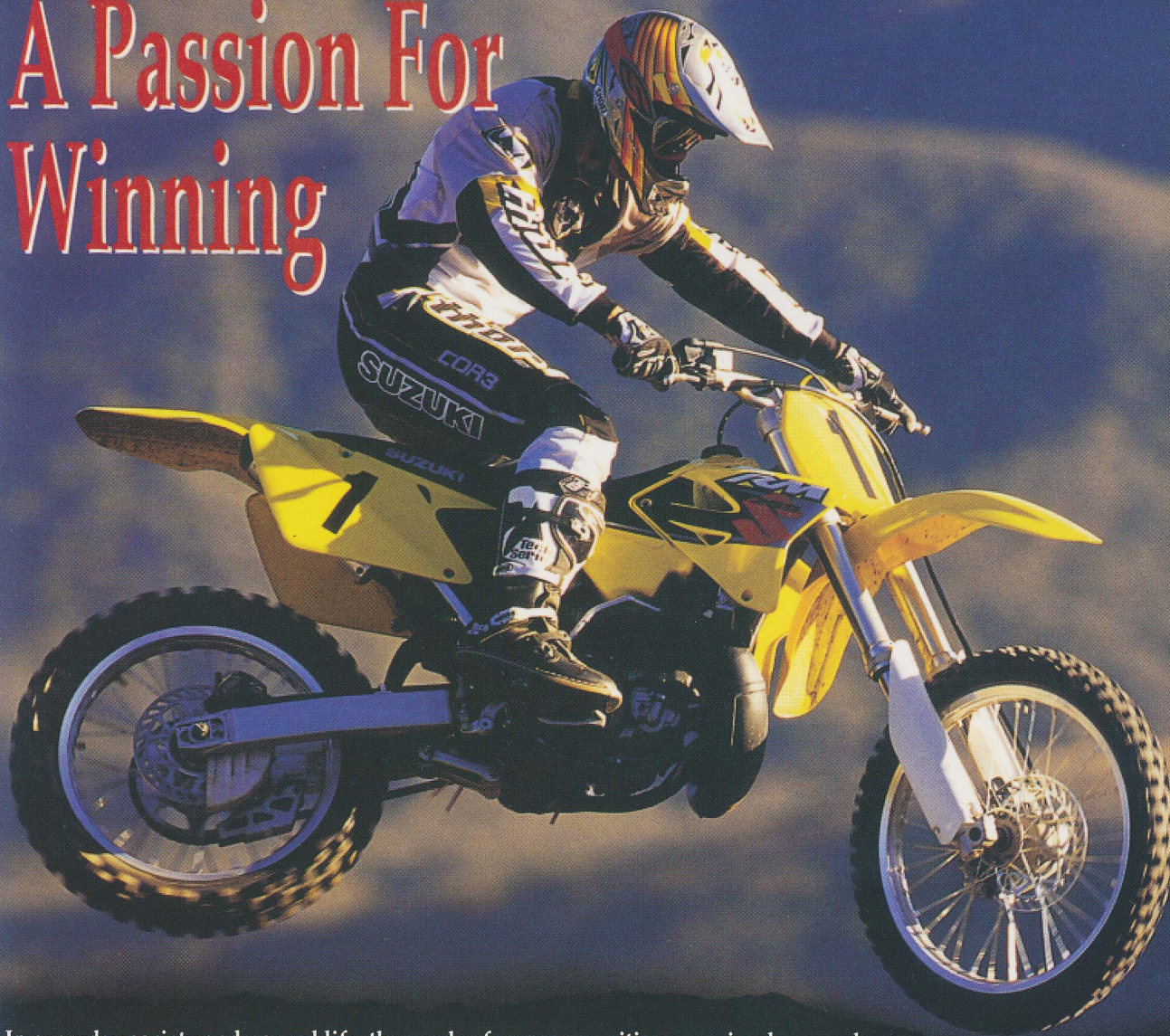


 **SUZUKI**

RM
250/125



A Passion For Winning



Stronger, More Aggressive, Lighter

The new RM models make more power and torque, have more aggressive styling, and are lighter than ever. The 2001 RM250 weighs just 98.0 kilograms (216 pounds) and the 2001 RM125 weighs just 90.0 kilograms (198 pounds).

Weight distribution has been optimized on both models, with chassis and engine redesigned to concentrate weight at the center of the machine

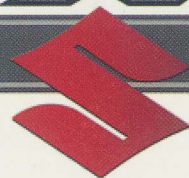


In everyday society and normal life, the needs of an average citizen are simple enough. A familiar job, an easy commute, a nice garden, a predictable hobby, a comfortable life. But for some people, having things familiar and easy and nice and comfortable and predictable is not enough. For some people, there has to be more.

For some people, a good life requires excitement. For some people, dirt is for racing, not gardening. For some people, competition is life's highest calling, and winning is life's highest passion. Such people are not average citizens. They are motocross racers.

There are machines built for such people. Developed using the lessons learned through winning World Championship Grand Prix races in Europe and National Championship races in the United States, and Japan.

Designed by a dedicated group of Suzuki engineers who mix technical expertise with a passion for winning.

RM**RM250/125 chassis****Completely New, Lighter Chassis**

The entire chassis of each model has been redesigned to improve the balance of frame rigidity, weight placement, swingarm length and rigidity, suspension calibration and overall geometry. In each case, the chassis has been matched to the engine power unit engine power output for the best overall performance.

The basic frame design remains a single backbone with dual cradle, but with detail changes in construction reducing weight and increasing rigidity. Compared to the 2000 models, the cross section of the rectangular downtubes has been reduced from 50 × 45mm to 40 × 45mm, and the rear cradle is now made of stamped sections instead of tube sections; main frame weight is reduced by about 580 grams. The detachable, aluminum rear subframe/seat-rail section is 120 grams lighter on both models.

The RM250 has a 1470mm (57.9-inch) wheelbase with 27.5 degrees of rake and 115mm (4.53 inches) of trail. The RM125 has a 1450mm (57.1-inch) wheelbase with 26.5 degrees of rake and 104mm (4.09 inches) of trail.

The radiator shroud, fuel tank, seat, rear frame cover and handlebars have been reshaped to make it easier for the rider to move around on the machine. On the RM250, the footpeg mounts have been relocated 9mm upwards and 9mm rearwards, to improve the riding position.

**RM125****RM250****RM250****RM125**



RM250/125 chassis

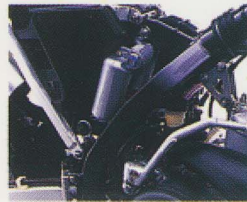
Detail changes to reduce weight include the following:

- Reshaping the rear fender, incorporating a cutaway hand grip area on each side to allow the rider to grab the fender and move the bike sideways more easily, to put it on a stand, position it in the starting gate area or before remounting (saving 5 grams).



Hand grip area

- Simplifying the rear brake master cylinder design and repositioning the master cylinder fluid reservoir inside the frame rail, eliminating the need for a rear brake master cylinder cover (saving 109.8 grams).

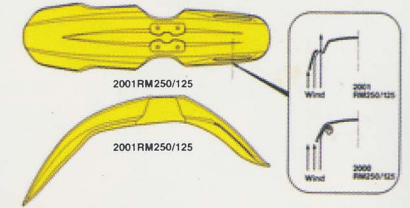


- Reducing the size and shape of the metal adjuster on the clutch cable, and reducing the outer cable diameter from 7.0 to 6.1mm (saving 73.8 grams).

- Reducing the size and shape of the metal end piece on the throttle cable (saving 22.5 grams).

- Reshaping the front number plate (saving 37.6 grams).

- Reshaping the front fender with air scoops to increase the flow of cooling air reaching the radiator, without decreasing mud protection (saving 30 grams).



- Reducing front wheel hub width from 102mm to 82mm and using larger-diameter (26mm versus 25mm) aluminum axle spacers instead of steel (saving 47.7 grams).

- Increasing the size and changing the shape of the cutouts inside the front brake disc (saving 99.9 grams).



- Reducing the thickness of the rear brake disc and increasing the size and changing the shape of the cutouts inside the rear brake disc (saving 146 grams).



- Reducing the outside diameter of the chain roller from 40mm to 35mm, (saving 8 grams).

- Reshaping the swingarm-mounted chain buffer (saving 5 grams).

- Changing the shape of the rear brake caliper bracket (saving 30.7 grams).

- Chamfering the rear corners of the chain adjuster blocks (saving 2.9 grams).

- Reducing chain guide thickness from 3.5mm to 3.0mm (saving 31.9 grams).

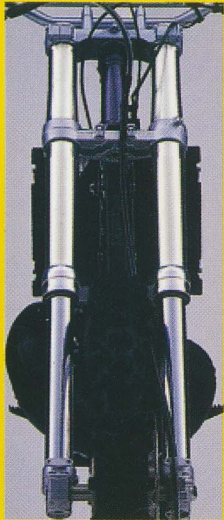
- Reshaping the rear brake pedal and making it out of 1mm thinner material, (saving 90 grams on the RM250 and 78 grams on the RM125).

- Using a small front brake hose cover instead of a brake disc cover (saving 86.6 grams).



RM250

More Responsive Suspension



RM250 front forks

The 2001 RM250's new Kayaba inverted, cartridge front forks have 46mm inner tubes and weigh 800 grams less than the forks on the previous model. A new design improves high-speed-damping response to sharp-edged, harsh terrain and hard landings without compromising slow-speed-damping response to rolling terrain features and in corners. A check plate positioned above the cartridge divides the oil inside the fork into two

quantities—the oil inside and surrounding the cartridge, and the oil above the cartridge; a small orifice allows oil to flow through the check plate from one to the other at a controlled rate. The cartridge itself is surrounded by an air bladder containing a volume of air equal to the maximum volume of oil displaced by the piston rod. This design reduces the volume of air at the top of each fork leg, above the oil level, but adds air volume in the bladder surrounding the cartridge, without reducing the total air volume.

All fork designs use pressurized air as a progressive spring, which becomes firmer as fork travel increases. In other words, the fork's ability to deal with sharp bumps and hard landings and resist bottoming increases with travel because, as the fork compresses, the air inside each fork leg is also compressed and internal air pressure rises. To generate enough internal air pressure to respond well and resist bottoming on a given sharp-edged bump or during a given hard landing, a conventional fork must travel—or compress—a certain amount. In a series of sharp-edged bumps—or if a sharp-edged bump follows a hard landing—a conventional fork may run out of travel and bottom out.

This RM250's new forks have a better ability to respond to series of sharp-edged bumps and an increased resistance to bottoming

based not just on travel, but also on damping piston speed. When the forks encounter a rolling terrain feature or enter a corner, they move at a relatively slow rate—producing a slow damping piston speed. The slow damping piston speed sends oil through the small orifice in the check plate to compress the air contained in the bladder surrounding the cartridge. The total volume of air in the fork is compressed, and normal response is produced, without harshness.

But when the RM250's new forks encounter a sharp-edge bump, they move quickly—producing a high damping piston speed. The high damping piston speed cannot send oil through the check plate fast enough to compress the air contained in the bladder surrounding the cartridge, and only the air at the top of each fork leg is compressed. Internal air pressure increases more quickly without using maximum travel, allowing the forks to deal with subsequent sharp-edge bumps and increasing the forks' resistance to bottoming.



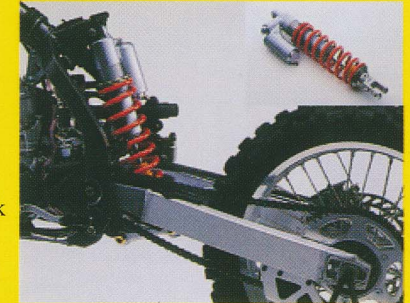
RM125 front forks

The 2001 RM125 uses new Showa twin chamber cartridge forks with 47mm inner tubes and the fork springs relocated from the top of each leg to the bottom of each leg, where it is submerged in oil. This design change reduces the air volume at the top of each fork leg and increase the forks' resistance to bottoming. A new compression damping piston includes a low-speed valve to improve performance over rolling terrain and in corners.

RM250 rear shock

The latest RM250 uses a new piggyback-reservoir Kayaba rear shock with both high-speed and low-speed compression damping circuits, high-speed and low-speed referring to the rate at which the shock is compressed. At relatively slow shock-

piston speeds, oil moves from the main shock body into the reservoir through a passageway in the center of the compression damping system, around a needle that can be externally adjusted to change slow-speed damping force. At relatively high shock-piston speeds, oil also flows through ports around the edges of the compression damping system, with the rate of flow and damping rate controlled by a shim stack. The shock body itself is 46mm in diameter, and the shock is 260 grams lighter than the shock used on the previous model.



RM125 rear shock

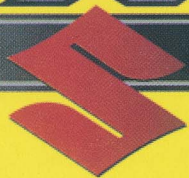
The 2001 RM125 has a new piggyback-reservoir Showa rear shock using the same type of compression-damping system as the RM250, but with a slightly different compression damping adjustment mechanism. The shock body is 50mm and a lighter (weight, not rating) spring is used, reducing overall rear shock weight by 417 grams compared to the shock on the previous model.



In the case of both models, detail changes in the swingarm design and the progressive rear suspension linkage have improved response and traction, especially on washboard surfaces. The linkage leverage ratio has been adjusted, and linkage lever and link rod design changes saved a total of 145.2 grams. The shock absorbers on both models now use needle-roller-bearing upper mounts instead of ball-bearing upper mounts, improving suspension response and smoothness, especially over high-speed washboard sections.



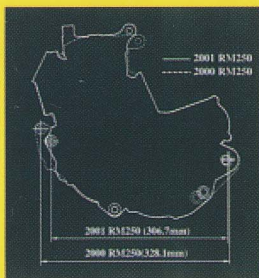
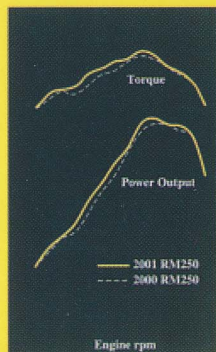
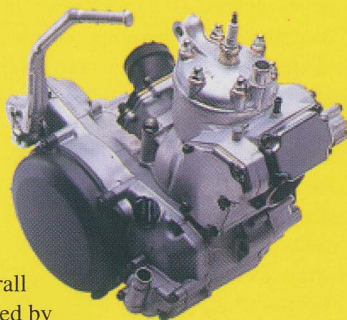
RM250/125 engine



RM250 engine

Stronger, Lighter, More Compact Engines

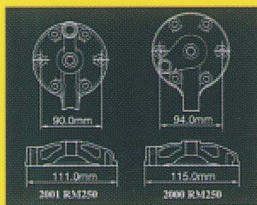
The 2001 RM250 engine makes more power and torque, weighs less and is more compact than the previous model's engine. Maximum power output has been increased substantially, with significant mid-range power increases as well. Overall engine weight has been reduced by 1133 grams compared to the 2000 model's engine. And the new engine is 21.4mm shorter, measured front to rear.



In basic terms, the 2001 RM250's engine has a bore and stroke of 66.4 × 72mm for 249cc of displacement. It is liquid-cooled, and its cylinder bore

is plated with Suzuki's own race-proven nickel-phosphorus-silicon-carbide coating, known as SCEM (Suzuki Composite Electrochemical Material).

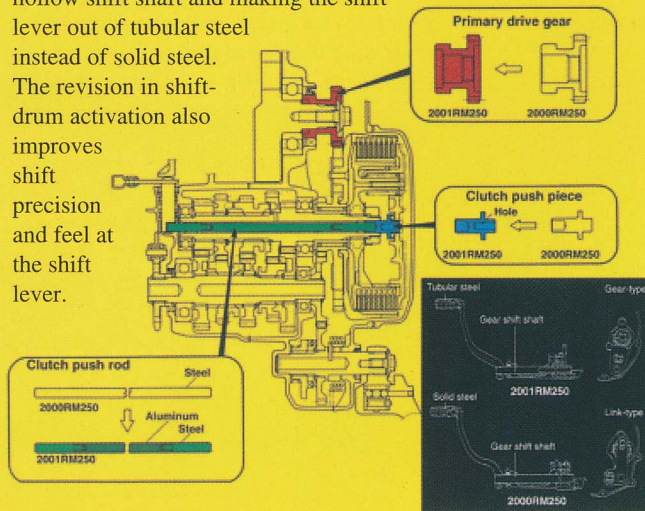
The reduction in weight came from a hard look at every detail of the engine design. The cylinder head, for example, is 4mm smaller in outside diameter (reduced from 115mm to 111mm) and the cylinder head stud bolt circle is 4mm smaller in diameter (reduced from 94mm to 90mm). Cylinder head wall thickness has been reduced where possible, and the RM250's head is a total of 52 grams lighter.



The RM250's cylinder assembly is a total of 450 grams lighter, the reduction in weight coming from reduced wall thickness,

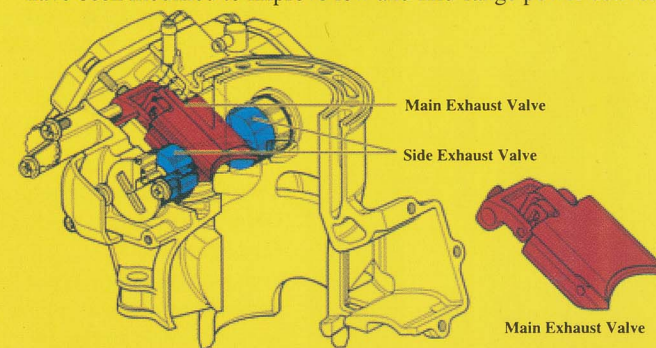
shorter cylinder stud bolts and shorter cylinder stud bolt flanges. Reducing the outside diameter of the magneto rotor from 77.5mm to 73.5mm saved 55 grams. And removing material from the primary drive gear saved 18.2 grams,

Weight-saving changes to the RM250's clutch activation and shifting mechanisms saved a total of 85 grams, the most significant including replacing the one-piece steel clutch push rod with a three-piece, two-material (steel/aluminum/steel) clutch push rod, switching to gear-type shift-drum operation, using a hollow shift shaft and making the shift lever out of tubular steel instead of solid steel. The revision in shift-drum activation also improves shift precision and feel at the shift lever.

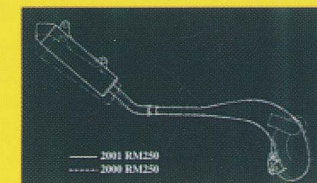


Changes made to increase the RM250's power started with a redesign of the exhaust valve system and port shape, which adjusts exhaust port timing to best suit engine rpm, broadening the powerband. The single main exhaust valve used on the 2000 model has been replaced by a two-stage, two-piece exhaust valve. The valves move independently, changing main exhaust port timing as engine rpm increases, resulting in stronger mid-range power and smoother power delivery across the rpm range. The opening of the side exhaust valves—positioned in the auxiliary exhaust ports located on each side of the main exhaust port—has been adjusted to work best with the new dual-stage, two-piece main exhaust valves. The side exhaust valves now move on needle

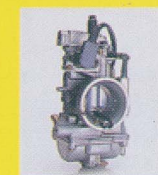
roller bearings instead of ball bearings, for more precise control. And the shape of the main exhaust ports and auxiliary exhaust ports have been modified to improve low and mid-range power delivery.



The RM250's exhaust pipe has been modified for 2001, to work with the exhaust valve and port changes. A slight reduction in exhaust pipe wall thickness saved 150 grams, and a redesigned silencer is between 48 grams and 55 grams lighter for the non-U.S. model. The exhaust pipe mount has been changed from steel to aluminum, saving an additional 5 grams.



The 2001 RM250's 38mm Keihin carburetor incorporates a throttle position sensor (TPS), and the digital engine control module now uses 3D mapping to determine ignition timing, based on rpm and throttle position, improving throttle response and tractability, especially at lower rpm ranges.



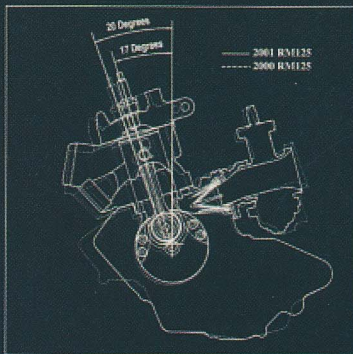
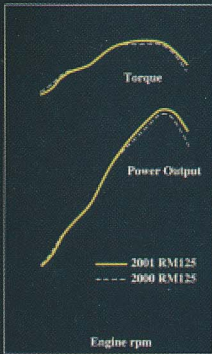
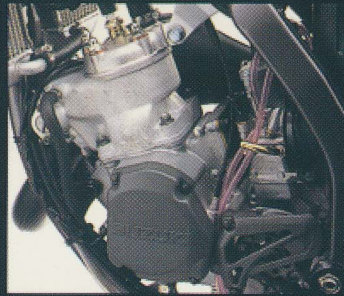
To help make the engine more compact and to move its weight closer to the machine centerline, the 2001 RM250's bolt-on waterpump has been positioned on the right side of the crankcases; the previous model's waterpump was built into the front of the crankcases. The transmission case is also smaller internally. As a result, the crankcases are 21.4mm shorter and 410 grams lighter. And the simplified radiator hose routing allowed by the water pump relocation saved another 95 grams.

RM250/125 engine

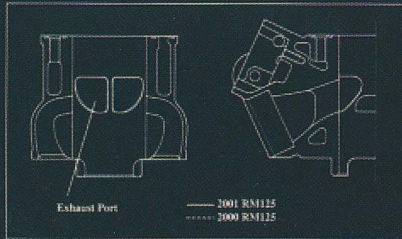
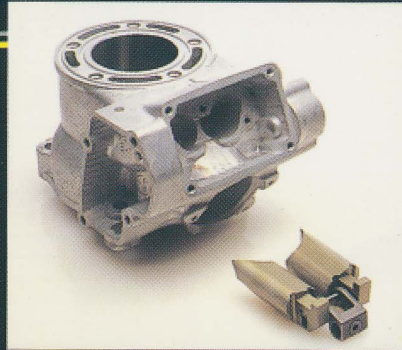
RM125 engine

The 2001 RM125's engine is completely new. Bore and stroke are 54×54.5 for 124.8cc of displacement. Like the RM250, the RM125 is liquid cooled with race-proven SCEM cylinder plating.

Compared to the previous model's engine, the 2001 RM125's engine makes more peak power and torque. The cylinder is positioned closer to vertical--17 degrees instead of the previous model's 20 degrees—to straighten the intake tract and improve cylinder charging efficiency, contributing to the better mid-to-high-range power output. The new engine is 750 grams lighter and is 21mm shorter, measured front-to-rear.



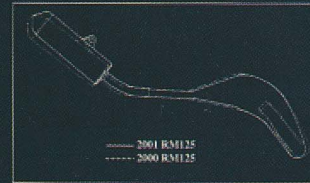
The water pump, incorporated into the front of the crankcases on the previous RM125 model, now bolts onto the right side of the cases, allowing the cases to be made shorter. Simplified radiator hose routing saves 95 grams of weight. Reducing the magneto rotor's outside diameter saves another 55 grams, and the engine's digital CDI control unit is 33 grams lighter.



Exhaust port timing and revisions in the exhaust pipe dimensions work with the new RM125's revised intake tract and a new 38mm Mikuni

carburetor and contribute to the increase in power output. The new carburetor is lighter and simpler, measuring 16mm shorter from its inlet to the intake manifold, improving throttle response. Easy access to the main and slow jets is provided by removing the float bowl drain plug, and the carburetor's improved gas flow volume eliminates the need for a separate power jet circuit. Overall, the new carburetor is 104.1 grams lighter than the carburetor used on the previous model.

The 2001 RM125's exhaust system itself is lighter thanks to slightly thinner wall thickness (saving 290 grams), an aluminum pipe mount replacing the previous model's steel pipe mount (saving 5 grams), and a redesigned silencer (saving 30 grams).



Internal transmission ratios for the RM125's first and second gears have been revised to improve the chances of a holeshot at the start of a race. Changes in the clutch activation and shifting mechanisms reduce weight, major changes including the use of

a three-piece, two-material (steel/aluminum/steel) clutch push rod instead of the previous model's one-piece steel push rod, using a hollow shift shaft, switching to gear-type shift-drum operation, and making the shift lever out of tubular steel instead of solid steel. The shift-drum activation revision also improves feel at the shift lever, as well as shifting precision.

Ready To Race

The 2001 Suzuki RM250 and RM125 are not built for everyday citizens.

They are built for people with a passion for life, and a passion for competition.

They are built for motocross racers.

With a passion for winning.

Here now.

Ready To Race.



**RM
250**



YR1:Champion Yellow

**RM
125**



YR1:Champion Yellow

2001 RM SPECIFICATIONS

	RM250	RM125
Overall length	2,175mm (85.6 in)	2,145mm (84.4 in)
Overall width	840mm (33.1 in)	840mm (33.1 in)
Overall height	1,275mm (50.2 in)	1,275mm (50.2 in)
Wheelbase	1,470mm (57.9 in)	1,450mm (57.1 in)
Ground clearance	335mm (13.2 in)	335mm (13.2 in)
Seat height	965mm (38.0 in)	940mm (37.0 in)
Dry mass	96kg (211 lbs)	86.5kg (190 lbs)
Engine Type	Two-stroke, liquid cooled	Two-stroke, liquid cooled
Intake system	Piston reed valve	Crankcase reed valve
Number of cylinders	1	1
Bore	66.4mm (2.614 in)	54.0mm (2.126 in)
Stroke	72.0mm (2.834 in)	54.5mm (2.146 in)
Displacement	249cm ³ (15.2 cu. in)	124cm ³ (7.6 cu. in)
Compression ratio	9.0:1 (EX VALVE OPEN) AND 10.5:1 (EX VALVE CLOSE)	8.9:1 (EX VALVE OPEN) AND 10.7:1 (EX VALVE CLOSE)
Carburetor	KEIHIN PWK38PWJ/TPS, single	MIKUNI TMX38S, single
Air cleaner	Polyurethane foam element	Polyurethane foam element
Starter system	Primary kick	Primary kick
Lubrication system	Fuel/oil premixture of 32:1	Fuel/oil premixture of 32:1
Clutch	Wet multi-plate type	Wet multi-plate type
Transmission	5-speed constant mesh	6-speed constant mesh
Gearshift pattern	1-down, 4-up	1-down, 5-up
Primary reduction ratio	3.000 (63/21)	3.368 (64/19)
Gear ratios, Low	1.800 (27/15)	2.071 (29/14)
2nd	1.470 (25/17)	1.687 (27/16)
3rd	1.210 (23/19)	1.444 (26/18)
4th	1.000 (21/21)	1.200 (24/20)
5th	0.869 (20/23)	1.052 (20/19)
6th	-----	0.950 (19/20)
Final reduction ratio	3.769 (49/13)	4.083 (49/12)
Drive chain	D.I.D.520DM, 112 links	D.I.D. 520DM, 112 links
Front suspension	Telescopic, pneumatic/coil spring, oil damped, compression damping force 20-way adjustable, rebound damping force 18-way adjustable	Telescopic, pneumatic/coil spring, oil damped, compression damping force 22-way adjustable, rebound damping force 20-way adjustable
Rear suspension	Link type, spring preload fully adjustable, high speed compression damping force 3-tum adjustable, low speed compression damping force 16-way adjustable, rebound damping force 18-way adjustable	Link type, spring preload fully adjustable, high speed compression damping force 4-tum adjustable, low speed compression damping force 19-way adjustable, rebound damping force 20-way adjustable
Front fork stroke	310mm (12.2 in)	310mm (12.2 in)
Rear wheel travel	320mm (12.6 in)	320mm (12.6 in)
Steering angle	45°	45° (right & left)
Caster	27° 30'	26° 30'
Trail	115mm (4.53 in)	104mm (4.09 in)
Turning radius	2.3m (7.5 ft)	2.3m (7.5 ft)
Front brake	Disk brake	Disk brake
Rear brake	Disk brake	Disk brake
Front tyre size	80/100-21 51M	80/100-21 51M
Rear tyre size	110/90-19 62M	100/90-19 57M
Ignition type	Electronic ignition (CDI)	Electronic ignition (CDI)
Ignition timing	4° B.T.D.C. at 1,500 rpm	5° B.T.D.C. at 1,700 rpm
Spark plug	NGK BR8EG	NGK BR8EG
Fuel tank	8.0 L (2.1/1.8 US/Imp gal)	8.0 L (2.1/1.8 US/Imp gal)
Transmission oil, oil change	750ml (0.8/0.7 US/Imp qt)	750ml (0.8/0.7 US/Imp qt)
overhaul	850ml (0.9/0.7 US/Imp qt)	800ml (0.8/0.7 US/Imp qt)
Coolant	1,100ml (1.2/1.0 US/Imp qt)	970ml (1.0/0.9 US/Imp qt)
Front fork oil (each leg)	454ml (15.3/16.0 US/Imp oz)	570ml (19.3/20.1 US/Imp oz)

Specifications shown have been achieved by production models under standard operating conditions. Data is intended to describe the motorcycle fairly but may not apply to every machine. Suzuki reserves the right to change specifications, equipment, materials, colour or any other item without notice. Actual colours may differ from the colours printed in this brochure. Please confirm the full specification of a particular model with your Dealer, prior to purchase. Always wear approved helmet, eye protection and protective clothing. Read and understand the Owner's Manual before riding the machine. Never ride under the influence of alcohol or other drugs.

SUZUKI RACING INFORMATION 1 North Road, Brighton, BN1 1YA
www.suzuki2.co.uk

RM-BROCH. Date of Preparation - August 2000

 **SUZUKI**
Ride the winds of change