cruiser, the basic question was, how could we best express our own brand identity alongside this familiar, timeless impression? How should we let our classic cruiser, which must be styled for familiarity, embody a distinctive gleam of uniquely Suzuki character?

The answer was reached. For us, it would have to be the engine. The state-of-the-art Suzuki engine technology embodied in our power cruiser SUZUKI BOULEVARD M109R/INTRUDER M1800R, the new developments that opened up a new window of performance. The awesome power of the M109R/M1800R engine - now, we will transplant that power into the heart of our biggest-displacement classic cruiser.

The SUZUKI BOULEVARD C109R/INTRUDER C1800R. Suzuki’s biggest-displacement classic cruiser, with the hot pulsating heart of its 1,783 cm³ (108.8 cubic inch) DOHC 4-valve V-Twin powerplant wrapped in a tasteful, mature, adult styling created without catering to any temporary, passing design trends.

2008. Now at last the SUZUKI BOULEVARD C109R/INTRUDER C1800R takes to the roads. In the U.S.A. In Europe. To so many roads across the globe.

“INTRUDER” is the model name mainly used for European market. “SUZUKI BOULEVARD” is the model name mainly used for North American and Oceanian markets.

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Product concept

“Suzuki’s own Power Classic Cruiser”

Suzuki’s own redefinition of a classic cruiser.

Suzuki’s biggest-displacement classic cruiser, powered by an engine embodying advanced Suzuki technology, wrapped in a tasteful, mature, adult styling created without catering to any temporary, passing design trends.



Product overview

Advanced V-Twin engine laden with Suzuki technology

A classic cruiser should not be built for novelty; rather, a classic cruiser must express a certain timeless, familiar image.

However, timeless familiarity can also lead to blandness and lack of individuality that undercuts a motorcycle's appeal.

How could we best express a uniquely Suzuki character, a particular gleam that can set the bike apart from the others?

Everyone probably has a different image of the Suzuki brand. But few would disagree that one of the foremost technology at the core of Suzuki motorcycles' character, is our engine technology that has given rise to generations of high performance powerplants.

The new performance horizon opened up by the V-Twin engine technology for the SUZUKI BOULEVARD M109R/INTRUDER M1800R power cruiser represents one of the latest of such tradition of technological innovation. It's an exciting new performance horizon that also makes the M109R/M1800R engine a natural choice as a basis for the powerplant of our new flagship classic cruiser, the C109R/C1800R.

The SUZUKI BOULEVARD C109R/INTRUDER C1800R, true to the timeless classic cruiser concept, is not designed to "look different," to look original for originality's sake. However, the powerful "heart" of the machine embodies a fullest expression of technology that's uniquely Suzuki.

Naturally, we did not simply transplant the power cruiser engine; rather, it is extensively redesigned to realize an abundance of low-to-mid range power and torque and the pulsating feel both demanded of a classic cruiser.



Across-the-range power and torque that redefines “powerband”

The term “powerband” is used to describe the range of rpm at which a motorcycle engine is most effective, delivering its best throttle response and acceleration. In the case of the C109R/C1800R, the term Broad Powerband is almost inadequate, its V-Twin engine designed and tuned to crisply respond to the throttle across the entire range of engine rpm with power delivery that is not only linear, but tsunami-like. Whether on a solo ride across town, or a two-up cruise across the country.

- Liquid-cooled, 4-valve, DOHC, 54° V-Twin
- L-section top piston ring with PVD coated oil ring
- SCEM cylinders
- Shot-peened connecting rods
- Fuel injection system using advanced designs including Suzuki Dual Throttle Valve (SDTV)



Overall styling true to authentic classic cruiser image

Design motifs expressing the image of strength

The styling design is another important element of a classic cruiser. However, it is not enough to simply capture attention. As with the engine, the styling design should maintain authenticity while expressing strength.

The classic cruiser is a type of motorcycle that should invite riders to approach it in a somewhat casual manner without having to feel one has to “brace up” to the ride. Even with a large 1,783 cm³ displacement, the bike should welcome a calm approach from the rider, without the burden of unnecessary levels of tension. Our objective was a styling that’s accommodating and gentle to the senses, one which can make riders of any tastes look forward to a long, satisfying ownership. The styling should be refreshing and refined, but at the same time we thought it important to avoid the impression of simply following fashion trends. In other words, we sought an authentic styling that’s naturally and simply attractive.

Another important element in our styling concept was to express the power and strength of the C109R/C1800R’s high performance engine developed from the M109R/M1800R power unit. We felt the bike’s overall styling needed to maintain a natural, simple feeling of attractiveness - that cannot be compromised. Now that it is complete, we’re confident we managed the C109R/C1800R styling to express the power and strength of its M109R/M1800R-derived high-performance power unit with various “power motifs” on the engine and chassis, while maintaining a natural, authentic overall styling image.

Classic, authentic designs

- Rigid-frame-like look
- Deep fenders front and rear
- Classic chrome-plated headlight housing

Expressions of power feel

- Wide 240 mm-size rear tire
- Wide fuel tank
- Hefty 90 mm-diameter front fork outer covers
- Various styling design motifs shared with SUZUKI BOULEVARD M109R/INTRUDER M1800R

Modern suspension design and a rich set of functional features

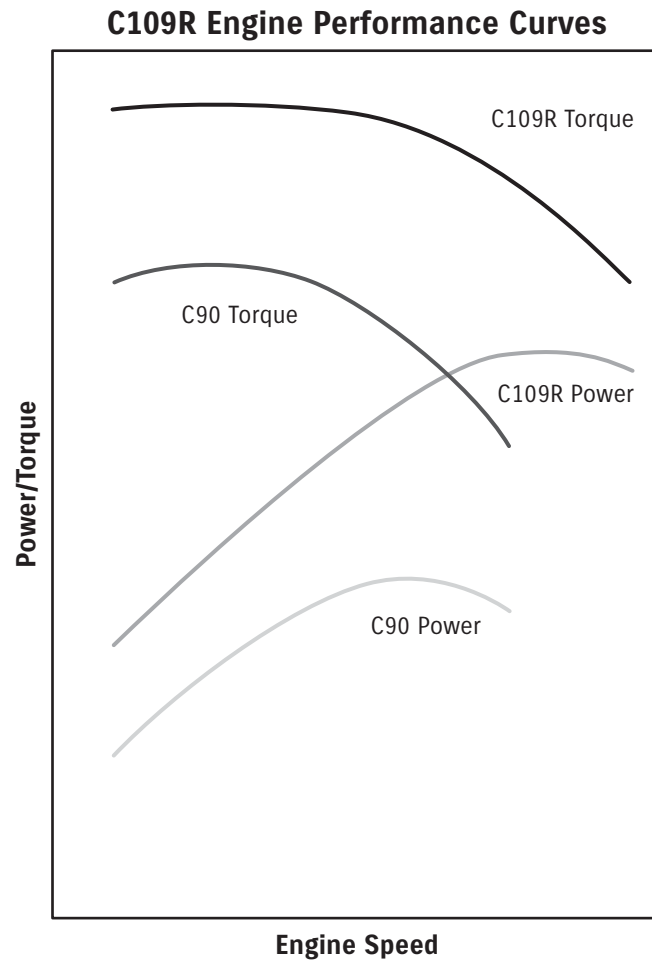
A classic styling should not be an excuse for classic, dated riding feel and comfort. The C109R/C1800R design pursues, without compromises, modern handling and comfort demanded of today's motorcycles. Likewise with equipment. The C109/C1800R comes with a rich set of features naturally expected of Suzuki's flagship largest-displacement classic cruiser.

- Rear monoshock suspension
- Comfortable ride with wide pullback handlebars and front/rear seats shaped to offer much freedom of riding postures
- Front/rear combined brake system
- Ease of picking the bike up off the sidestand
- Well-equipped instrument cluster
- Ample generator capacity allowing genuine accessory driving lights



Advanced V-Twin engine laden with Suzuki technology

Across-the-range power and torque that redefines “powerband”



■ Layout

Liquid-cooled 4-valve DOHC
54-degree V-Twin-cylinder
basic layout.



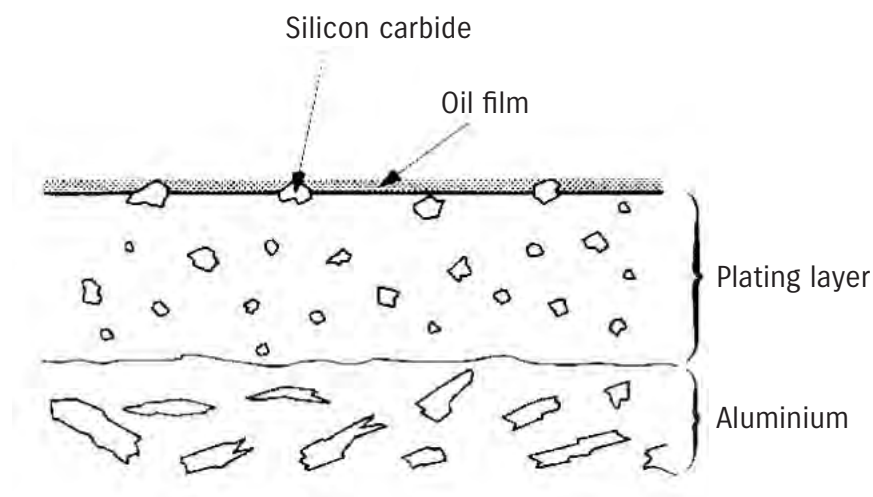
■ Piston

The same lightweight forged aluminum-alloy pistons as those of the M109R/M1800R. Piston diameter is not only larger than competing models; it is the largest compared to any gasoline vehicle engine running on the ground. The upper piston ring has an L-shaped cross-section, by which the ring is pushed by the pressure of the combustion gas against the cylinder wall, increasing sealing efficiency. The piston rings are also designed for increased rigidity and lighter weight. The oil control rings are plated with racing-technology-derived chrome-ion coating, using a process known as Physical Vapor Deposition (PVD) method, in which charged, vaporized chrome-nitride in a vacuum chamber is electro-deposited on piston-ring surfaces carrying an opposite charge. Chrome-nitride coating provides a more uniform thickness compared to conventional chrome plating and is hard and smooth, thereby reducing friction while increasing cylinder sealing efficiency, resulting in increased power production.



■ Cylinder

SCEM cylinders, made with Suzuki Composite Electrochemical Material (SCEM) high-speed plating - Suzuki's own, well-proven nickel-phosphorus-silicon-carbide coating technology offering efficient heat transfer and high wear resistance.



■ Conrod

The conrods are made of chrome-moly steel and are shot-peened. Shot-peening treatment involves shooting the conrod steel material with ball-shaped granules at high speeds to harden the surface, and increase the strength by creating a high compressive residual stress. The increased material hardness results in a better match with increased engine power and allows the conrod to be made thinner and lighter.



■ Crankshaft

The crank inertia of the M109R/M1800R engine was reviewed and increased by approx. 15%. As a result, the engine rpm varies less with throttle operation, making for a smoother riding feel and realizing delivery of a more steadfast power delivery at very low rpm range, in keeping with the character of a classic cruiser.

Combustion is at unevenly spaced intervals, at 486-234 degrees. Along with which a single-axis balancer is used, and crankpin off angle is optimized, by which unpleasant engine vibrations are greatly reduced. In addition, the engine is floating-mounted using large rubber mounts. These measures together helped compose a distinctly V-Twin pulse feel.

The crankcase is a two-piece (upper and lower) type, to increase rigidity to match the increased engine output.

Lubrication system is the semi-dry-sump type, to keep the crankcase compact, reduce engine height, and furthermore, to avoid mechanical losses caused by crankshaft oil agitation. And because the transmission case doubles as an oil tank, the engine can also be made more compact in terms of overall size.



■ Cylinder head

The cylinder head with a compactly shaped combustion chamber uses dual spark plugs, resulting in smooth, linear power-output characteristics, high fuel efficiency, and low exhaust emissions. The two spark plugs are each controlled by its own, separate ignition map. Both spark plugs fire at the same time during light-load engine operation, but fire at optimally timed intervals at heavy load conditions.

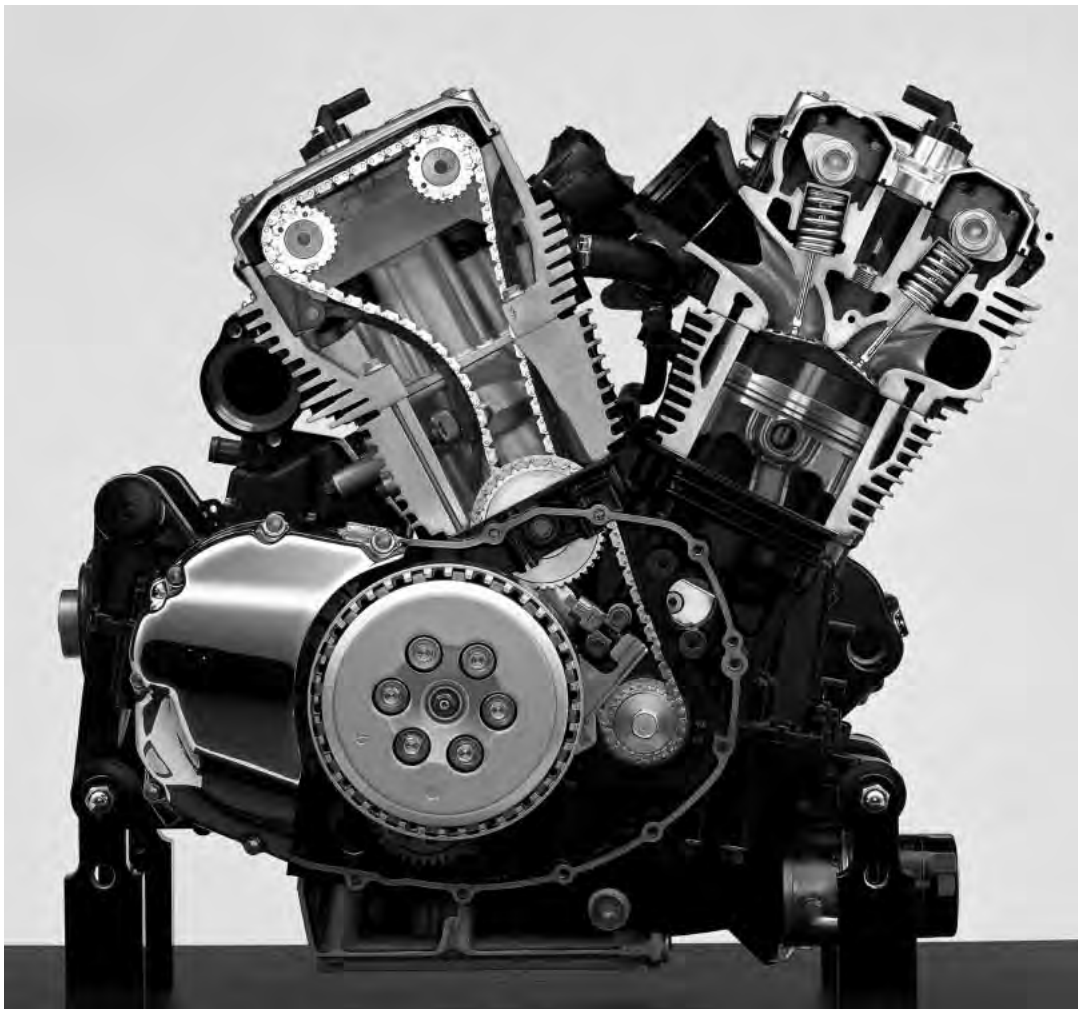
The intake port shape is the downdraft type, designed based on those of sport models like the SV1000 and GSX-R1000 and delivering high intake efficiency. Valve angle is 14 degrees – similar to that for supersport models like the Hayabusa. Valve diameters are intake 42 mm and exhaust 38 mm.

The camshafts are made of cast-iron-alloy, just like Suzuki supersport models. The exhaust camshafts share the same profile with the M109R/M1800R (only base circle diameter is different), while the intake cam profile is changed, aimed at heightening low-to-mid-range power in keeping with the C109R/C1800R's model concept. The cam timings were selected to deliver a robust feel throughout the powerband while also maintaining a rider-friendly character, particularly for highway rides. Making use of supersport model technology, inner shims are used to reduce valvetrain weight.

■ Cam chain

Suzuki's own two-stage cam chain drive system contributes to keeping the engine light-weight and compact. With conventional cam chain drive systems, the cam sprockets rotate at half the speed of the crankshaft sprocket, which means effective diameter of the cam sprocket has to be double compared to that of the crankshaft sprocket, which makes the cylinder head high and long, resulting in a large engine size.

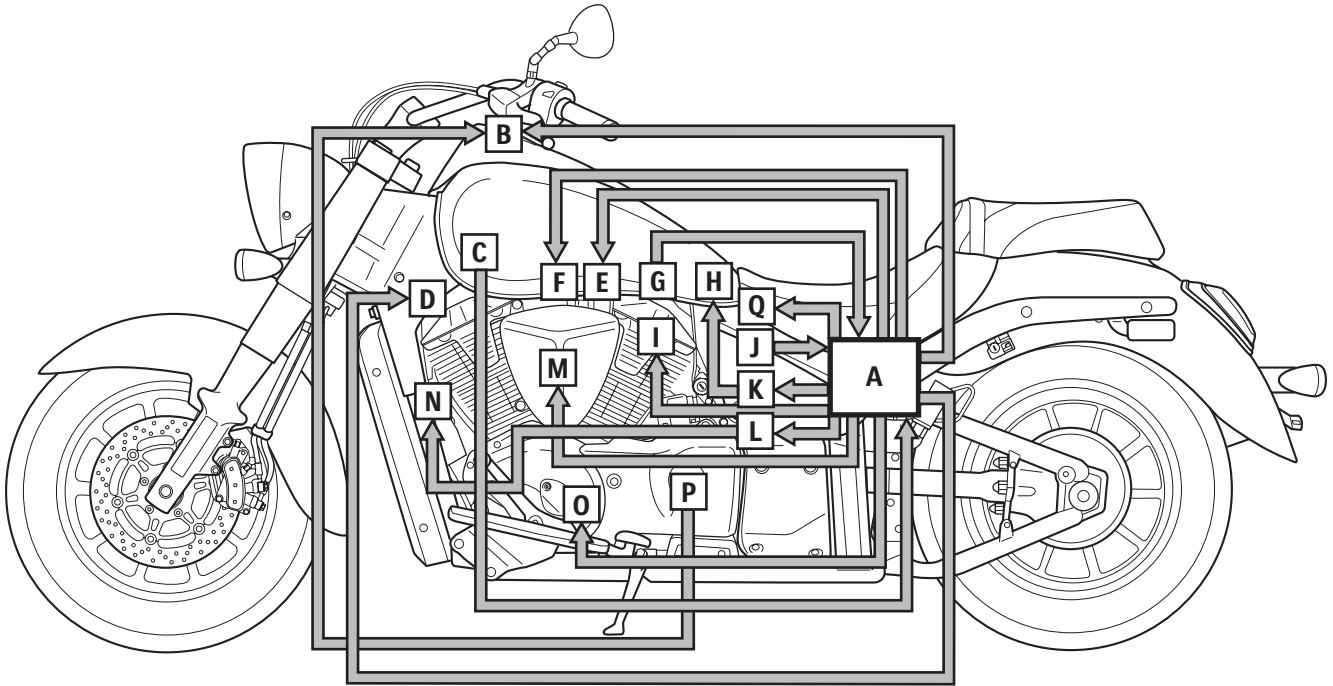
Suzuki's two-stage cam chain drive system adds an intermediate sprocket with a pair of teeth, between the cam sprockets and the crank sprocket, and uses two chains - one chain linking the crankshaft sprocket and intermediate sprocket, and another chain running from the intermediate sprocket to the cam sprockets - an effective design solution allowing a compact cylinder head.



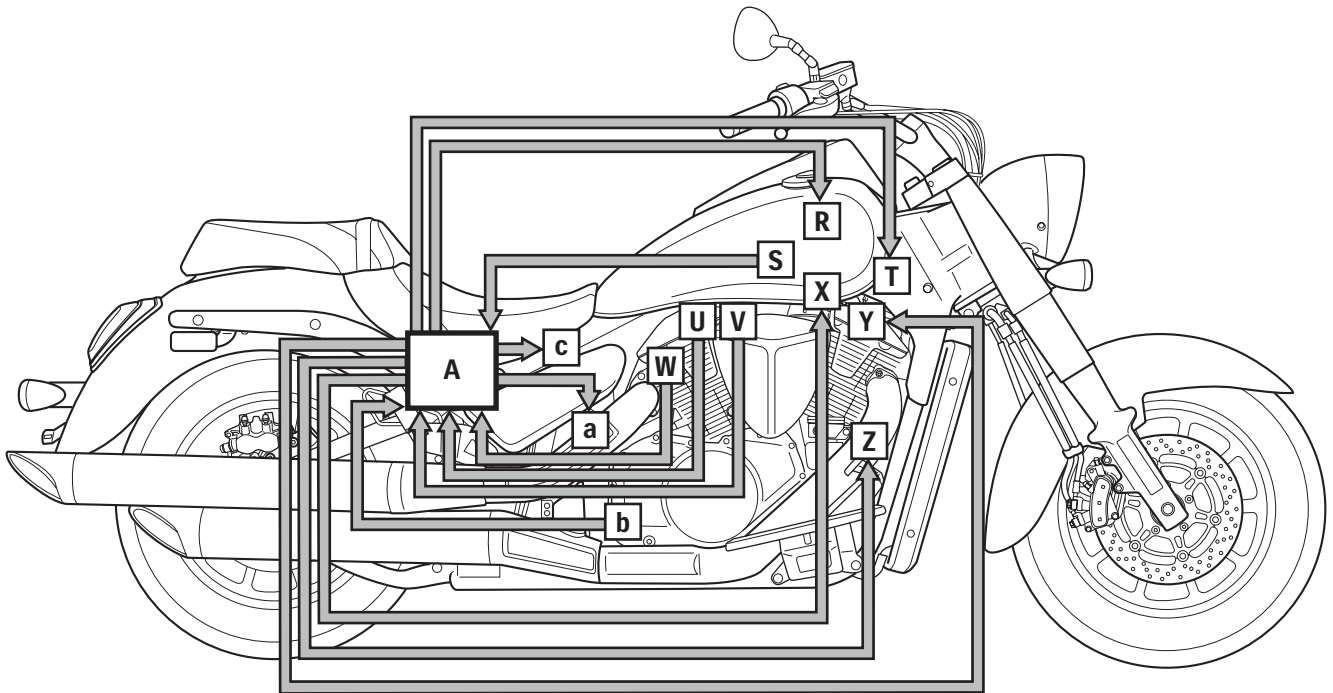
* Photo : M109R/M1800R

■ ECM

The microcomputer of ECM with a 32-bit capacity and a 384 kilobyte ROM is the central “brain” of the C109R/C1800R, controlling various functions including: ignition, fuel injection, Idle Speed Control (ISC), secondary throttle valves, exhaust tuning system motor, O₂ sensor (for the European, Australian and Californian specification only) and Pulsed-secondary AIR-injection (PAIR) system.



A	ECM
B	Speedometer
C	Intake air temperature sensor
D	PAIR control solenoid valve
E	Fuel injector #1
F	Fuel injector #2
G	Intake air pressure sensor #1
H	Fuel pump
I	Ignition coil/plug cap #1
J	Tip-over sensor
K	Fuel pump relay
L	Cooling fan relay
M	Engine coolant temperature sensor
N	Cooling fan
O	Crank shaft position sensor
P	Speedometer sensor
Q	Ignition coil #1



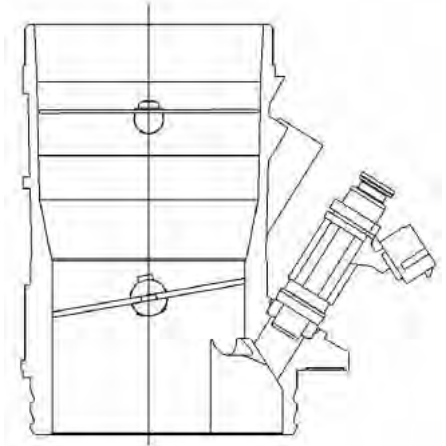
A	ECM
R	ISC valve
S	Intake air pressure sensor #2
T	Ignition coil #2
U	Secondary throttle position sensor
V	Throttle position sensor
W	Secondary throttle valve actuator
X	PAIR control solenoid valve [For European, Australian and Californian spec]
Y	Ignition coil/plug cap #2
Z	O ₂ sensor #1 [For European, Australian and Californian spec]
a	O ₂ sensor #2 [For European, Australian and Californian spec]
b	Gear position switch
c	Exhaust control valve actuator

■ SDTV

A single-barrel throttle body containing the Suzuki Dual Throttle Valve (SDTV) system is fitted to each cylinder. The design delivers accurate fuel delivery precisely suited to a wide range of riding conditions. Throttle bore diameter is 52 mm, reduced from the M109R/M1800R's 56 mm, for increased low-to-mid-range power befitting a classic cruiser. Each cylinder is equipped with its own intake-air-pressure sensor providing the feedback for a more precise fuel injection.

The SDTV system uses two butterfly valves in each throttle body barrel. The primary butterfly valve is linked to the throttle cable, while the secondary valve is incrementally opened/closed by a motor controlled by the ECM based on engine rpm, gear position and the position of the primary butterfly valve.

The secondary valve is opened/closed to constantly maintain optimum intake air-flow velocity for a linear throttle response, ample low-to-mid range torque and high combustion efficiency.



■ Injector

Each cylinder has its own multi-hole-type (12-hole) injector. The injector on-time (the length of which determines the volume of fuel delivered to the engine) is calculated by the ECM based on engine rpm, intake air pressure and throttle position.



■ ISC

The Idle Speed Control (ISC) system monitors and calculates the difference between the actual idling rpm and the normal idling rpm, and corrects to the normal idling rpm by regulating the intake air-flow volume by using a stepping motor to open/close an ISC valve in the bypass circuit in the throttle body. Particularly during cold starts, the system also conducts fast-idle control by increasing intake air flow volume based on sensor-monitored engine coolant temperature. The system produces stable idling contributing to user comfort, and also helps keep the accuracy of idling even after longtime use, adding environmentally friendly performance.

■ Air cleaner box

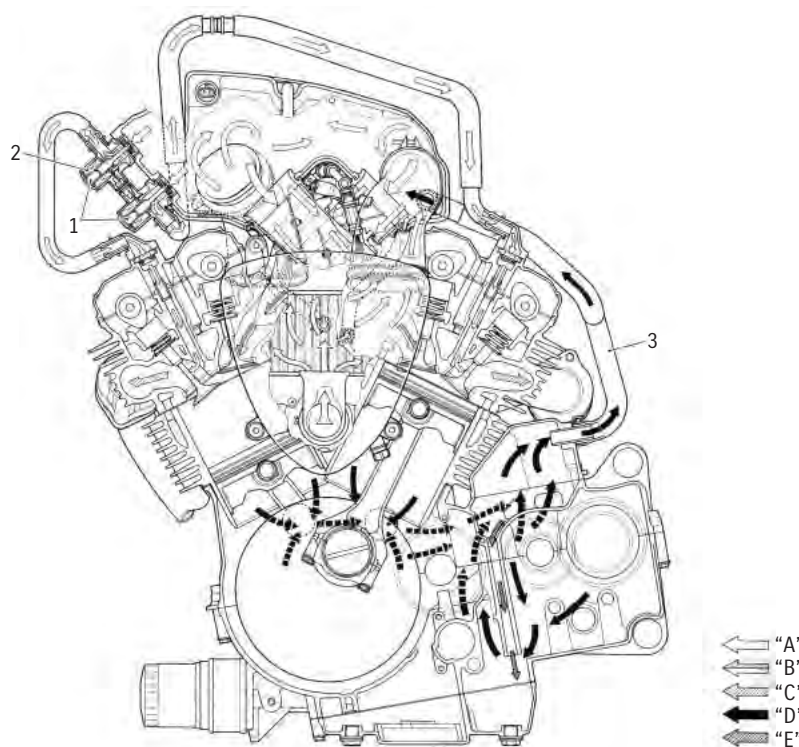
The air cleaner box is shaped forming three separate chambers – one above the middle of the engine and one on each side of the cylinders – for compactness while maintaining proper volume for realizing a downdraft intake design. The three-chamber design also helps allow the fuel tank to be enlarged without disrupting the C109R/C1800R's smooth overall form.

■ PAIR system and catalyzer

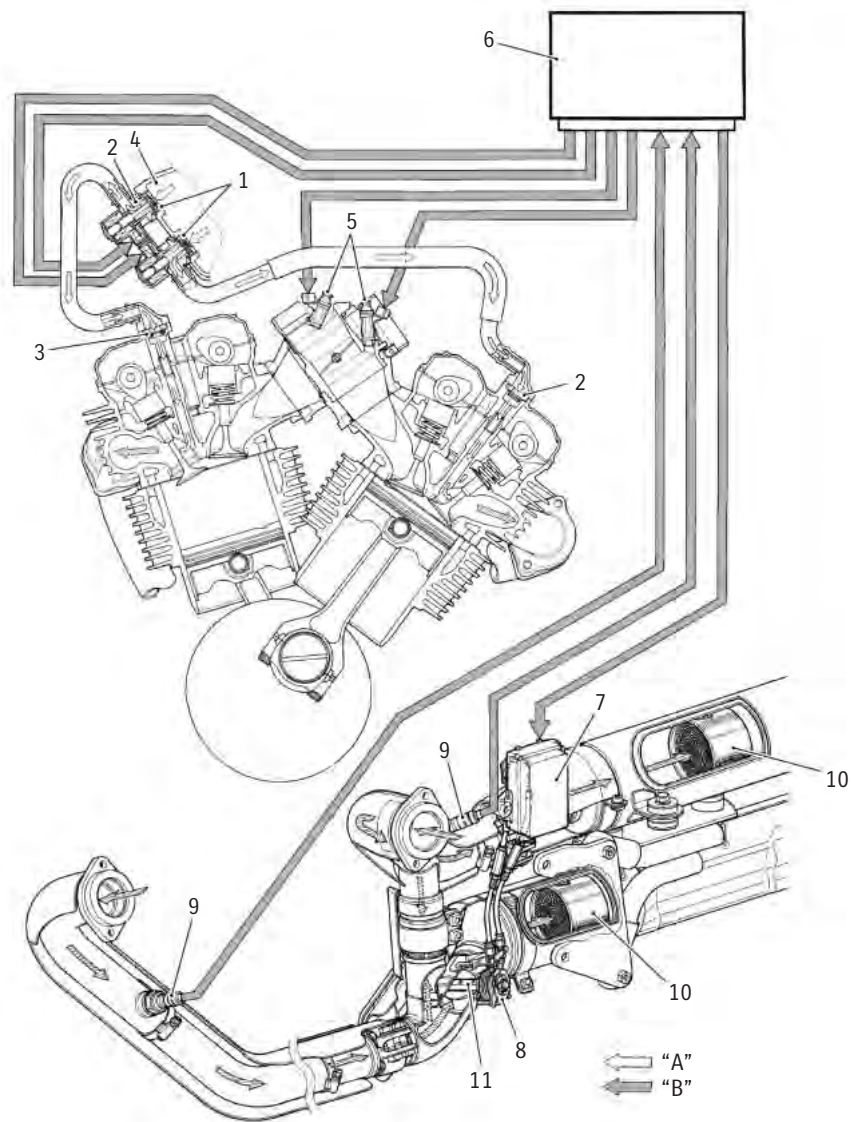
All versions of the C109R/C1800R equips the Pulsed-secondary AIR-injection (PAIR) system, which injects, using exhaust pulses, fresh air from the air cleaner box through the solenoid valve - controlled by the ECM based on throttle position and engine rpm - into the exhaust ports of each cylinder head to ignite unburned hydrocarbons (HC) and carbon monoxide (CO) and reduce their emissions by converting them into H₂O and CO₂. Furthermore, on the European, Australian and Californian specification, each cylinder has its own PAIR solenoid control valve for an even more effective environmental measure (the solenoid valve is shared by the twin cylinders on other versions).

A large-capacity catalyzer, 76.3 mm thick and 80 mm long (European, Australian and Californian specification)/76.3 mm thick, 40 mm long (American and Canadian specification) is fitted on each muffler pipe. The Australian and Californian specification furthermore equips O₂ sensors, resulting in superb environmental performance.

The O₂ sensors provided for each cylinder closely monitor the conditions of the exhaust gas in the exhaust pipe, which is fed back to the ECM making adjustments to constantly maintain optimum fuel-air ratio to allow the catalyzers to reduce emissions as efficiently as possible.



1	PAIR control solenoid valve [For European, Australian and Californian spec]
2	PAIR control solenoid valve [For American and Canadian spec]
3	PCV hose
A	Fresh air
B	Fuel/Air mixture
C	Exhaust gas
D	Blow-by gas
E	Return oil



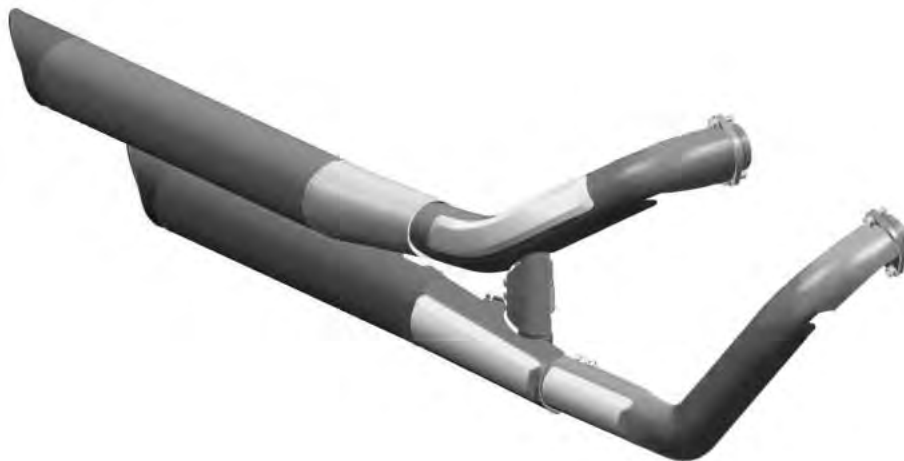
1	PAIR control solenoid valve [For European, Australian and Californian spec]
2	PAIR control solenoid valve [For American and Canadian spec]
3	PAIR reed valve
4	Air cleaner chamber
5	Fuel injector
6	ECM
7	Exhaust control valve actuator
8	Exhaust control valve pulley
9	O ₂ sensor [For European, Australian and Californian spec]
10	Catalyst
11	Exhaust control valve
A	Fresh air
B	Exhaust gas

■ Exhaust system with SET

The exhaust system is the 2-into-2 type. The two head pipes are connected by a balance tube - a design aimed at canceling out reflected exhaust waves and evening out the valleys in exhaust pulses. Right behind the balance tube is a Suzuki Exhaust Tuning (SET) system which adds to the effect of the tube: an exhaust valve opens/closes and optimizes exhaust pulses, particularly with emphasis on the low rpm range, thus contributing to ample torque output. The mufflers deliver a well-composed, rich, luxurious exhaust note befitting Suzuki's flagship classic cruiser model. The exhaust note was carefully tuned using a sound-quality evaluation program based on data obtained through sensation-evaluation tests extensively repeated in the course of developing the M109R/M1800R.

The resulting well-tuned, luxurious and distinct C109R/C1800R exhaust note opens a new page in the sound of cruiser bikes and helps set it apart from other models.

The muffler design with a slash-cut end is shared with the M109R/M1800R but with the cut surface rotated approx. 15 degrees for a fresh image. Muffler length is also extended to match the larger chassis size, thus contributing to the model's low-and-long image.



Overall styling true to authentic classic cruiser image

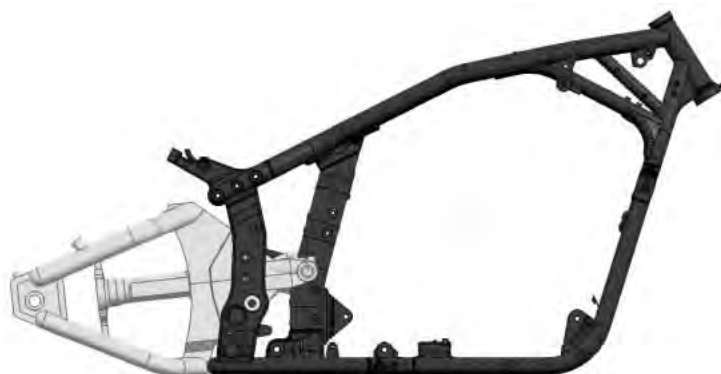


■ Frame

The classic hardtail-like styling image is composed with a frame-pipe construction that integrates the lines of the main frame section and the swingarm-pivot section, and with a layout that hides the rear suspension unit in the lower chassis.

The basic frame construction is shared with Suzuki's flagship power-cruiser model M109R/M1800R. All three engine mounts are rubber-cushioned to reduce unpleasant engine vibration transmitted to the chassis.

The various frame sections are made using, as much as possible, only actual functioning structural parts, and rather than using unnecessary cover components, extra effort is rendered in the manufacturing process including surface treatment, in pursuit of genuine beauty rather than decorative add-ons. The shaft drive secondary gear output cover and the swingarm pivot cover are both chrome-plated steel for a rich, luxurious feel befitting a flagship classic touring machine.



■ Front and rear fenders

The front and rear fenders are shaped slightly shallower than is typical for a classic cruiser, and with a functional-looking slimness, to visually accentuate the robust impression of the ultra-wide rear tire.

On the other hand, we avoided the flared edges and used a straight shape, and chose fender lengths typical of classic cruisers, in order to express a timeless, authentic style of beauty that owners will not tire of easily. The fenders are made of steel for a high-quality feel. Combined with chrome-plated steel supports accentuating both sides of the rear fender, the fenders contribute to a well-composed luxury feel befitting Suzuki's flagship biggest-displacement cruiser bike.



■ Headlight housing

Chrome-plated headlight housing having a conventional design expected of a classic cruiser. The housing is shaped with a round front view, but with a somewhat "slash-cut" side view with the upper part projecting forward. In other words, the housing is shaped to express the timeless authentic classic-cruiser beauty with the round front design, and new quality with a side view that takes one step further from the familiar visored form by using a fresh new slash-cut shape.

The 12-volt 60/55-watt halogen-bulb multi-reflector high/low beam headlight with a 180 mm lens diameter provides ample illumination.



■ Speedometer

A typically classic cruiser round, large 110 mm-diameter-lens analog speedometer is positioned atop the fuel tank inside a chrome-plated housing.



■ Turn signals

The bullet-shaped chrome-plated front/rear turn signal design shared among the SUZUKI BOULEVARD/INTRUDER series, with a typically cruiser-model image of authentic, timeless luxury that's well-matched to the overall styling of the C109R/C1800R. Vertical lens cut is employed, instead of the more common fisheye fresnel cut seen on other models. 12-volt, 21/5-watt for front bulbs and 12-volt, 21-watt for rear bulbs (this is for American, Californian and Canadian specification, for European and Australian specification, both front and rear 12-volt, 21-watt).



■ Wheels

Cast aluminum-alloy wheels with a new design. The radial 10-spoke design is shaped to express a lightweight and sporty visual impression while also conveying a well-composed image contributing to maintaining the authentic styling appeal of a classic cruiser. Sizes are 16M/C x MT3.50 front and an ultra-wide 16M/C x MT8.00 rear.



■ Taillight

The taillight uses fisheye cut red lens with a luxurious finish mounted inside a chrome-plated rim also with a luxurious feel. Taillight features LEDs of high vibration resistance and low electrical consumption.

Furthermore, to enhance the C109R/C1800R's sleek overall lines, the license plate holder and the license plate lamp is positioned together below the taillight, for an uncluttered impression.



Design motifs expressing the image of strength



■ Fuel tank

The wide fuel tank has a powerful and distinctive visual impact. Together with the tires, wheels and the fenders, the tank highlights the C109R/C1800R's voluminous feel. The tank is also shaped expressing the familiar and authentic, classic cruiser feel, and has an ample 19 liters (5 gallons) capacity for convenience on long touring rides.

■ Tires

Tires are Bridgestone-made and specifically designed for the C109R/C1800R. Sizes are front 150/80R16M/C 71V, and on the rear, a massive, ultra-wide 240/55R16M/C 86V overwhelming other brands' competing models and delivering a powerful, dynamic impression.



■ Front fork tube covers

Hefty 90 mm-diameter front fork tube covers help compose a voluminous, robust front end.



■ Styling design motifs

The cylinder head cover styling design is shared with the M109R/M1800R. The outlines of air cleaner cover and the taillight are shaped with an upside-down-triangle motif styling concept also shared with the M109R/M1800R. Likewise, the muffler end slash cuts are also inspired from the M109R/M1800R.

Such shared design features express the performance heritage of the M109R/M1800R power cruiser incorporated into the C109R/C1800R engine unit.



M109R



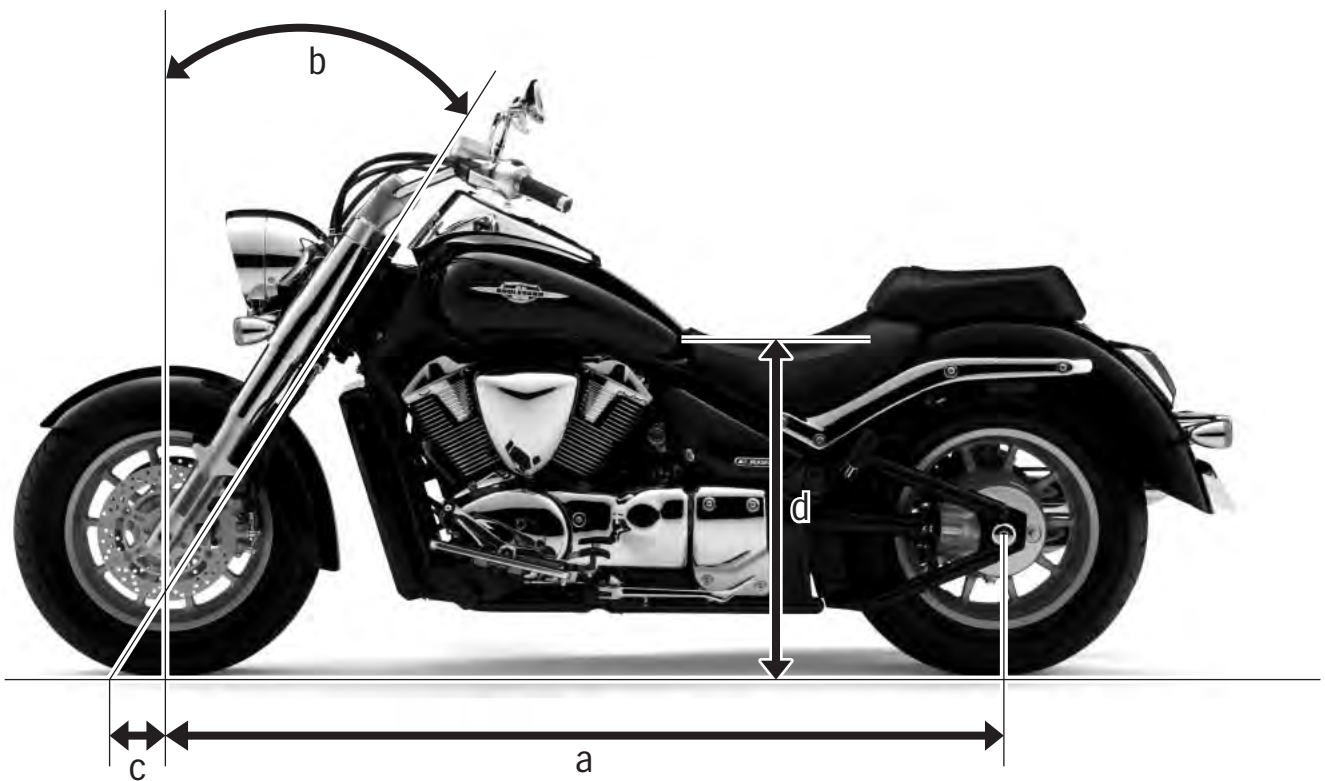
C109R



Modern suspension design and a rich set of functional features

■ Chassis dimensions

Chassis dimensions were selected aimed at delivering steady, well-composed straightline handling performance without sacrificing maneuverability. – It is a feeling of two tires working together as one – in other words, a handling character one expects from a classic cruiser. The dimensions including a long wheelbase were also chosen to make sure the C109R/C1800R will have one of the largest overall dimensions in its class to deliver a robust image befitting Suzuki's largest-displacement classic cruiser.



Overall length	2,580 mm (101.8 in)
Overall height	1,150 mm (45.3 in)
Overall width	985 mm (38.8 in)
a) Wheelbase	1,755 mm (69.1 in)
b) Caster angle	31.8 degrees
c) Trail	131 mm (5.2 in)
d) Seat height	705 mm (28.0 in)
Dry weight	357 kg (787 lbs)
Ground clearance	135 mm (5.3 in)

US specifications

■ Rear suspension

The Showa-made 46 mm-cylinder-inner-diameter steel damper unit delivers stable shock absorption. 7-way preload adjustability allows damper performance to be matched to various running situations and road-surface conditions. Wheel travel is an ample 118 mm. The cast and extruded composite aluminum swingarm features light weight and high rigidity.



■ Front forks

Showa-made 49 mm-diameter conventional front forks deliver 130 mm of wheel travel and feature high rigidity and superb operating feel.



■ Transmission

5-speed transmission, with gear ratios selected for smooth rides in a wide variety of running conditions from short highway hops to long touring rides. A friction damper built in between the 2nd driven gear and driveshaft smoothes gearshifts.

Shaft drive was chosen, for low maintenance and durability over the long run.

Transmission Overall Ratios	
1st	10.856
2nd	6.948
3rd	5.153
4th	4.107
5th	3.402

■ Riding position

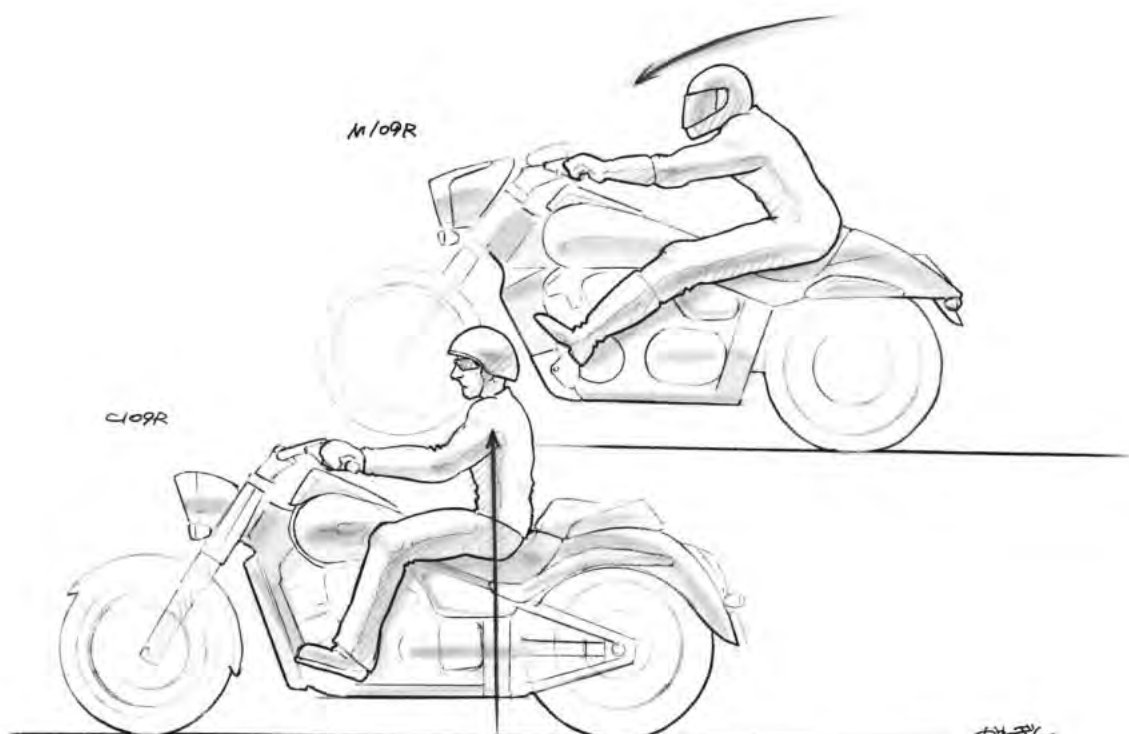
The pullback handlebars are chrome-plated for a rich, luxurious finish. The bars' shallow bend and wide design presents a well-composed riding position.

The rider's seat is sized wide and long, befitting Suzuki's largest-displacement classic cruiser.

The generous seat length allows users much freedom of riding postures to suit different riding conditions and individual rider sizes. The generous seat width helps enhance comfort even for riders of a larger build.

For comfortable tandem rides, the pillion seat is also provided with ample length and cushion thickness, along with a bulge at front.

Even though the chassis size is among the largest in its class, the foot controls, handlebars and the seat are positioned so that they are not too distant from each other. The floorboards – a typical classic cruiser feature – are also generously sized for comfort.



■ Brakes

Front/rear combination brake system. When only the front brake lever is applied, only the front caliper is activated; when the rear brake pedal is applied, both the front and rear calipers are activated for a well-balanced distribution of braking force to both the front and rear wheels.

The front brake uses pin-slide caliper – newly designed for the front/rear combination brake system – with three pistons each measuring 25.40 mm, 22.65 mm and 25.40 mm in diameter. The front brake lever only activates the two outside pistons in the front caliper, while another brake line connecting the front caliper to the rear brake pedal activates the 22.65 mm center piston. The front brake uses dual 290 mm-diameter floating-mounted discs.

Pin-slide 2-piston rear brake caliper is shared with the M109R/M1800R. Both pistons measure 30.23 mm in diameter. The rear brake pedal activates these rear caliper pistons as well as each of the 22.65 mm center pistons on the two front brake calipers. Rear brake disc measures 275 mm in diameter and is also floating mounted.



■ Sidestand

Despite being a large 1,783 cm³ bike, the C109R/C1800R is designed to be relatively easy to pick off the sidestand. The long, chrome-plated sidestand by itself presents a luxurious feel befitting an authentic classic cruiser.



■ Instrument cluster

The chrome instrument cluster carries an analog speedometer and maintenance-free LED indicator lights for turn signals and other functions. The speedometer needle is driven by a precise and highly vibration-resistant stepping motor.

An LCD section on the speedometer face includes selection of either twin trip meters or odometer, along with fuel gauge and clock displays which are constantly on view.



■ Generator

Magneto generating capacity at idle is increased by 4A compared to the M109R/M1800R, allowing installation of genuine dual 35-watt driving lights.

A wide choice of genuine accessories

An attractive lineup of genuine accessories developed alongside the C109R/C1800R, featuring ease of installation as well as a natural, harmonious match with the bike, in terms of both fit and design. A wide choice of items to customize and personalize your very own C109R/C1800R.



* Photo : C109R

- **Windscreen**

Two types available for North American market (both with SUZUKI BOULEVARD logo) and one type available for European market (without logo), Different shapes for North American market and European market respectively, due to regulation differences

- **Light bar**

For North American market only

- **Accessory bar**

- **Passenger floorboard**

With or without SUZUKI BOULEVARD logo (with logo for North American market and without for European market)

- **Rear backrest**

With or without SUZUKI BOULEVARD logo (with logo for North American market and without for European market)

- **Backrest support**

With or without SUZUKI BOULEVARD logo (with logo for North American market and without for European market)

- **Rear carrier**

- **Saddlebag support**

- **Saddlebags**

For North American market only

- **Chrome master cylinder cap**

- **Chrome frame head trim**

- **Chrome oil filter**

Parts names all provisional

Specifications

Engine configuration	54-degree, V-twin, 4-stroke, DOHC
Engine displacement	1,783 cm ³ (108.8 cu. in)
Engine cooling system	Liquid cooled
Compression ratio	10.5 : 1
Valves per cylinder	4
Intake valves per cylinder	2
Exhaust valves per cylinder	2
Bore x stroke	112.0 mm x 90.5 mm (4.409 in X 3.563 in)
Valve angles from vertical	IN : 13 degrees, EX : 14 degrees
Valve train type	Bucket tappets, cam chain drive
Intake valve diameter	42.0 mm (1.65 in)
Exhaust valve diameter	38.0 mm (1.50 in)
Intake valve maximum lift	9.2 mm (0.36 in)
Exhaust valve maximum lift	9.9 mm (0.39 in)
Intake valve timing	
Open BTDC	25 degrees
Close ABDC	53 degrees
Exhaust valve timing	
Open BBDC	67 degrees
Close ATDC	19 degrees
Fuel system	Fuel injection
Throttle valve size	φ 52 mm (2.0 in)
Air filter type	Non-woven fabric element
Exhaust system type	2-2
Ignition system	Electronic ignition (transistorized)
Lubrication system	Semi-dry sump
Engine oil capacity	5,000 ml (5.3/4.4 US/Imp qt)
Fuel capacity	19.0 L (5.0/4.2 US/Imp gal)
Transmission	5-speed constant mesh
Clutch type	Wet multi-plate type
Clutch actuation system	Cable
Clutch spring type	Coil spring
Number of clutch springs	6
Number of clutch plates	
Drive plate	6
Driven plate	7
Primary drive gear ratio (teeth)	1.757 (58/33)
Final drive gear ratio (teeth)	2.823 (18/17 x 32/12)

Transmission gear ratio (teeth)	
1st	2.187 (35/16)
2nd	1.400 (28/20)
3rd	1.038 (27/26)
4th	0.827 (24/29)
5th	0.685 (24/35)
Transmission overall ratio	
1st	10.856
2nd	6.948
3rd	5.153
4th	4.107
5th	3.402
Frame type	Steel double-cradle
Rake / trail	31.8 degrees / 131 mm (5.2 in)
Wheelbase	1,755 mm (69.1 in)
Seat height	705 mm (28.0 in)
Front fork	Telescopic, coil spring, oil damped
Front fork inner tube diameter	49 mm (1.9 in)
Front fork adjustment	
Rebound damping	No
Compression damping	No
Spring preload	No
Front wheel travel	130 mm (5.1 in)
Rear suspension adjustment	
Rebound damping	No
Compression damping	No
Spring preload	Adjustable (7-way)
Rear wheel travel	118 mm (4.6 in)
Front brake	Pin-slide 3-piston, ϕ 290 mm dual discs
Rear brake	Pin-slide 2-piston, ϕ 275 mm single disc
Front wheel	16 M/C x MT3.50, cast aluminum alloy
Rear wheel	16 M/C x MT8.00, cast aluminum alloy
Front tire	150/80R16M/C 71V tubeless
Rear tire	240/55R16M/C 86V tubeless
Dry weight	357 kg (787 lbs)
Overall length	2,580 mm (101.8 in)
Overall width	985 mm (38.8 in)
Overall height	1,150 mm (45.3 in)
Ground clearance	135 mm (5.3 in)



Way of Life!