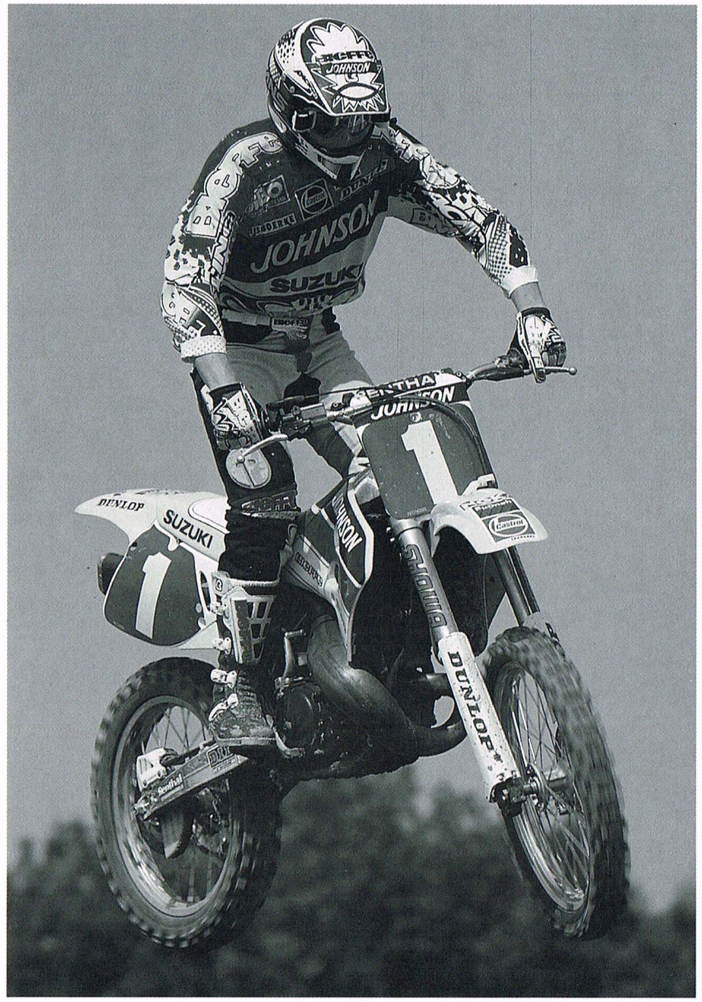

SUZUKI
RM
SERIES
SUZUKI WORLD CHAMPIONS

RM250 & RM125

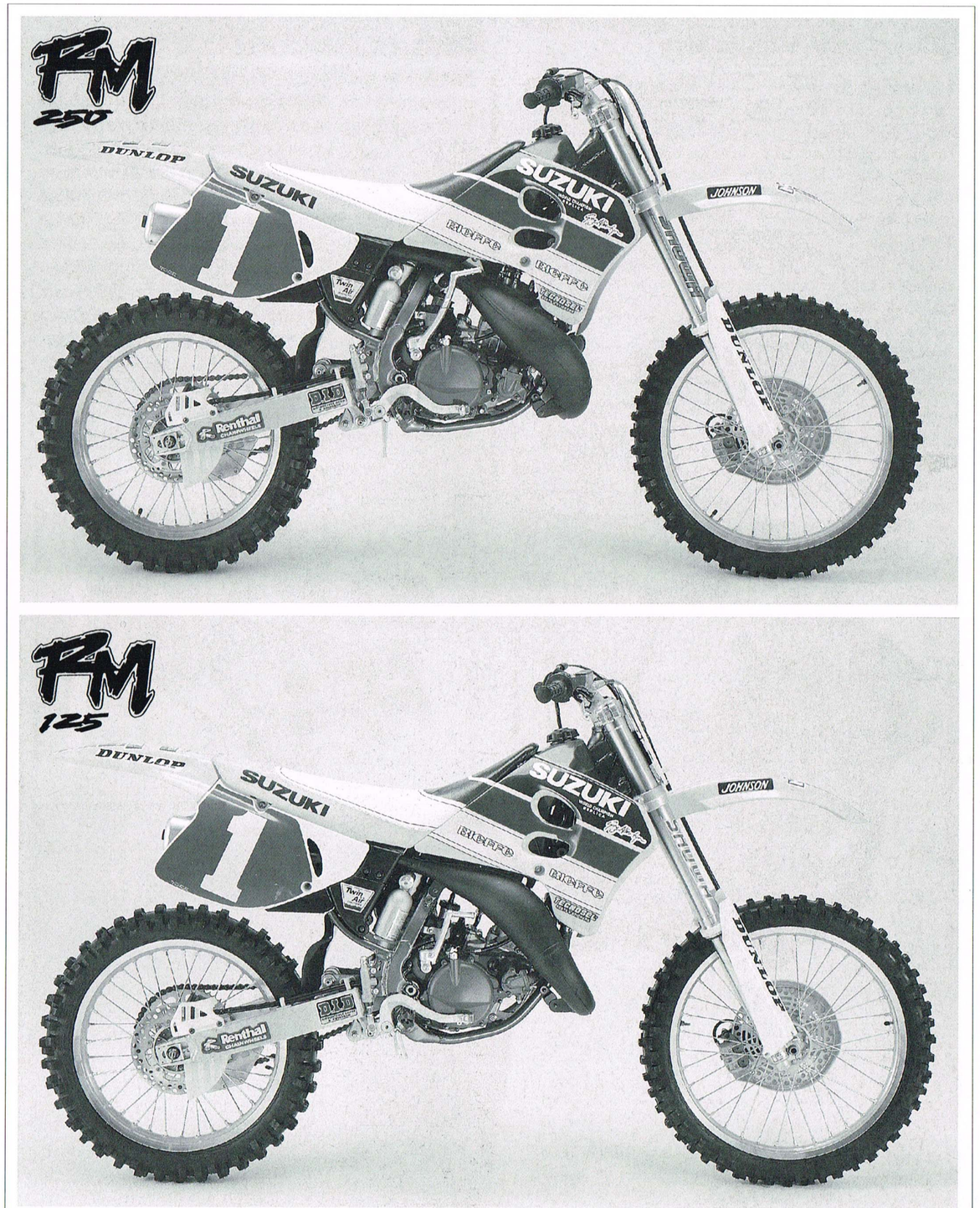
The RM250 and RM125 Put You Ahead of the Pack with Their Total Racing Potential

Suzuki is the most successful manufacturer in the history of motocross.
26 individual world titles say so.
No other manufacturer comes close.
And we're not just the greatest either, we're also the latest in the ultra competitive world of 250cc Grand Prix racing, with Greg Albertyn taking the 1994 World Title on his factory developed Suzuki.
In celebration of that victory, Suzuki are proud to announce the Albertyn Special Edition RM250 and RM125 machines, carrying the same striking colour design Team Johnson Suzuki graphics as the World Champion's machine.
Packed with Suzuki's race winning technology, the RM250 and RM125 machines provide both the power and the handling to take on the toughest circuit and the toughest opposition. And all this Suzuki power, technology and world championship image come at a price that puts the so-called opposition firmly in the shade.
Just check out the specification. Check out the heritage. And Check out the price. The Suzuki RM250 & RM125 set the pace.



Greg Albertyn 250cc Motocross World Champion

Suzuki GB plc
November 1994

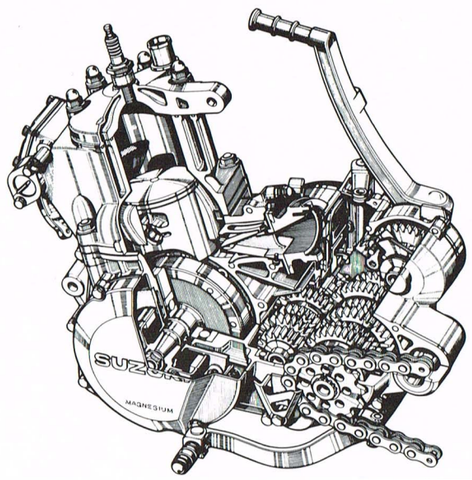


Power Characteristics Designed to Provide the Edge Precisely Where it Counts in the Heat of Battle

Crankcase reed-valve induction system: the well-proven heart of RM engine design

The two-stroke, water-cooled, single-cylinder crankcase reed-valve induction engine format of the RM250 and RM125, thanks to years of refinement and racing feedback, continues to receive high acclaim from race-winning riders. Reed-valve induction directly into the crankcase has advantages of low intake resistance and allows better utilization of inertial flow of the intake. This engine format is utilized as the one best-suited to provide higher torque and power throughout the rpm ranges, which is crucial to motocross performance. In addition, this case-reed induction system needs no intake port. This means less stress on the piston skirt section, enabling the piston to be shaped and built for lighter weight. Such conceptual advantages of case-reed induction, backed up and refined with race-winning factory feedback, result in the acclaim that the RMs' power plant continues to win from riders for its superb power for acceleration, due to its wide powerband and tractable power; and power output characteristics that enable riders to maintain precise rear-wheel traction control.

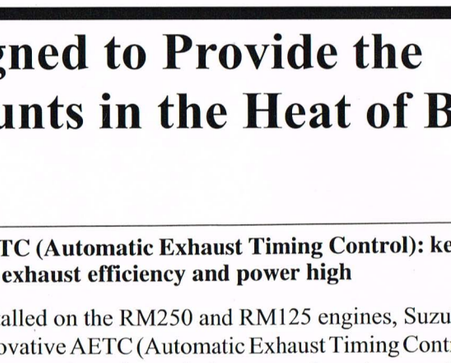
RM250 engine

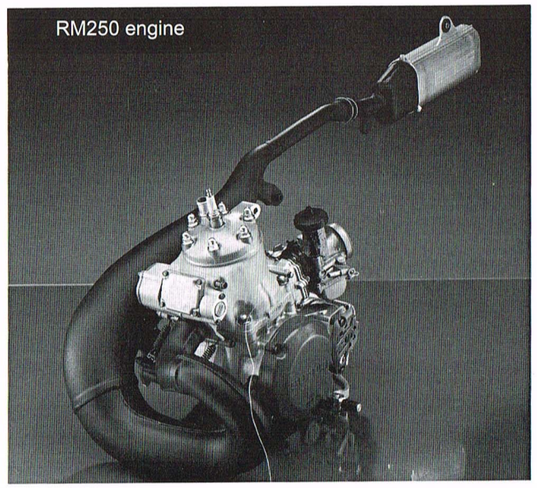


AETC (Automatic Exhaust Timing Control): keeping exhaust efficiency and power high

Installed on the RM250 and RM125 engines, Suzuki's innovative AETC (Automatic Exhaust Timing Control) system varies exhaust timing to match engine rpm. The AETC system has a valve directly behind the exhaust port that blocks the port's top edge at low rpm to delay the exhaust port timing and thereby heighten charging efficiency by preventing the intake mixture from flowing out of the cylinder; then it recedes at higher rpm to keep exhaust efficiency high by maintaining a smooth exhaust flow. The Suzuki AETC system's hallmark is the absence of "dead areas" that can undermine flow in the exhaust passage when the exhaust valve recedes at high rpm. This smooth exhaust flow contributes greatly to higher power and torque. All this more closely translates into an engine that combines sharp-revving, tractable power, excellent throttle response and superb rear wheel traction control.

AETC(Automatic Exhaust Timing Control)





Totally refined for more race-winning advantages: the RM250 engine

Under the ultra-tough conditions of today's motocross racing environment, engine developments can't wait. The RM250 engine features Suzuki's well-proven and championship winning two-stroke technology, to ensure top-class performance. A straight intake tract — from the open-type air cleaner, to the proven Keihin PJ38 carburettor, to the reed valve in the crankcase — achieves high intake and combustion efficiency. Efficiency that's reflected in optimum engine response in low-to-mid range, high power and a linear, controllable and tractable output that responds closely to the riders' demands.

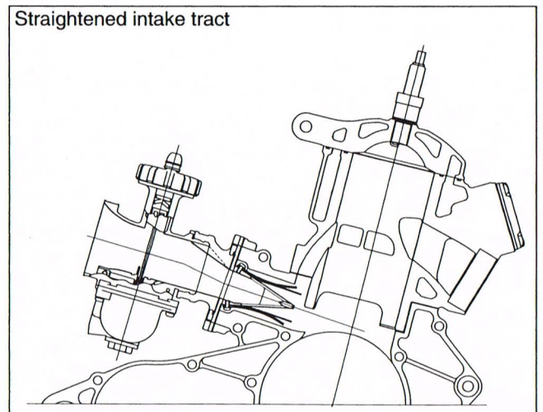
On the cylinder, the scavenging and exhaust port timing achieve maximum design power output characteristics, and an ample reserve of usable power in the mid-to-high rev ranges.

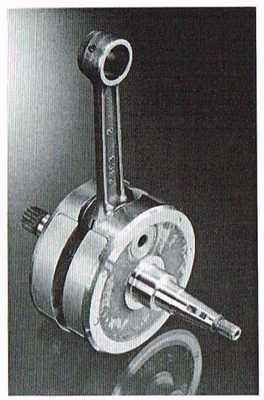
The piston features two rings for ultra-stable combustion — resulting in high durability and toughness, designed to maintain maximum power in the heat of competition.

The engine covers, including the crankcase, clutch cover and magneto cover, are all designed to match the straight design intake tract profile, and the overall engine design concentrates on maximum strength for optimum durability under extreme conditions. This priority design concept is also reflected in the large main bearing specification.

The RM250 engine thus proves the many advantages of the Suzuki crankcase reed-valve format, designed and developed to provide that extra race-winning edge. Extensive and continuing refinements, based on close inspection of racing feedback, keep the Suzuki name at the very forefront of racing tachnology at both Grand Prix World Championship level and through to our race-winning production RM series machines.

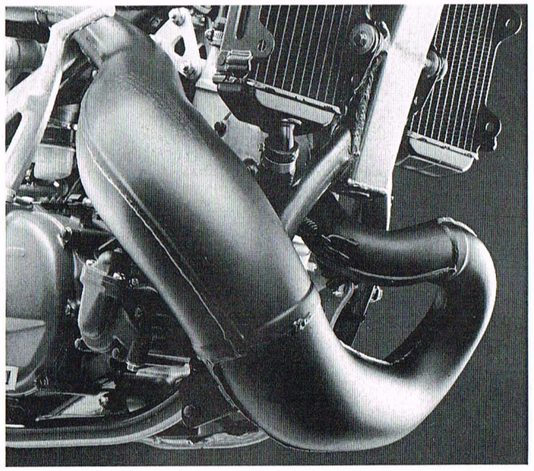
Straightened intake tract





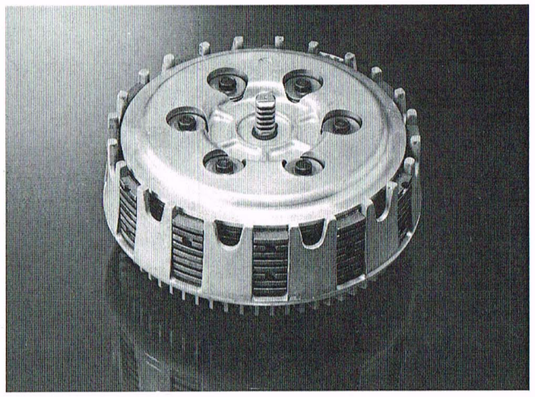
The RM250 exhaust system: straight design profile for high efficiency

Helping to utilize the engine's full potential is the computer-aided design exhaust system. The expansion chamber features a smooth, straight route that provides maximum exhaust efficiency and engine power output. The system particularly accentuates power output characteristics in the low-to-mid ranges, helping to provide the low-end punch that is so vital on modern circuits, along with tractable power pick-up. The RM250's power output characteristics are thus supported by an exhaust system designed for the best all-round, low-to-mid range performance, together with intake section and cylinder design, for better mid-to-high range performance. The result is ample power and torque throughout the powerband, plus smooth yet strong tractability. The expansion chamber is also fitted high up on the machine to provide maximum protection.



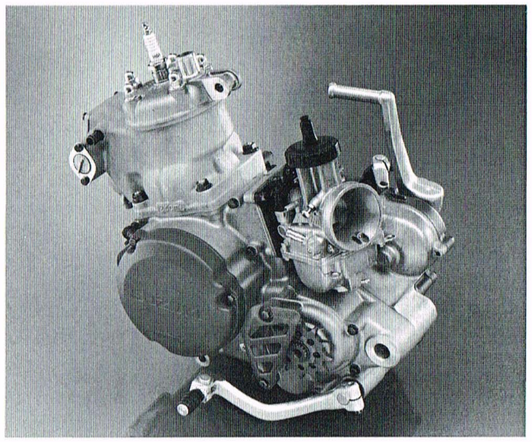
Transmission components designed for smooth shifting action plus versatility of choice

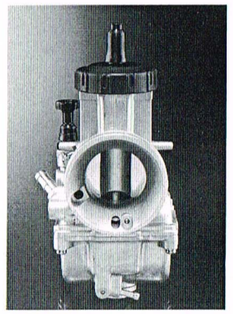
The RM250 transmission system's leading features are its pressure disc and clutch housing design. The pressure disc system features an 8 x 7 plate design, aimed at providing excellent feedback and a light pull. This assures fast and responsive clutch action, helping the rider to make smooth starts off the line and strong drives out of corners. Keeping in mind different track conditions — muddy and sandy surfaces especially — and each rider's preference, Suzuki provide an alternative 9 x 8 plate pressure disc system as an optional item. The system also features a die-cast clutch housing that is strengthened by a special casting production process for ultimate durability under racing conditions.

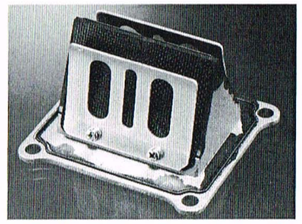


The RM125 engine: a true racing legend

The RM125, well established as an overwhelming high-power machine in its class, comes to the field with a design that confirms its dominant position.
The intake tract system features the benefits of a Keihin PWK36 carburettor, along with proven straight and short port shaping to deliver a superb combination of smooth high-range revving and quick response, especially in the low range. In short, a responsive and controllable power delivery across the powerband. The Keihin carburettor is also designed for easy adjustment and benefits from the use of standardised jetting components.
At the cylinder end of the intake design, the reed valve features a carbon fibre reed material that has been well proven on the factory machines. The lightweight, hard-wearing and flexible carbon design provides the fastest response, high revving performance and a linear low-to-mid range power output.

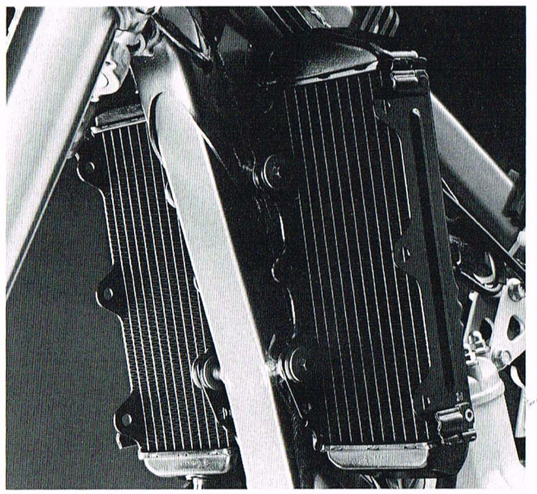






Proven parallel-positioned radiators, with performance supported by advanced water pump

On both the RM250 and RM125, the parallel-positioned radiators support the high powered engines with the high radiating capability provided by their low cooling airflow resistance and efficient distribution of coolant flow. With an eye to the ever intensifying 125cc class racing action, the RM125 features a large diameter impeller, utilising a high performance 6-blade unit, designed to provide maximum cooling efficiency in rigorous racetrack situations.



Digital CDI unit: higher ignition precision

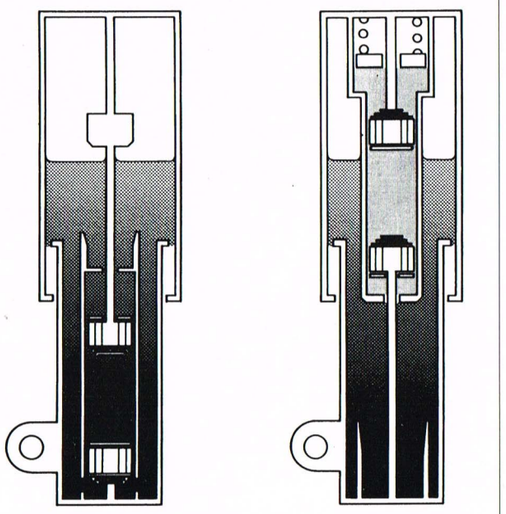
The RM125's ignition system comes with a digital CDI unit, contributing to high ignition precision, with the benefit of easier engine starting.

The RM250 and RM125 Suspension and Frame - Close Reflection of the Factory Machine's Potential Gives Cutting-edge Advantage in All Racetrack Situations

An exciting phase of inverted fork design: the Twin Chamber Cartridge Fork, developed simultaneously with the factory machine front fork

The Twin Chamber Cartridge Fork installed on both the RM250 and RM125 is an exciting development of the inverted front fork design. Developed through the combined corporate efforts of both Showa and Suzuki, it features a design that was refined in line with the forks fitted to the development factory machines — delivered with our total commitment and enthusiasm to incorporate the best of the factory machine technology into production machines. The hallmark of the Twin Chamber Cartridge Fork that sets it apart from other earlier inverted front fork designs is the incorporation of a separate damper, with sub-tank integrated in an inverted position inside the top section of the fork. The sub-tank in the integrated damper includes a free-moving piston that completely seals off the sub-tank's air compartment and oil compartment. The oil compartment is also pressurised with a spring. In short, it is a fork that contains within itself a completely independent "chamber" that acts just like a damper in rear shock absorbers.

Comparison of front fork design

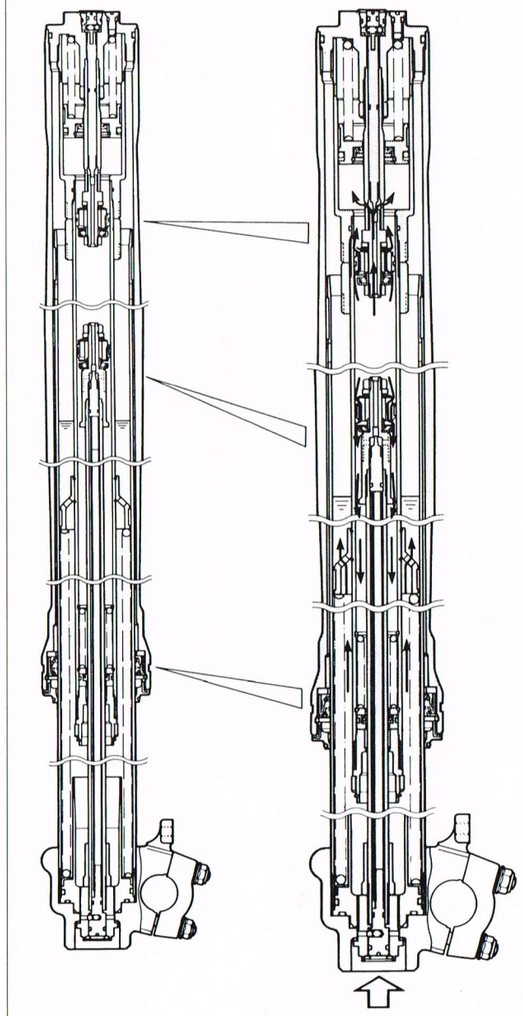


Unlike conventional fork design, which generates damping force with an emulsified mixture of air and oil, in the Twin Chamber Cartridge Fork the oil and air are completely separated by the free-moving piston. Thus the much better damping force of nearly pure oil can be utilized for better fork performance.

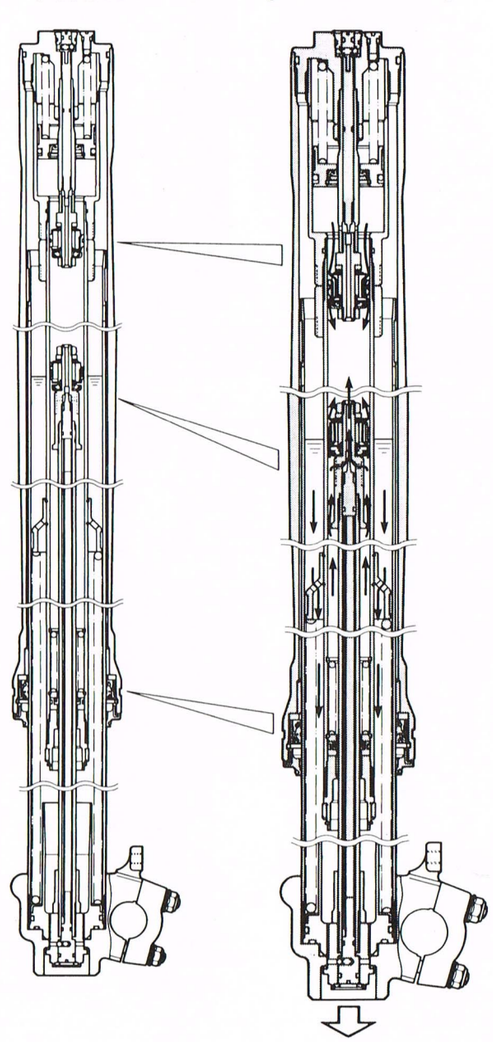
The Twin Chamber Cartridge Fork also features an enlarged oil cone at the bottom of the fork. This effectively reduces the foaming of fork oil and greatly increases fork performance at near-bottoming conditions.

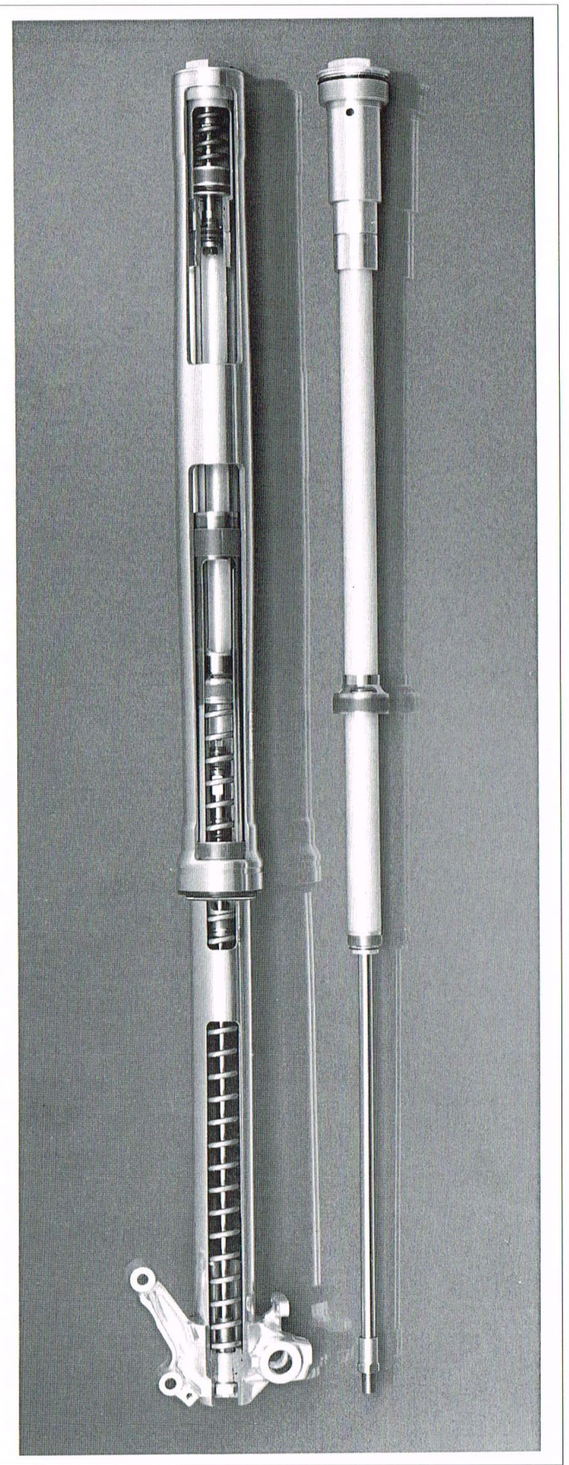
Thus the main advantages of the Twin Chamber Cartridge Fork are these three points: 1) Greatly improved damping action with added stability of performance; 2) Much improved progressive performance, combining soft response to initial inputs while providing optimum movement throughout the wheelstroke; 3) Greatly heightened shock-absorption capacity at near-bottoming situations. This reduces the shock encountered when the fork bottoms out and helps make it easier for the rider to maintain stability over rough surfaces. In short, the Twin Chamber Cartridge Fork's damping characteristics and precision closely match the levels of the newest Suzuki factory machine.

FRONT FORK (COMPRESSION)



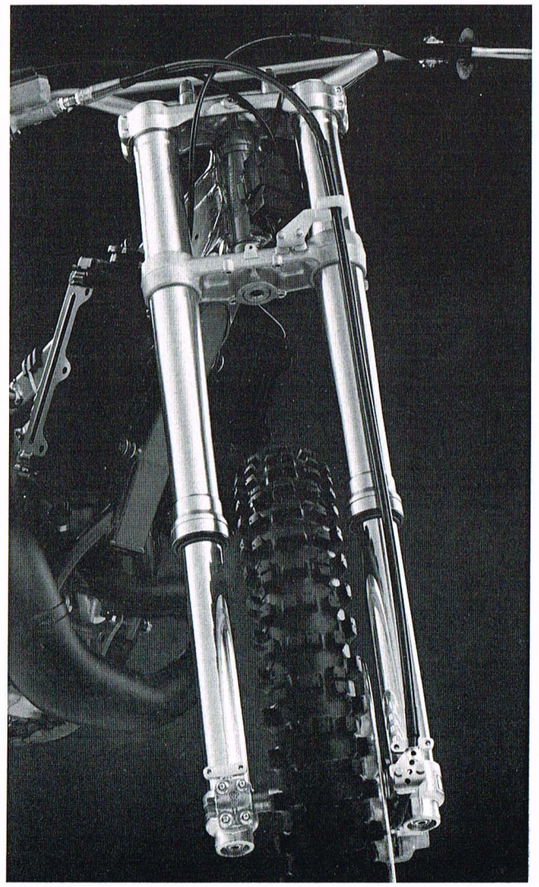
FRONT FORK (REBOUND)

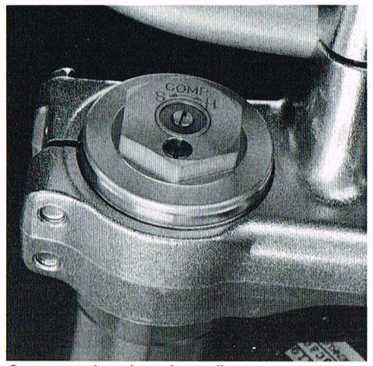




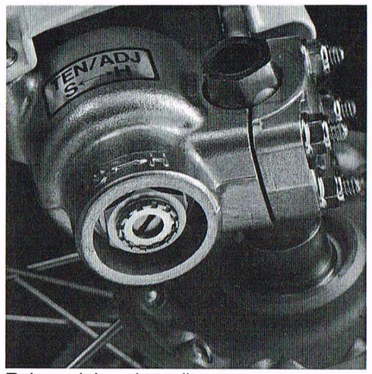
More on the inverted front fork

Even with the twin-chamber design, the weight of the RM250 and RM125's front fork is kept at a minimum and, along with the innovative Twin Chamber Cartridge system, the fork also features two other advantages. Double lip seals, rather than a single lip design, provide excellent sealing performance and durability. The oil seal utilises a low-friction material to maintain optimum smoothness of fork response. And the front fork protector is generously proportioned to provide maximum protection. Extending well around the stanchion tube section, it offers better protection to help prevent or minimise damage from stones and track impacts.
The Twin Chamber Cartridge Fork comes with an 18-stage adjustment for both rebound and compression, providing a wide-ranging choice of fork settings to suit each rider under diverse race track and racing conditions.

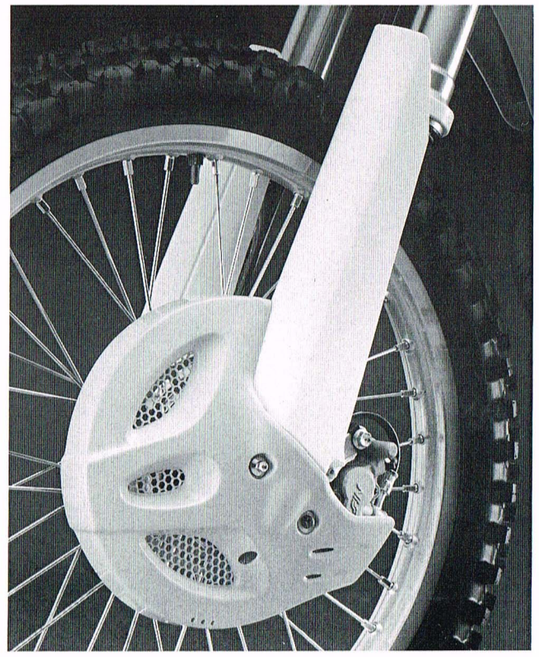




Compression damping adjuster

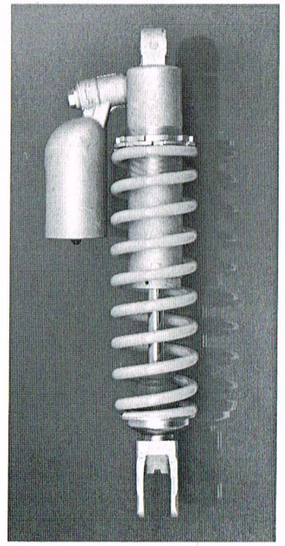


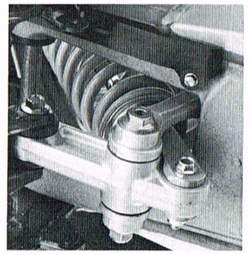
Rebound damping adjuster



Link-type rear suspension features advanced link design and damping characteristics

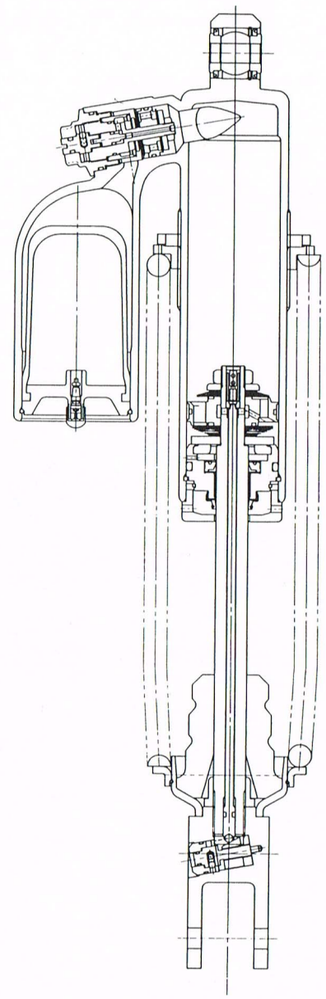
Suzuki's exclusive link-type rear suspension, a well proven system for delivering progressive response to race track conditions, has been extensively refined over the years to make a superb combination with the inverted front fork design featured on the RM250 and RM125. In recent years the improvements have centred on three main areas. First, the lever rear cushion in the link system has been modified to reduce the rate of leverage ratio variation. Second, the damper has been modified, with revised valve specifications, and with a bleed hole added to the main pressure valve in the piston, to create damping characteristics that precisely match the change in the link system. These modifications lead to greater stability of damping power and an increase in effective rear wheel stroke, which translates into a more effective absorption of surface input shocks. This means even softer initial response to small loads and smoother progressive performance. Third, the rear shock absorber's main valve tightening section has been designed for increased precision and rigidity, resulting in improved resistance to heat and more stable damping performance.
In addition, the rear cushion rod has been slimmed down to reduce weight — an effective reduction of a moving suspension component that contributes to better performance.





The link-type rear suspension of the RM250 and RM125 delivers a full 324mm wheel stroke of winning progressive performance. Whether crossing rough surfaces at high speed, or absorbing the impact of jump landings, it closely matches the full potential of the factory Suzuki machine.

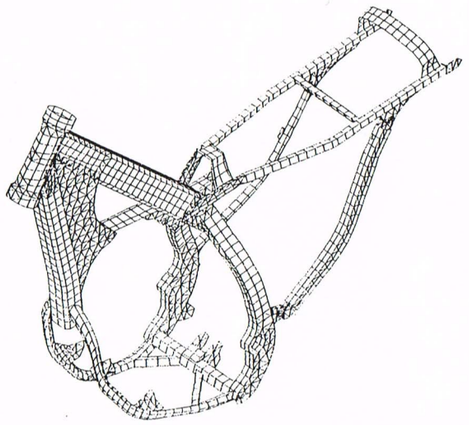
RM250 and RM 125 rear cushion unit

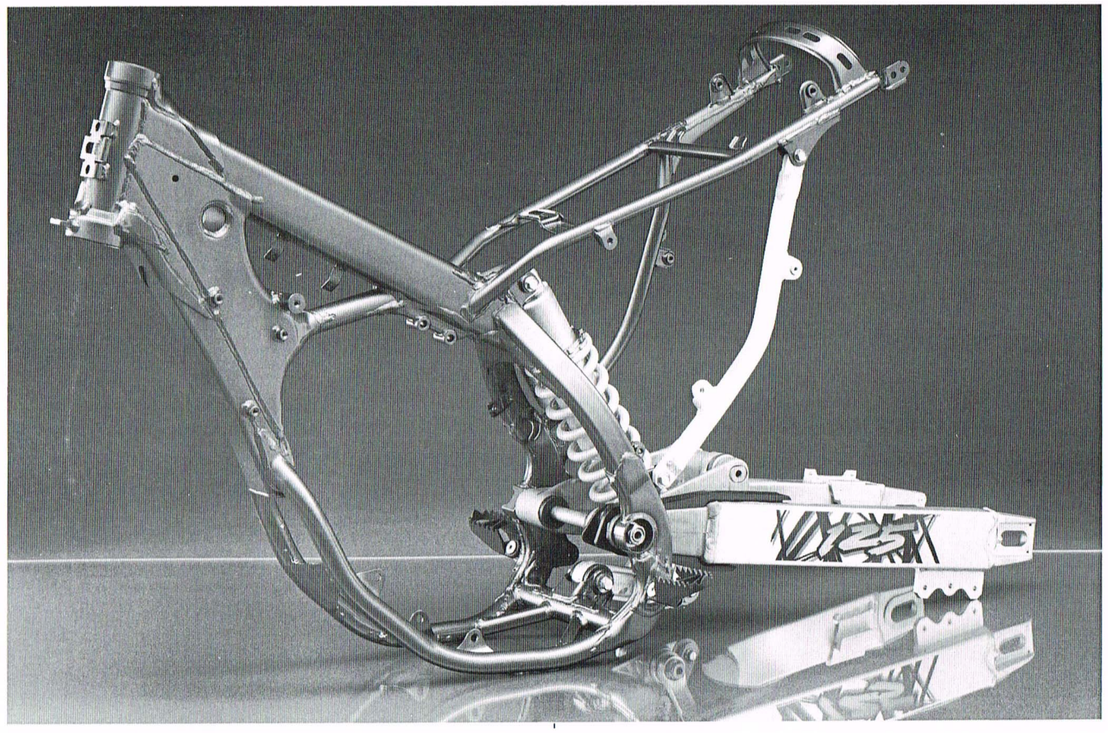


RM250 and RM125 box-tubing semi-double cradle frame: race-tough rigidity with light weight

The box-tubing semi-double cradle frame on both the RM250 and RM125 combines ultra-high rigidity with light weight, thanks to design by FEM (finite element method) computer assisted analysis, to determine the optimum shape and material. The semi-double cradle format was chosen as the design best suited for motocross bikes to keep weight low and rigidity high, for sharp handling — the kind of handling that has won acclaim from successful RM riders worldwide. The frame is made primarily of chrome molybdenum steel box tubing, which is lighter, stronger and more durable than high tensile strength steel tubing. On both the RM250 and RM125, the 1.4mm thick, box section tubing, comprises large cross-section components: 50 x 45mm downtubes, 50 x 60mm tank rail, and 35 x 25mm body tubes connecting the tank rail with the pivot shaft section. Overall, the frame design features Suzuki's traditional semi-double cradle frame design approach of keeping the main loop section compact. The high rigidity frame, combined with the innovative front fork and refined rear suspension, maintains optimum response to various race conditions, from small track inputs like those encountered when crossing rough surfaces at high speed, to large inputs like jump landings. The rider's chosen cornering line can be maintained with extra precision. The RM250 and RM125 frame is as ready as ever for these machines' racetrack rivals.

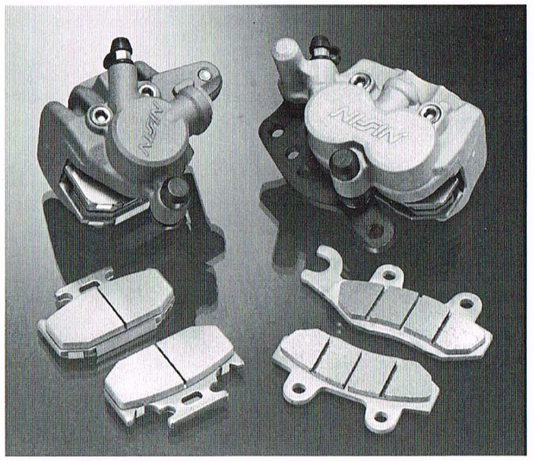
High-strength-frame

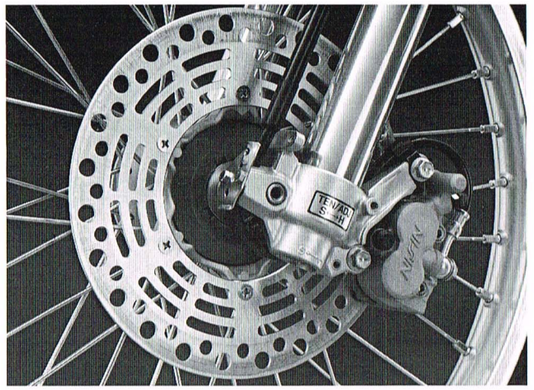


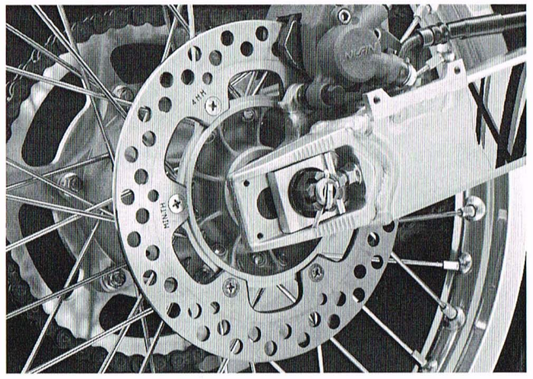


Brakes upgraded for better stopping power and feedback

Both the front and rear brakes are designed for maximum stopping power and feedback. The large 250mm front disc brake with twin-piston caliper features a metallic pad that provides optimum braking power, brake feel and feedback, as well as added wear resistance and durability. The 220mm rear disc brake also features the same pad material for race-effective braking power, feedback and durability.





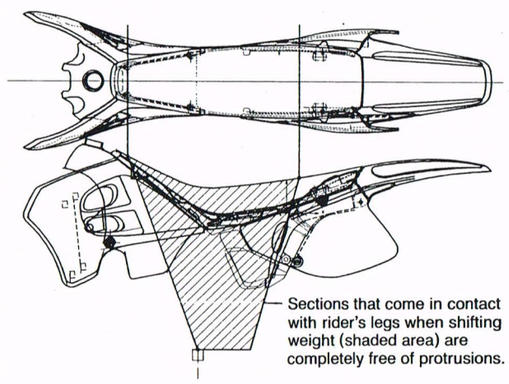


Race-winning Potential Comes from Attention to Details: Close-ups of the RMs

Flush surface bodywork features slim radiator cover design

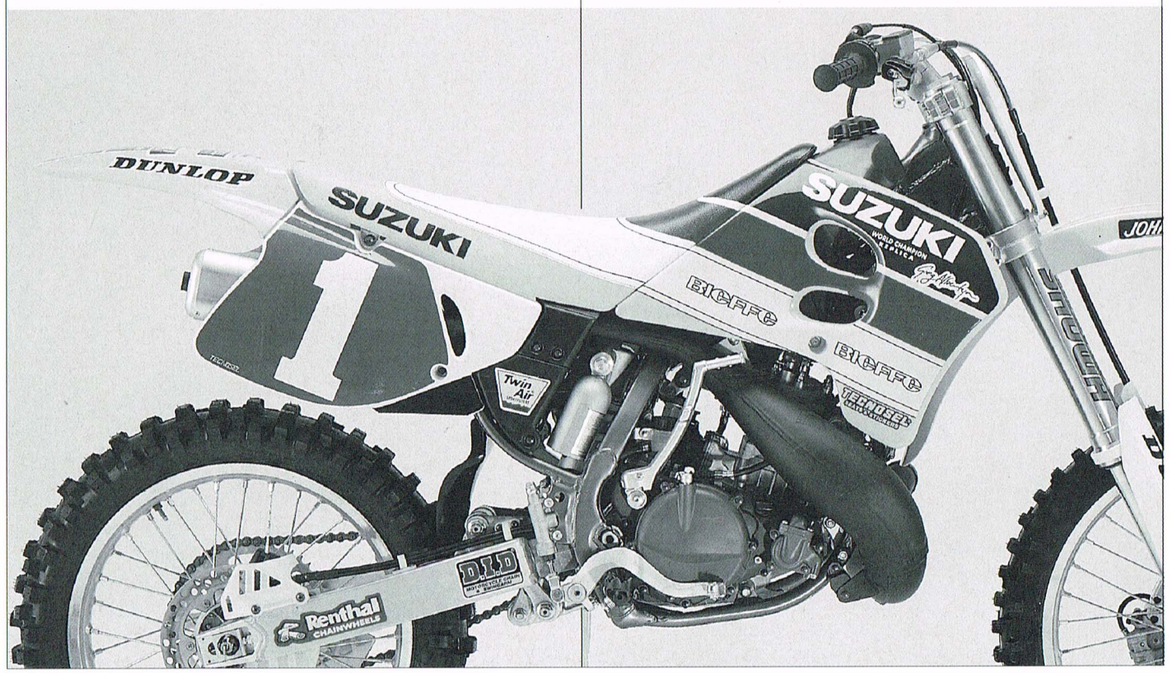
The widely acclaimed smooth, flush surface RM250 and RM125 bodywork tank and radiator covers are designed with a slim shape, so that the bike's width at the radiator section is both small and narrow, facilitating rider knee grip and easy weight shifts.

Flush-surface body design



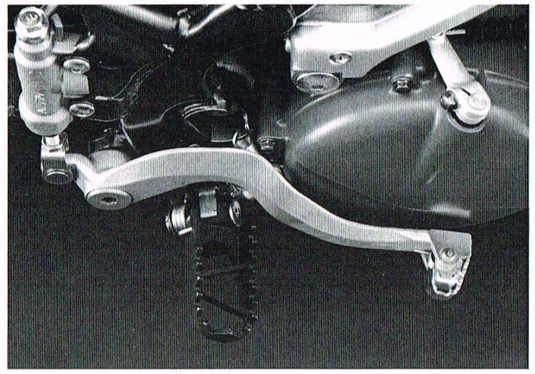
New colouring and graphics

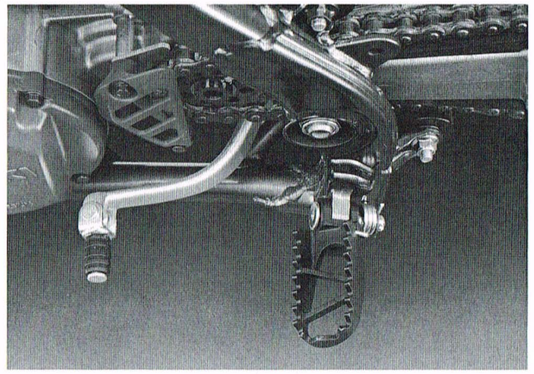
In celebration of Greg Albertyn's 1994 World 250cc Motocross Championship, Suzuki are proud to announce the Albertyn Special Edition RM250 and RM125 machines, carrying the same colour design Team Johnson Suzuki decals and seat cover designs as the World Championship winning machine.



Larger one-piece construction chrome-moly footpegs

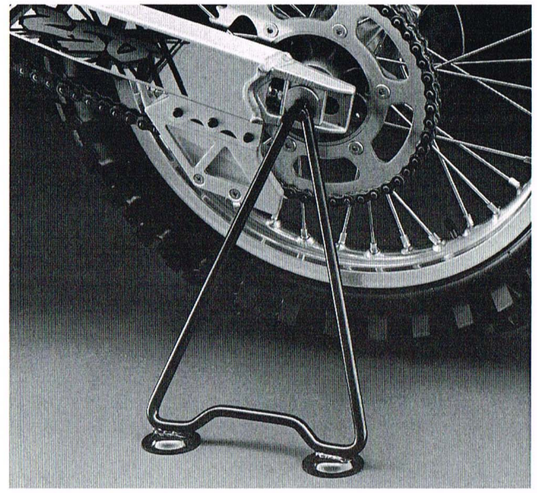
The revised chrome-moly footpegs are larger and of one-piece construction to assist the rider's manuevers and to increase durability.





Triangle stand

The RM250 and RM125 models eliminate the need for a sidestand, reducing weight substantially. A triangle stand is standard equipment.



Specifications

MODEL	RM250
DIMENSIONS AND DRY MASS	
Overall length	2,167mm (83.9 in.)
Overall width	815mm (32.1 in.)
Overall height	1,250mm (49.2 in.)
Wheelbase	1,467mm (57.8 in.)
Ground clearance	360mm (14.2 in.)
Seat height	960mm (37.8 in.)
Dry mass	98.0kg (216 lbs.)
ENGINE	
Engine type	2-stroke, water-cooled with AETC
Intake system	Crankcase reed valve
Number of cylinder	1
Bore	67.0mm
Stroke	70.8mm
Piston displacement	249cc
Corrected compression ratio	10.5:1 (Low)
(Low speed/High speed)	8.8:1 (High)
Carburetor	KEIHIN PJ38
Starter system	Primary kick
Lubrication system	Fuel/oil premixture 32:1
TRANSMISSION	
Clutch	Wet multi-plate type
Transmission	5-speed constant mesh
Gearshift pattern	1-down, 4-up
Gear ratios, 1st	2.154 (28/13)
2nd	1.706 (29/17)
3rd	1.412 (24/17)
4th	1.158 (22/19)
5th	1.000 (23/23)
Primary reduction ratio	2.652 (61/23)
Final reduction ratio	3.769 (49/13)
Drive chain	DAIDO DID 520KD, 112 links
CHASSIS	
Front suspension	Inverted, pneumatic/coil spring, compression and rebound damping 18-way adjustable
Rear suspension	Link-type, spring preload fully adjustable, compression and rebound damping 21-way adjustable
Front fork stroke	310mm (12.2 in.)
Rear wheel travel	324mm (12.8 in.)
Caster	62°45'
Trail	108mm (4.3 in.)
Steering angle	45°
Turning radius	2.3m (7.5 ft.)
Front brake	Disc, hydraulically operated
Rear brake	Disc, hydraulically operated
Front tire	80/100-21 51M
Rear tire	110/90-19 62M
ELECTRICAL	
Ignition type	SUZUKI P.E.I.
Spark plug	NGK BR8EV...for Canada NGK R4118S-8...for others
CAPACITIES	
Fuel tank	7.5L (2.0 gal.)
Transmission oil	800ml (0.8 qt.)

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MODEL	RM125
DIMENSIONS AND DRY MASS	
Overall length	2,130mm (83.9 in.)
Overall width	815mm (32.1 in.)
Overall height	1,250mm (49.2 in.)
Wheelbase	1,435mm (56.5 in.)
Ground clearance	360mm (14.2 in.)
Seat height	960mm (37.8 in.)
Dry mass	88.0kg (194 lbs.)
ENGINE	
Engine type	2-stroke, water-cooled with AETC
Intake system	Crankcase reed valve
Number of cylinder	1
Bore	54.0mm
Stroke	54.5mm
Piston displacement	124.8cc
Corrected compression ratio	11.1:1 (Low)
(Low speed/High speed)	8.8:1 (High)
Carburetor	KEIHIN PWK36
Starter system	Primary kick
Lubrication system	Fuel/oil premixture 32:1
TRANSMISSION	
Clutch	Wet multi-plate type
Transmission	6-speed constant mesh
Gearshift pattern	1-down, 5-up
Gear ratios, 1st	2.142 (30/14)
2nd	1.750 (28/16)
3rd	1.438 (23/16)
4th	1.200 (24/20)
5th	1.053 (20/19)
6th	0.950 (19/20)
Primary reduction ratio	3.368 (64/19)
Final reduction ratio	4.083 (49/12)
Drive chain	DAIDO DID 520DS5, 112 links
CHASSIS	
Front suspension	Inverted, pneumatic/coil spring, compression and rebound damping 18-way adjustable
Rear suspension	Link-type, spring preload fully adjustable, compression and rebound damping 21-way adjustable
Front fork stroke	310mm (12.2 in.)
Rear wheel travel	324mm (12.8 in.)
Caster	62°15'
Trail	111mm (4.4 in.)
Steering angle	45°
Turning radius	2.3m (7.5 ft.)
Front brake	Disc, hydraulically operated
Rear brake	Disc, hydraulically operated
Front tire	80/100-21 51M
Rear tire	100/90-19 57M
ELECTRICAL	
Ignition type	SUZUKI P.E.I.
Spark plug	NGK BR9EV...for Canada NGK R4118S-9...for others
CAPACITIES	
Fuel tank	7.5L (2.0 gal.)
Transmission oil	750ml (0.8 qt.)

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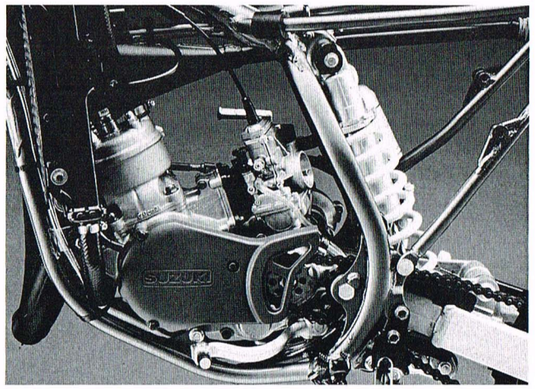
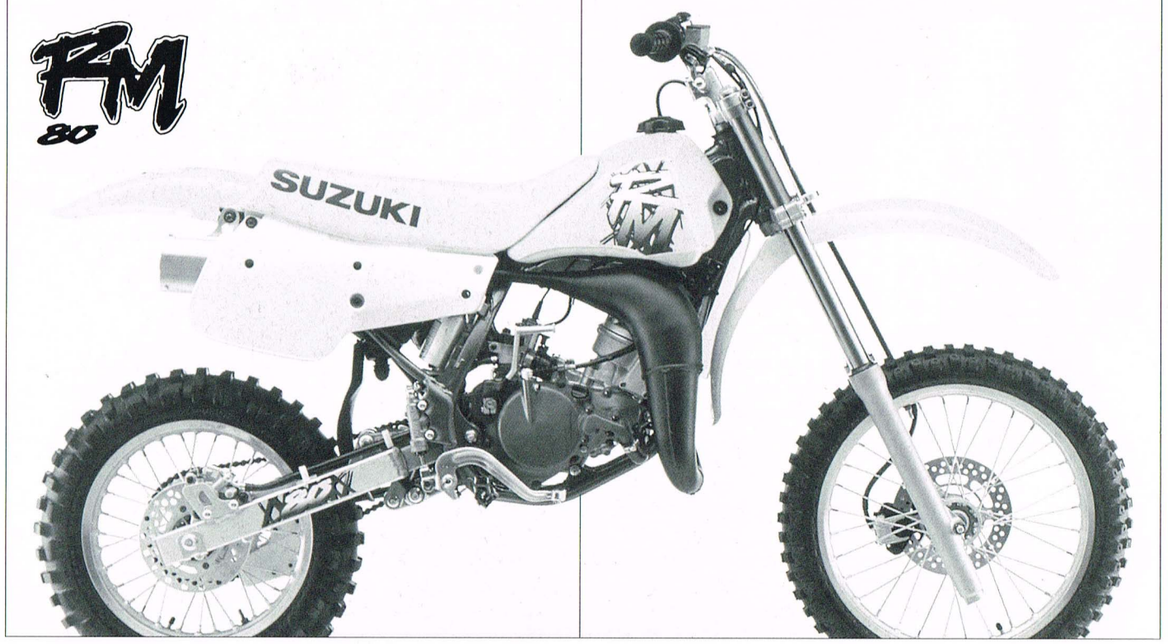
RM80: the Winning Choice of Future Champions

The RM80, proudly bearing the same yellow body color and new graphics as its larger-class brothers — the RM250 and RM125 — is the machine of choice of many young riders who are just entering the challenging and exciting world of motocross racing. From its Suzuki AETC-equipped power plant and tough semidouble cradle frame to its progressive front and rear suspensions, the RM80 provides a high level of race readiness. On the Suzuki RM80, the young rider is off to a great start.

• 2-stroke, water-cooled, single-cylinder crankcase reed-valve induction engine features high power output and easily accessible torque. The piston has a semi-dome head for efficient combustion and a large cut-away section for lighter weight and quicker revving.
• The Mikuni TM flat-valve carburetor keeps intake flow smooth and ensures quick throttle response.
• Suzuki's AETC (Automatic Exhaust Timing Control) system regulates exhaust timing to match the engine rpm range, effectively supporting high output in the low and middle ranges.
• The engine has an O-ring gasket to maintain superb sealing between the cylinder and the cylinder head, helping provide the durability needed for long racing actions.
• The six-speed transmission is designed for smooth operation and precise feedback.
• The semidouble cradle frame combines strength and high rigidity with light weight.
• The highly rigid 35mm stanchion-tube front fork with 275mm wheelstroke and the well-proven Suzuki link-type rear suspension together provide optimum progressive performance.
• The rear shock absorber comes with stepless rebound and compression damping adjustments, allowing riders to fine-suit the suspension for the conditions of each race.
• Both the front disc brake with semi-metallic pad and the rear disc brake with sintered-metal pad provide strong stopping power and optimum feedback, along with high resistance to heat.
• A genuine Suzuki Big Wheel conversion kit is available to suit the larger young rider. Full details are available from your Suzuki Off-Road Dealer.



RM 80



Specifications

MODEL	RM80 and RM80X
DIMENSIONS AND DRY MASS	
Overall length	1,805mm (71.1 in.)
Overall width	735mm (28.9 in.)
Overall height	1,100mm (43.3 in.)
Wheelbase	1,240mm (48.8 in.)
Ground clearance	325mm (12.8 in.)
Seat height	840mm (33.1 in.)
Dry mass	64.0kg (141 lbs.)
ENGINE	
Engine type	2-stroke, water-cooled with AETC
Intake system	Crankcase reed valve
Number of cylinder	1
Bore	47.5mm (RM80R) 46.5mm (RM80XR)
Stroke	46.8mm
Piston displacement	82cc(RM80R) 79cc (RM80XR)
Corrected compression ratio	9.3:1 (Low)
(Low speed/High speed)	10.8:1 (High)
Carburetor	MIKUNI TM28SS, single
Starter system	Primary kick
Lubrication system	Fuel/oil premixture 20:1
TRANSMISSION	
Clutch	Wet multi-plate type
Transmission	6-speed constant mesh
Gearshift pattern	1-down, 5-up
Gear ratios, 1st	2.545 (28/11)
2nd	1.933 (29/15)
3rd	1.571 (22/14)
4th	1.333 (20/15)
5th	1.167 (21/18)
6th	1.045 (23/22)
Primary reduction ratio	3.444 (62/18)
Final reduction ratio	3.428 (48/14)
Drive chain	DAIDO D.I.D. 428G2, 118 links
CHASSIS	
Front suspension	Telescopic, pneumatic/coil spring, oil damped
Rear suspension	Link-type, spring preload fully adjustable, rebound damping fully and compression damping force adjustable
Front fork stroke	275mm (10.8 in.)
Rear wheel travel	277mm (10.9 in.)
Caster	62°
Trail	87mm (3.4 in.)
Steering angle	45°
Turning radius	1.9mm (6.2 ft.)
Front brake	Disc brake, hydraulically operated
Rear brake	Disc brake, hydraulically operated
Front tire	70/100-17 40M
Rear tire	90/100-14 49M
ELECTRICAL	
Ignition type	SUZUKI P.E.I.
Spark plug	NGK BR10ES...for Canada NGK B10ES...for others
CAPACITIES	
Fuel tank	4.5L (1.2 gal.)
Transmission oil	650ml (0.7 qt.)

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GREG ALBERTYN
•
250cc MOTOCROSS WORLD CHAMPION

⚠ WARNING

FAILURE TO FOLLOW THE INSTRUCTIONS IN THE OWNERS MANUAL COULD INCREASE THE RISK OF SERIOUS INJURY

- Always wear the correct protective clothing including an approved helmet, eye protectors, hand protection and leg protection.
- Remember whether expert or novice, training improves skills.
- Never ride under the influence of alcohol or drugs.
- Always ride within your capabilities.
- The actions pictured here took place under controlled conditions with professional and/or experienced riders.

SUZUKI

SUZUKI GB PLC, 46-62 GATWICK ROAD, CRAWLEY, WEST SUSSEX RH10 2XF.
TEL: 0293 518000