TRACK TEST:

Suzuki RM250X

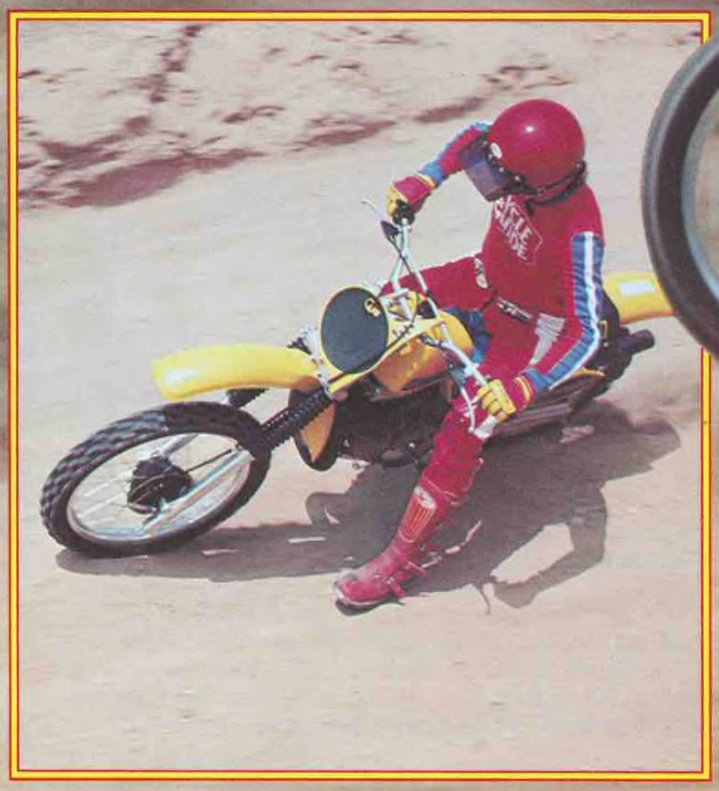
Suzuki gets the last word.

BY RON LAWSON

By all rights, Suzuki's RM250X shouldn't be a success. After all, that the bike was released five months late should have been its death knell. No motocrosser wants to buy an '81 racer when everyone else is already thinking about the '82s.

The marketing deck was being stacked against the RM as far back as December 1979 when Honda officially joined the single-shock ranks of Yamaha and Kawasaki at the Anaheim Stadium Supercross. Suzuki was left standing outside the door of the exclusive single-shock clubhouse holding a once-successful but now hopelessly out-of-vogue twin-shock invitation. And anything that the company could produce at that late date would be tainted with the appearance of a "me too" effort.

But, with an attitude of better late than never, Suzuki jumped on the bandwagon and unveiled the Full Floater at the mid-way point in the 1980 nationals. Delays in development were followed



by delays in production, but the machine was, eventually, ready for sale. Then came yet another obstacle. A young inventor filed a lawsuit claiming that the Floater was actually his own creation.

With the case still pending in court, Suzuki heaved a corporate sigh and fed limited numbers of the RM250 to its dealers. The first ones practically evaporated as they hit showroom floors. It turned out that what could have been—by conventional standards *should* have been—a market disaster was actually the most eagerly awaited motocrosser of the year.

The reason for the RM's surprising success lies not in any marketing text but in the bike itself. Word spreads quickly at the racetrack. And the word was that the new RM had the suspension and the handling to make it the straight-from-the-box winner that motoconsumers endlessly search for.

Part of the bike's appeal comes from the fact that it is totally new. The development didn't stop with the new rear suspension but kept right on going, combining futuristic ideas with existing techniques like the conventional reed valve inlet which Suzuki had chosen not to use in the past. The technology that the Suzuki sums up makes it a hard package to resist.

But there are those who will say that the very factors that should have spelled the downfall of the Suzuki were responsible for its success. In the public's eye, any motorcycle in the works so long is shrouded in mystery and is bound to be the greatest thing on two wheels. The RM's early racetrack reputation might simply be the product of an overactive motocross imagination.

Either way, the question remains: Was it worth the wait?

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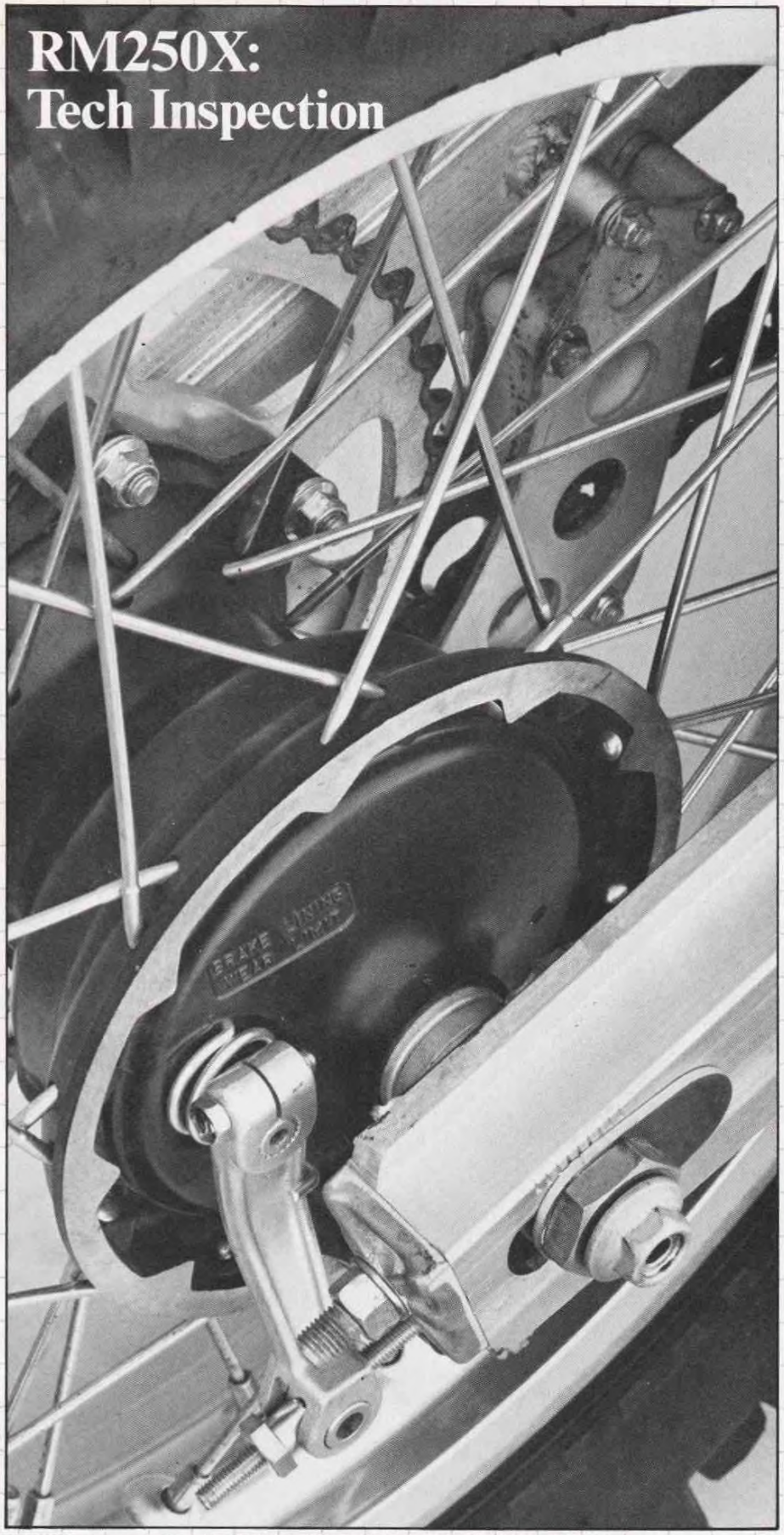
RM250X: Tech Inspection



Suzuki uses straight-pull spokes to lace a stronger rim to a full-width hub

A well-engineered way of keeping your wheels true to you.

Engine:

Top End: Suzuki has abandoned its patented Case Reed induction system in favor of the more popular all-reed design. The 2mm-larger 38mm Mikuni carb now feeds fuel through an eight-petal reed block. Once inside the motor, fuel passes through two small circular and one oblong port directly into the crankcases as well as through a bridged inlet and a new ported piston. Suzuki claims the all-reed design reduces intake turbulence. The motor has unchanged bore and stroke dimensions, but does have a new cylinder head with offset combustion chamber for increased performance. Compression is upped 0.2 to 8.1:1.

Bottom End: New crankcases combine a rear motor mount and swingarm pivot.

Drivetrain:

Primary Drive: Revised heat treatment of the gears is the only change to the primary drive of the RM250X. Gear ratios and the clutch are unchanged.

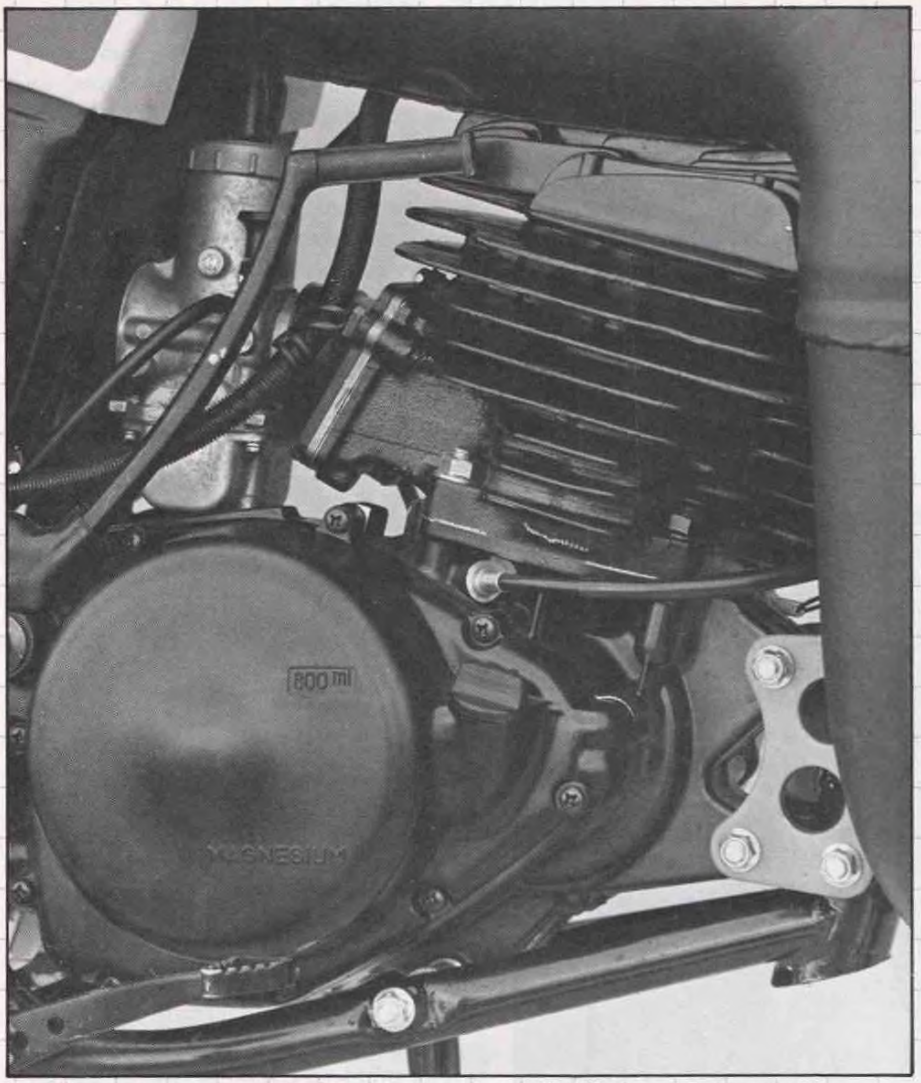
Gearbox: Internal gear ratios are unaltered from the T-model, but heat treatment is upgraded for longer gear life.

Final Drive: The rear wheel sprocket gains one extra tooth while the countershaft remains unchanged, giving a tooth count of 14/50.

Suspension:

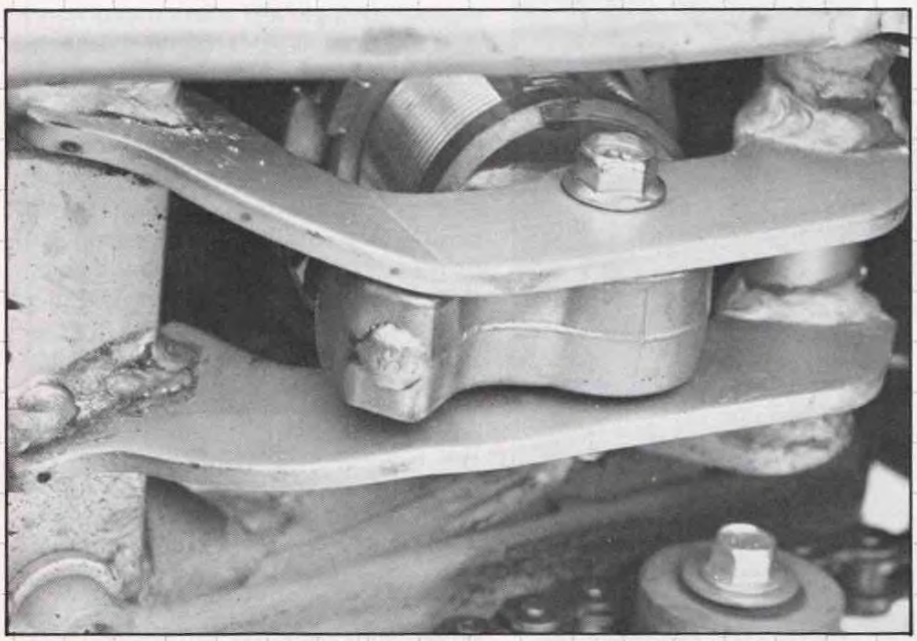
Front: The 38mm fork has the same stanchion tube diameter and the same wheel travel as the T-model. The fork no longer uses air assistance, instead relying on a short straight-rate spring with a long preload spacer. The new spring/spacer combination is lighter than last year's long spring arrangement, and a greater air volume produces less progression in the overall wheel rate.

Rear: Dispensing with the old twin-shock system, Suzuki uses its new Full Floater design which is shared with both the 125 and 465 models. The box-section aluminum swingarm is connected by steel links to an aluminum rocker which compresses the top end of a Kayaba shock. The shock's bottom eye is mounted to the swingarm so that both ends of the shock are compressed as the suspension moves. Wheel travel is increased 20mm over the T-model.



Euro-Japanese slow-revver has a strong heart but suffers from respiratory trouble

Restrictive airbox strangles efficient eight-petal Full-Reed induction.



The bottom of the Kayaba shock mounts directly to the extruded aluminum swingarm

The Full Floater takes the pressure from both ends.

Wheels:

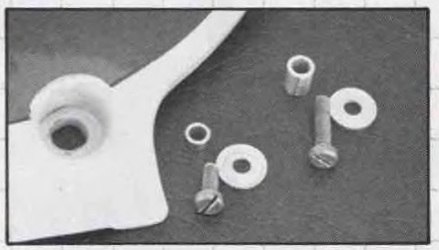
Stronger hubs are laced to redesigned Takasago rims with straight-pull spokes. The front hub has the same 150mm diameter as last year's, but the rear hub is 10mm smaller at 130mm. Both wheels are shod with Dunlop K390 tires.

Frame:

The Full Floater chassis shares nothing but its 4130 chromoly steel with last year's T-model. Wheelbase is increased 15mm with 1mm less trail and 0.5 degree less rake. Ground clearance increases 10mm and seat height is reduced 30mm. A new box-section extruded aluminum swingarm has axle adjuster blocks located inside the arm. A single bolt and nut at the rear of the arm moves the block and axle to adjust the chain.

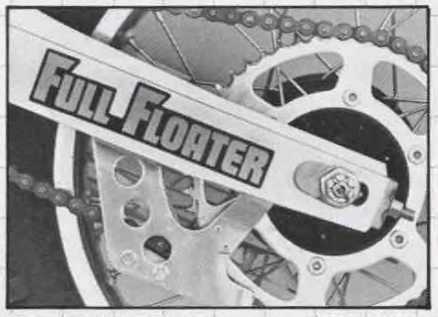
Details:

Twin dual-stage air filters, each mounted vertically on either side of the shock, are connected by a common plenum chamber. Softer rubber chain rollers and a fixed chain guide on the swingarm are claimed to reduce noise and increase chain life. A new humped gas tank has a 0.5-liter greater capacity.



Straight-slot screws don't clog with mud

But too many parts are too much hassle.



Fixed chain guide reduces the clatter

Chain adjusters move inside swingarm.

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Suzuki RM250X: Will It Win?

• At first glance, the Suzuki RM250X seems to be the antithesis of a European motocrosser. The plastic-flash, yellow-and-blue RM poses a sharp contrast to a Husky's stark lines or the sand-cast look of a Maico. But appearance is as far as the contrast goes—because once on the track, European thinking shows in the way Suzuki attacks the problem of winning races.

The RM doesn't produce the kind of hyper-rpm acceleration that Yamaha and Honda have trained riders to expect in 250cc motocrossers. Its power delivery is strictly European. Solid low-end builds through average mid-range to an unimpressive climax, but the RM puts all of its power on the racetrack. That means *usable* power. The kind that enables it to get to the first turn ahead of the rest of the spinning, digging and fish-tailing pack. In dragrace after dragrace, the stock RM beat a YZ250H to the first turn on a tractionless uphill start. The YZ was a blatantly stronger machine, but its power was wasted in rear-wheel spin while the Suzuki's gradual power delivery let it track straight up the hill and put it on top every time. The story changed in the Yamaha's favor once the duel was transplanted to level ground, though. The YZ's horsepower advantage put it on top whenever it could hook up with perfect traction.

It isn't until track conditions get really poor that the Suzuki becomes the star of the class. The RM thrives on the driest, gnarliest courses, owing credit in part to the European powerband and in part to the rear suspension. The Full Floater doesn't quite have the plush feel of a Honda Pro-Link over light, choppy braking bumps, but it shines on the big stuff. When it comes to giant killer-whoops the Suzuki can consistently keep its rear wheel on the ground pumping out power when other bikes are clawing at empty air.

Suzuki engineers had the advantage of being able to see what was working on other single-shockers before starting on the Full Floater. Starting with linkage similar to Kawasaki's, Suzuki added Honda's rising-rate concept and then threw in a few ideas of its own. The result marks a new high for Japanese off-road suspension.

Unfortunately, the outstanding rear end is paired with a merely average fork. Last year it might have been sufficient to use 38mm tubes, but the high-fashion world of motocross is constantly changing, and to keep up, Suzuki will soon have to go to 43mm units such as the ones fitted on the RM465. It isn't that the 250's fork flexes intolerably, but as a motocrosser gets older its fork gets weaker. And with a half-season of racing on the 38s, flex can become a serious problem. Overall action on the Kayabas is typically Suzuki, which is to say good. But the fork's performance is marred by high seal friction and overdamping. This is especially noticeable in rough turns where the front wheel skips over small holes, encouraging wash-out.

The problem is compounded by both a poor front tire selection and quick steering geometry. It isn't a major problem in every turn, but the sensitive steering can put too heavy a burden on the front Dunlop K390. Almost losing the front end in a high-speed sweeper isn't the kind of experience you need when trying to devote 100 percent of your concentration to a race.

But despite its few shortcomings, the RM is a commendably well thought-out racer and, hopefully, the first of a new breed. It marks the first confession from Japan that perhaps there is another way to build a motocrosser that doesn't require semifunctional gimmicks and razor-thin powerbands. But you will have to look closely for that confession. It's hidden under the plastic. —*Ron Lawson*

BETTER THAN STOCK:

Suzuki RM250X

Raising the standard.

• The RM250X is without doubt one of the most race-ready motocross machines to come out of Japan. It is so well thought-out, in fact, that its few flaws seem amplified—hardly worthy of notice on some other machines, perhaps, but crying out for correction on the RM.

The 250 uses every ounce of its controllable motor, but a restrictive airbox and rich jetting rob the bike of potential horsepower. This isn't a problem on gnarly tracks, but to avoid being outdragged on the smoother surfaces we headed for White Bros. Cycle Specialties of Garden Grove, California for an aftermarket airbox. The $89.95 airbox is imported from Twin Air of Holland and lets the RM breathe more easily. For an additional $10, White Bros. went through the carb, first installing an idle-speed adjuster, then rejetting.

With the engine in better trim, we turned to the suspension. Again, White Bros. supplied the fix. The fork received a new set of damper rods designed to work with the stock springs. The kit increased travel one-half inch and changed the valving to reduce rebound damping—for a cost of $45.

The rear suspension was given the White Bros. touch as well. The stock reservoir was replaced with an extruded unit that features both larger oil and nitrogen volume. It costs $74.95, plus $15 if White Bros. installs it. We didn't opt for the total shock rework, but that, too, is available for an additional $50.

Rear end changes continued with the installation of adjustable aluminum Floater struts to connect the swingarm to the rocker arm. The struts enable a knowledgeable rider to finely dial-in the bike for differing riding conditions. Racers have long been using the same idea on the front fork by raising and lowering the stanchion tubes in the triple clamps. The struts are adjustable by one-half inch, and we set our struts to one-eighth inch shorter than stock and raised the stanchion tubes by the same amount. You'll pay $59.95 to make these changes, but we found that altering the bike's attitude provided a noticeable improvement.

The greatest change came through the use of aftermarket tires. We frequently use Metzelers on test bikes, and knew from experience that a 110/90-18 would work wonders on the rear. We were just as impressed with the new K139 front tire from Dunlop. Both tires work exceptionally well on any surface.

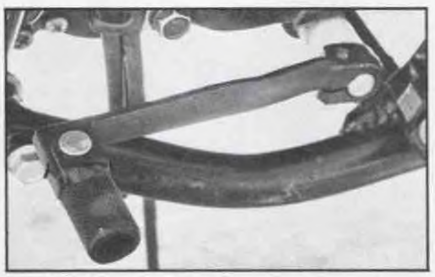
We finished the RM by indulging in the trick little bits and pieces that don't make you go faster but can save damage in a fall. Off came the old-fashioned twistgrip and on went an all-new Gunnar Gasser that carries a suggested retail price of $19.95. A White Bros. folding shifter also went on, satisfying our trick-lust for $17.50.

The end result of all these changes is a faster, more nimble RM250. With the new airbox in place, our reworked RM still isn't the fastest bike in the class, but it no longer gives up ground noticeably from turn to turn. And anything it loses can be easily regained in the turns because the new Dunlop works with the fork kit and Floater struts to eliminate the front-wheel pushing that we noticed on the stock RM.

Truthfully, the RM doesn't need any of these changes before it can win. As it sits, it is one of the most potent motocrossers on the 250cc shelf—which is why we made the improvements. It deserves a shot at being the best. —*Ron Lawson*

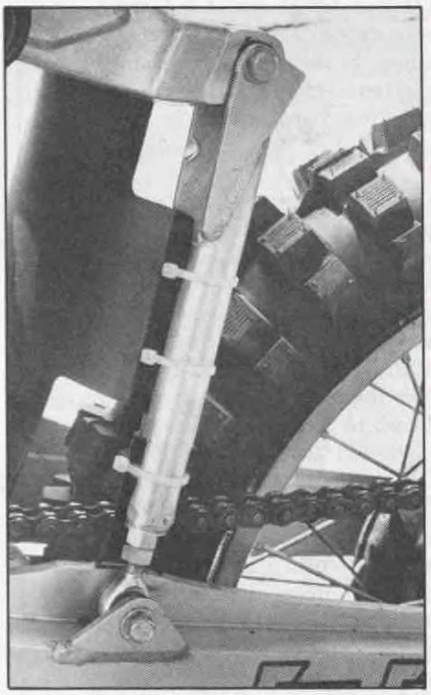
White Bros. airbox improves breathing

Twin-Air marketed by twin brothers.



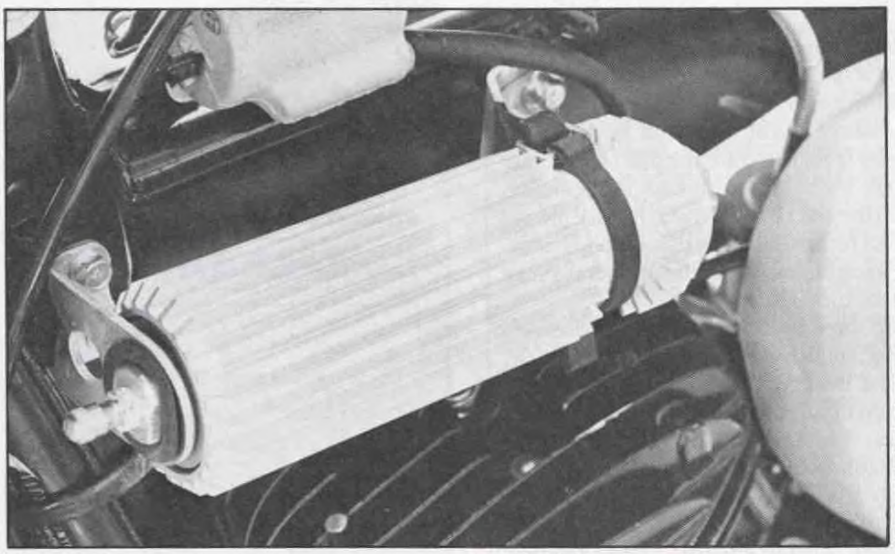
Slick shifter saves shafts

Stocker doesn't fold under pressure.



Adjustable aluminum Floater struts

So the RM can strut its real stuff.



Finned aluminum shock reservoir has greater capacity for better cooling

Steel braided hose and a completely reworked shock are also available.

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Ride Review

• You don't need to hard-sell me. You could even charge me the full retail price and I'd probably still go out and buy an RM250X. I've bought enough Suzukis in the past to be classed as an RM freak, so it was not surprising that I should fall seat-over-handlebar in love with this new bike.

Suzuki has gotten the X-model to turn even better than the last RM I owned, and the motor pulls so strongly it makes my Scott boots curl. OK, maybe I am over-reacting just a little. Maybe the new RM does have a few little problems and maybe there are some bikes that are as fast or handle as well. But after all, I am a Suzuki freak. Like so many racers out there I am loyal to a brand and I will need some pretty strong reasons to change my preferences. Suzuki hasn't helped any, because the X-model is as good a reason as any for not changing brands.

—Dean Taylor

• Sometimes it can be hard having to test a bone-stock machine. Especially a motocrosser. Take Suzuki's new RM250X for instance; the best rear suspension in the business and general excellence everywhere you look. Almost. I mean, I couldn't wait to slip on a new set of tires, grips, an airbox that breathes and a correctly jetted carb to produce the real performer I knew was in there somewhere.

OK, so you're saying all that stuff gets scrapped on a new machine anyway, so what's the point? The point is, I have to race test this bike in its stock form before I can swap components, and I'm not about to tell you what the bike was like before the changes. Such a good bike doesn't deserve harsh criticism when such simple cures are available. Now, if I could just get those stickies to stay on the tank. . . .

—Mark Diotte

• I've enjoyed riding every one of Suzuki's new X-model RMs, but the 250 was my least favorite. That's not to condemn the mid-size Suzuki, far from it, but as it comes from the crate the 250 lacks something. It does not turn with the precision of either the 125 or 465 and its fork always feels a little harsh. The motor, too, is nothing exceptional, with a healthy mid-range but no top-end.

All these problems went away when we bolted some basic aftermarket equipment to the bike. With Metzeler and Dunlop tires, a fork kit, shock reservoir and airbox from White Bros., the RM250X was transformed. It no longer skitters about on its stock tires and the front end is almost a match for the rear. All of a sudden I have a new favorite RM—and a favorite 250cc motocrosser, too.

—David Dewhurst

Suzuki RM250X

SPECIFICATIONS:

IMPORTER: U.S. Suzuki Motor Corporation
3251 East Imperial Highway
Brea, California 92621

CATEGORY: motocross

SUGGESTED RETAIL PRICE: $1979

ENGINE

Type	two-stroke vertical single
Port arrangement	one reed-valve-controlled intake, six transfers, one exhaust
Bore and stroke	67.0mm x 70.0mm
Displacement	246.8cc
Compression ratio (corrected)	8.1:1
Carburetion	one 38mm Mikuni slide/needle
Air filter	twin dual-stage washable oiled foam elements
Lubrication	pre-mixed fuel and oil
Starting system	primary kick
Ignition	internal-rotor magneto CDI
Charging system	none

DRIVETRAIN

Primary drive	straight-cut gears; 2.727:1 ratio
Clutch	wet, multi-plate
Final drive	#520 chain (5/8-in. pitch, 1/4-in. width); 3.571:1 (14/50) ratio

Gear	Internal gear ratio	Overall gear ratio	MPH per 1000 RPM
I	2.076	20.216	3.8
II	1.750	17.042	4.5
III	1.352	13.166	5.9
IV	1.105	10.761	7.2
V	0.913	8.891	8.7

SUSPENSION/WHEEL TRAVEL

Front	air-spring, 38mm stanchion tube diameter/ 10.5 in. (227mm)
Rear	Full Floater, 4-way adjustable rebound damping, 25mm spring preload adjustment/11.3 in. (287mm)

BRAKES

Front	drum, single-leading shoe
Rear	drum, single-leading shoe, straight-pull cable-operated

TIRES

Front	3.00 x 21 Dunlop Sports K390
Rear	5.10 x 18 Dunlop Sports K390

DIMENSIONS AND CAPACITIES

Weight	219 lbs. (99kg)
Weight distribution	47.0% front, 53.0% rear
Wheelbase	57.5 to 58.0 in. (1460 to 1473mm)
Seat height	38.0 in. (965mm)
Handlebar width	33.5 in. (851mm)
Footpeg height	16.8 in. (427mm)
Ground clearance	14.0 in. (356mm), at engine cradle
Steering head angle	29.5 degrees from vertical
Front wheel trail	4.8 in. (122mm)
Frame	tubular chromoly steel, single front downtube
Fuel tank	plastic, 2.2 gal. (8.5l), no reserve
Instrumentation	none

PERFORMANCE

Top speed (observed)	77mph (124kph)

WARRANTY: none

AVAILABLE COLORS: yellow

All weights and measurements are taken with machine unladen and fuel tank empty

COMPARATIVE TEST DATA:

Make & Model	Horse-power	Wheel Travel Front/Rear, in.	Weight (fuel tank empty), lb.	Weight bias Front/Rear percent	Transmission number of speeds
Suzuki RM250X	NA	10.5/11.3	219	47.0/53.0	5
Kawasakai KX250 A6	26.8	11.3/11.2	230	45.6/53.5	5
Honda CR250R-80	27.5	11.6/11.7	222	47.0/53.0	5
Yamaha YZ250G	27.5	11.6/11.7	217	46.5/53.5	6
Can-Am 250 MX-5	32.1	10.8/10.0	218	45.9/54.1	5
Husqvarna 250CR-79	24.3	11.8/11.8	227	44.5/55.5	5