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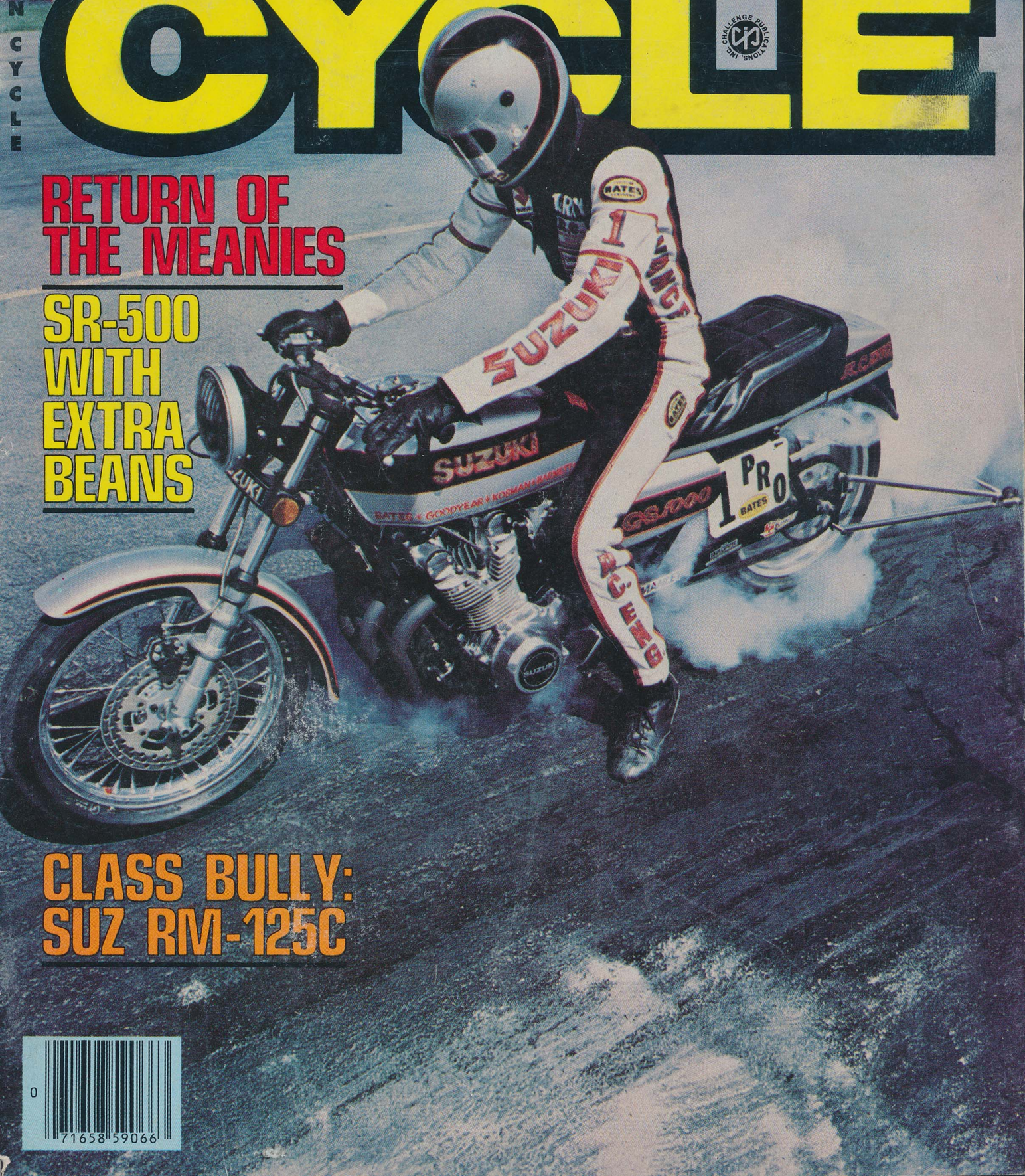
# MODERN CYCLE



## RETURN OF THE MEANIES

## SR-500 WITH EXTRA BEANS

MODERN CYCLE

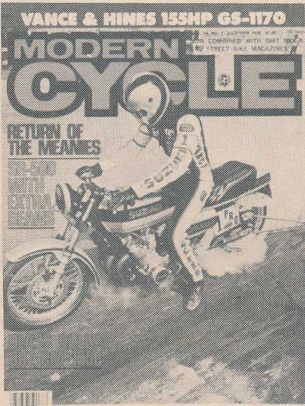


## CLASS BULLY: SUZ RM-125C



# MODERN CYCLE

VOL. 14, NO. 7 JULY 1978



**ON THE COVER:** Terry Vance warming up the skins on the Vance and Hines-RC Engineering GS-1000 plus. Photo by Dan Fitzgerald. Photo by Jeff Peck.

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# CLASS BULLY

Last year, when the RM-125B made its debut, we ascertained after a long, tough testing session that the bike was the best 125 we had ridden to date. Since then we've ridden a ton of the eighth-liter machines, including many with a lot of modifications.

The RM is probably the most successful 125 built to date and many of those modifications made the bike even more successful. Suzuki could probably have left the bike alone and it would still be the terror of the 125 class.

But they didn't.

Based on the "B," the new 125C is again a careful refinement of the previous model, just as the "B" was an intelligent update of the "A."

Engine, pipe, suspension, brakes, tank and plastic have all received changes. Some are minor, but others are completely different engineering executions.

## SUSPENSION

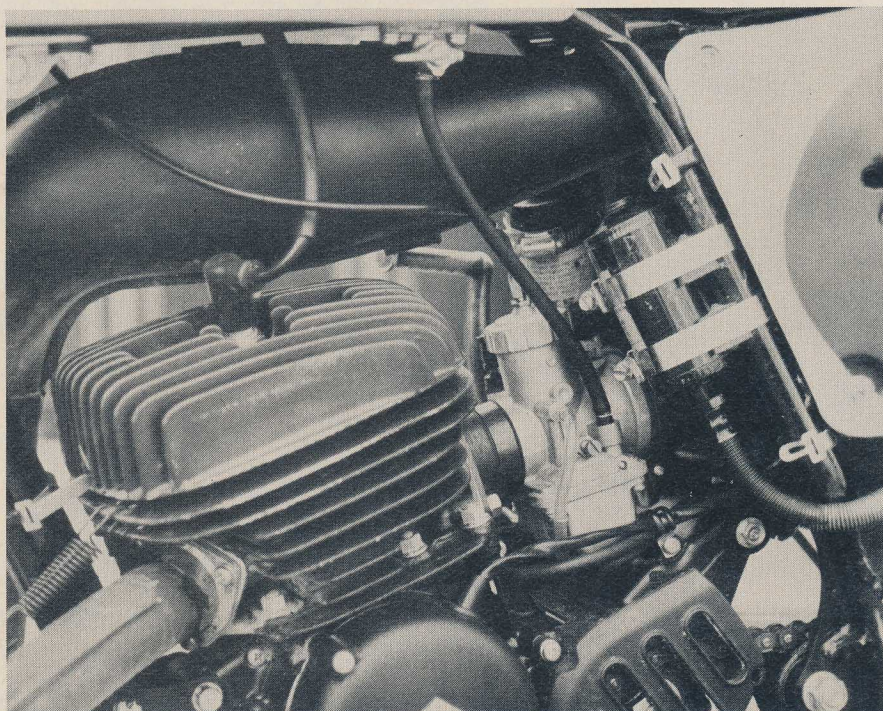
Without making the bike taller, Suzuki has improved the suspension at both ends and gained a slight increase in travel.

Up front, the forks, substantially the same as the "B" model, have received slightly longer tubes and extended air caps which allow for a larger air chamber volume. This increase allows the tuner to come up with a more progressive air spring rate.

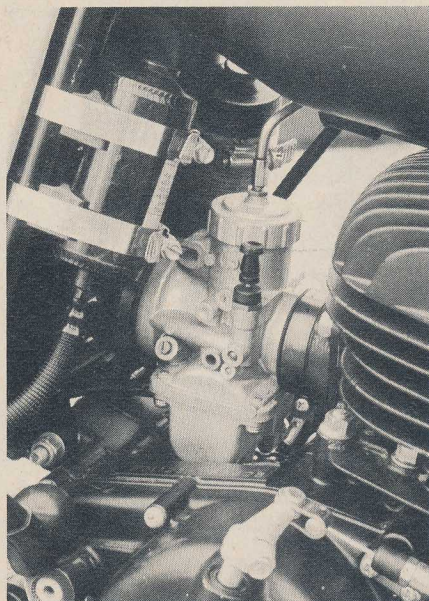
A wider range of pressures can be used, and when applied to varying amounts of fork oil can determine an almost infinite variety of rates. The air cap is slightly recessed into the cap which now utilizes a standard hex design.

To also aid in suspension tuning, the stanchions have been scribed in two rings on each tube. This provides two locations for fork tube height adjustment, and assures that each of the tubes is adjusted to the same height. We set ours at the uppermost mark and found that for our tracks and riding style, this was the best. We also experimented with the tube adjustment in small increments to the lower scribe mark. This position caused the bike to turn virtually under itself. For extremely tight tracks this may yield a slight edge in turning. It is something to experiment with.

## Suzuki RM-125C



*Pipe and porting are revised, bringing more punch to the RM.*



*Carburetion is provided by a VM32SS Mikuni through a combination piston-port and reed valve set up.*

Fork boots, of course, are used to insure long seal life. Keeping dirt out of the seals means that the air pressure, that is carefully adjusted in the forks, stays there.

To accommodate the extended tubes, a new top triple clamp has been fabricated. Rather than just cast the set backs into the clamps, Suzuki opted for a vibration damping type of mount. The clamps bolt down through a pair of tapered rubber bushings which effectively isolate much of the buzzing that comes through the bars. The set-back bars increase the leverage making steering inputs easier.

One of the most visible changes at the rear is the new aluminum swingarm. Constructed of a D cross section, the welding on the arm is slightly rough which gives it a "factory" appearance. Although it looks cobby, the arm is certainly strong enough. Axle locating tabs at the rear are massive and when welded to the banana shaped arm make a super-strong unit that should make the aftermarket people cringe.



While they appear to be the same, the remote reservoir Kayaba shocks are also new for the C model. Featuring adjustable damping (three settings) in addition to three preload settings, the shocks are an improvement over previous Kayabas. Valving is changed as well as gas and oil volumes. The shocks are a lot more sensitive to small bumps than their predecessors on the "B" model. For our testing purposes, we set the preload at the middle setting and the damping at the lightest setting. We did experiment with the damping, though, and a couple of the testers liked it cranked all the way up. At least this feature will allow a happy medium for the tuner.

The different shock and slightly different dimensions on the swingarm netted nearly a quarter of an inch in travel to just right at 9 inches. As we mentioned before, the increase is in

the bottoming end of the travel, so that the height of the bike didn't change.

## BRAKES

Biggest news in the brake department comes from the rear, where a full floating beauty resides. Rather than just a bushing, the brake backing plate pivots on a double row ball bearing which is carefully sealed from dirt. The brake lever pulls from over the top, rather than from below as before. With the torque arm arrangement on the floater, there was not room to leave it at the bottom. Also it helps protect the arm a little from damage from ruts, rocks and the like. An unhappy aspect is that the cable is the same used on the older backing plate and is too long for the top mount arm. It goes through too many twisting gyrations. A shorter cable is necessary here.

To keep maintenance low, the bush-

ings on the floating torque arm are similar to those used on shock eyes. These aren't as critical when it comes to dirt and can also absorb some of the shock that the arm gets from rocks, ruts or anything else that the rider may encounter when he misses a turn.

Up front, the brake remains unchanged from the B model.

## MOTOR CITY

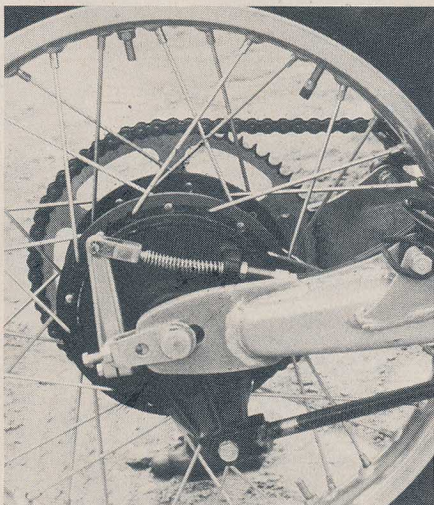
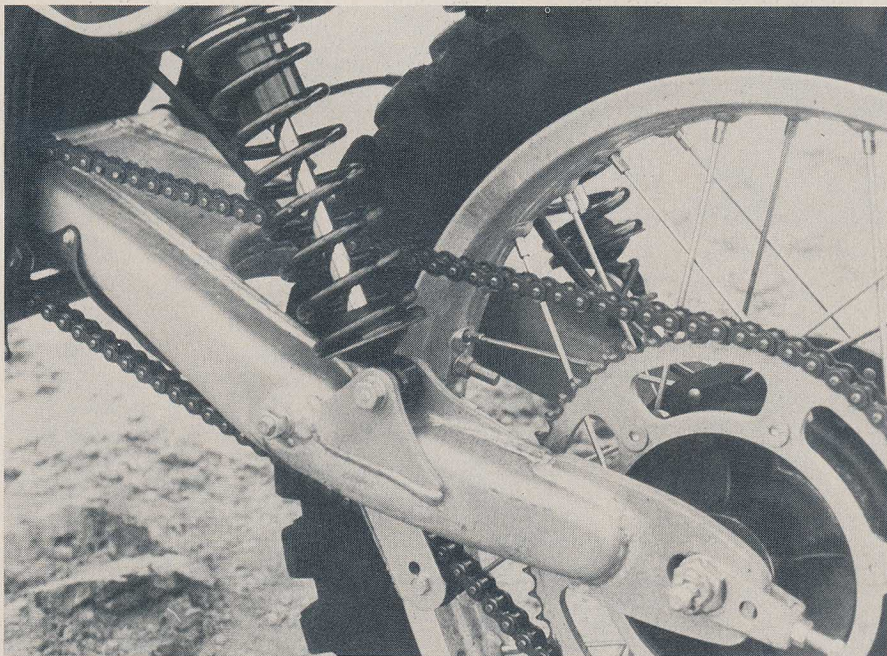
A combination of factors have teamed up to give the "C" more punch. Conservative estimates are that a full horsepower has been culled from porting, piston, pipe and silencer changes.

Although the bore and stroke remains the same (54x54mm) the piston ring design is changed. The piston features a pair of very thin flat rings instead of the thicker cross section units. The thin rings produce less drag because of the smaller friction surface. (These piston/ring sets will fit the Bs without modification. More on the interchangeable parts in future issues.)

Internally, the only changes that the engine underwent are in the barrel. Suzuki went at the jug with their porting tools and changed the height of the intake and the transfers. The intake has been raised 1.3mm, while the transfers have been raised 1mm. The exhaust port remains unchanged. These mods are some of the porting specs that Suzuki tuners used throughout last year.

In conjunction with the porting, the expansion chamber dimensions have been altered. A larger, quieter silencer has also been engineered. The pipe is a pressure formed thin steel unit. Some

*Massive aluminum swingarm has "factory" appearance. Shock mounting tabs are equipped with steel bushings to prevent ovaling of the bolt holes.*



*Full floating backing plate rides on double row ball bearings. Cable is too long; bends are too sharp. Short cable would remedy this.*



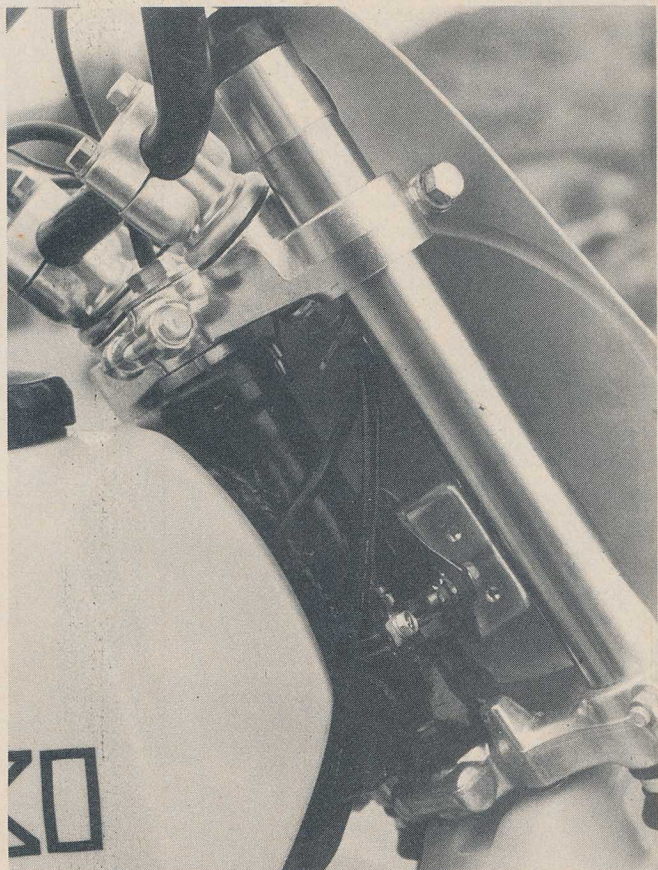
*Tank filler hole is large and handy. Plastic tank will take a lot of abuse—decals won't.*



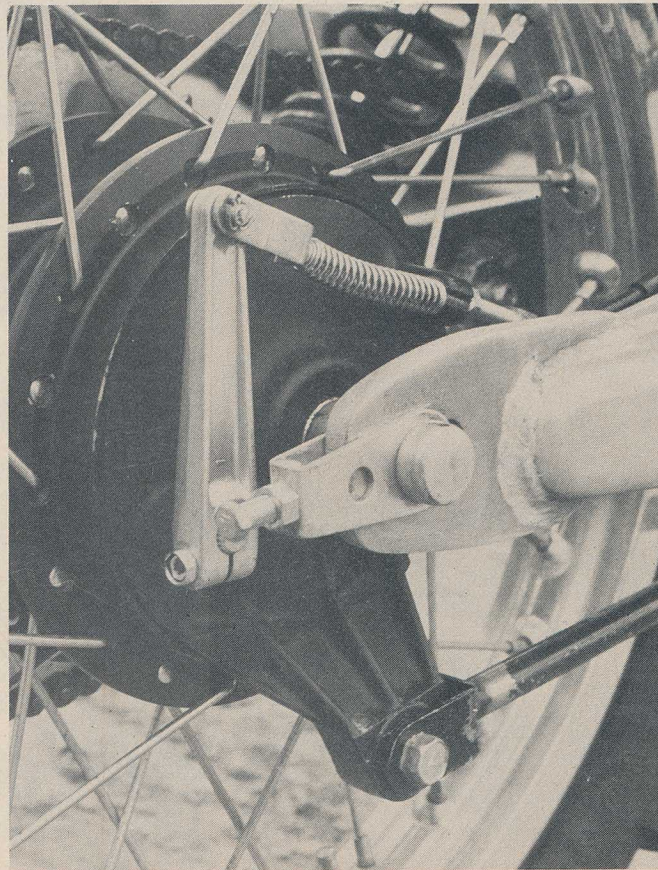
Double flap number plate and improved cable guides and stays reduce chances of cable snagging. Plate is fastened directly to triple clamps.



Air valve is slightly recessed in extended caps. Combination of longer tubes and cap allow for larger volume for air spring adjustments.



Set back clamps allow for tube height adjustment and increase leverage on the forks. Clamps are damped in rubber to reduce vibration.



expected the silencer to be aluminum but it is of similar construction. These changes have lowered the annoying pitch of the previous 125.

All the rest of the engine—carb, transmission, clutch and ignition—are unchanged. There are no weak spots here, so changes were not deemed necessary.

### OUTSIDE

Gone is the aluminum tank and in its place is a cross-linked polyethylene plastic unit. The filler cap is large,

easy to grasp and has a tether attached to it to keep it from rolling around during filling. The large opening is welcomed after the miniature filler on the earlier tanks. (Some of the tank mounts on the early production run were breaking. Suzuki has remedied this, but if you are having problems contact your dealer.)

Front and rear fenders have been redesigned. To enable them to not bend as much when packed with mud, the fenders are molded with reinforcing ridges across the top and around the

edges. Since the extended fork tubes are excellent candidates for snagging cables, the front number plate is now a double-armed protector type and is mounted directly to the triple clamps with 6mm screws. This is a much more sanitary setup than the rubber-banded mounting that always broke at the wrong time.

Improved cable guides on the front brake cable are also a welcome addition. The clamp on the fork slider that does double duty as fork boot clamp and cable holder is much beefier. In the past, that clamp had a tendency to cock sideways and allow the cable to snag into the tire. The new one is wider and functions much better.

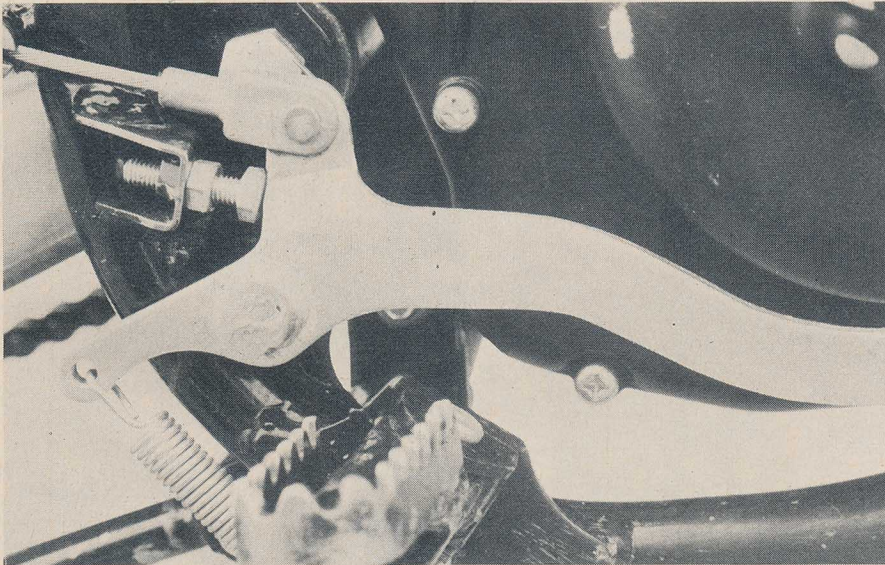
Hubs, rims, tires, seat and frame all remain unchanged.

### THRASHING

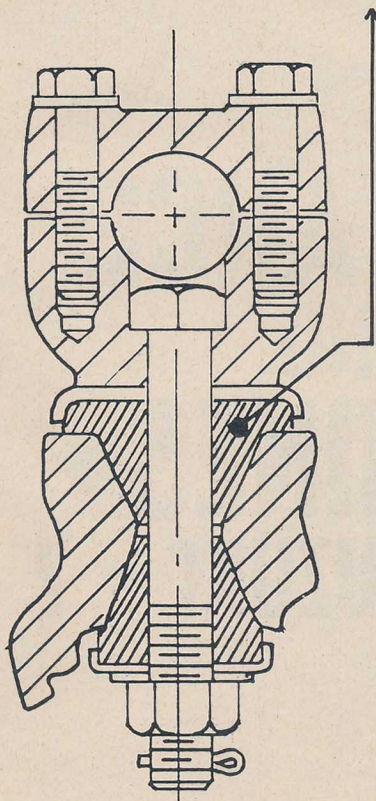
Our first stint on the 125 couldn't have come on a worse day. California was in the midst of the "monsoon" season (didn't we just have a drought?) when the annual editors' motocross GP came up. It's a little affair that Suzuki uses to present some of their new competition models to the press.

As the sky opened up, it rained on our parade some, but it gave us an excellent opportunity to test the little devils in poor conditions. The specially-

*(Continued on page 75.)*



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#### FEATURES:

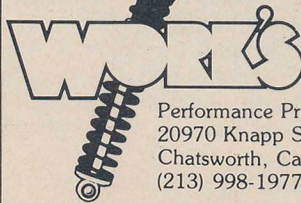
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# CLASS BULLY

(Continued from page 31)

groomed track went from damp and tacky, to muddy, to flooded by the end of the afternoon. Regardless of condition, the RMs buzzed merrily along with minimum of fuss. They had no extra waterproofing than comes from the factory and out of 15 bikes, only one watered out. After thrashing through axle deep mud and sand for nearly five hours the machines showed no adverse affects. After the clean-up one of the Suzuki mechanics was heard to say that even *he* was amazed at the absolute *lack* of wear or damage to the machines.

Not only did the bikes handle and run well all day but they held up better than anyone had expected them to. One water, no seizures and no thrown chains. (The strong swingarms no doubt minimized that in the miserable conditions.)

On our next outing, in better weather on another well-groomed track (as Indian Dunes almost always is) we found the bike to be superb in every way.

Turning is precise. Tracking cannot be faulted. It is doubtful that the change of the tires to any other brand could have worked better. Steering through the new, damped bar clamps was light and virtually vibration-free.

On major whoops or small washboards the rear stayed put. The new revamped, adjustable Kayabas are a major improvement to the rear. The beefy, no-flex swingarm also is a major factor in this area.

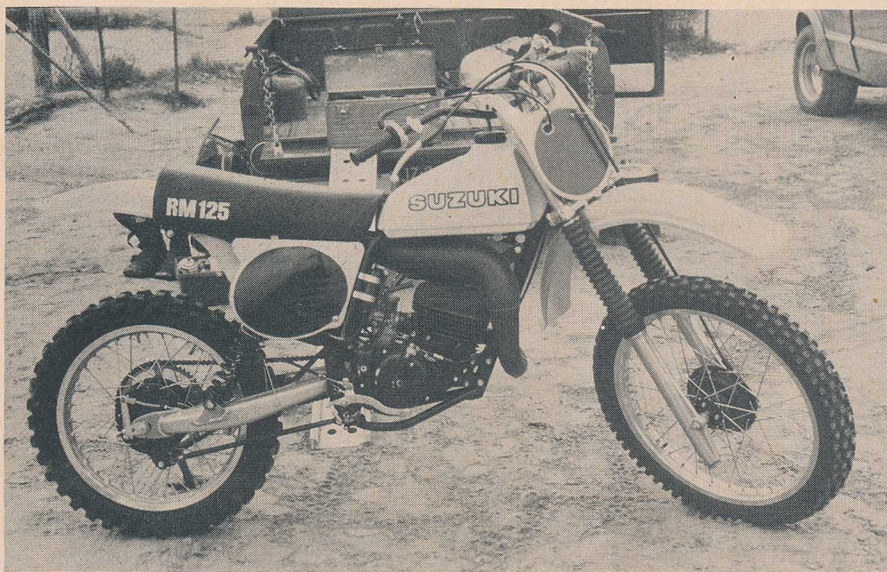
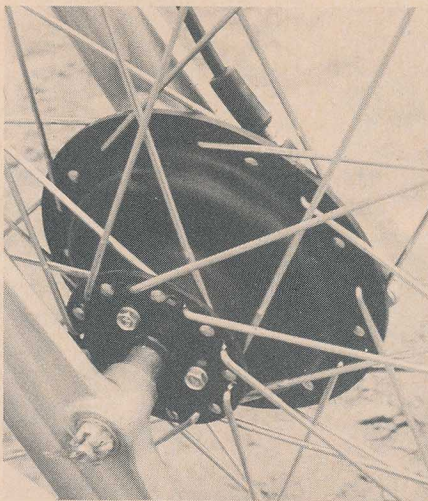
Coming out of corners garners the most noticeable power surge from the stronger motor. The bike feels stronger, even down low, than just about anything we've ridden—modified or not. Jetting was crisp and enabled the RM to wring out quickly, with no flat spots. Like any 125, the bike begs to be ridden in the top of the power band

and is quite happy there for long periods of time.

Although the suspension and motor changes are positive additions, it was the rear brake that garnered much of the applause. The full floater is a marked improvement over the stocker. Not only does it not want to lock up as easily, but by not chattering and hopping around it delivers a lot more braking force. It has a smooth, progressive feel that we have come to expect from floating brakes. The wide bearing surface on the backing plate helps eliminate the tendency of this panel to "walk" as some of the floaters with bushings can do.

## CONCLUSION

We didn't think they could make it better, but they did. Braking, suspension, durability and power have all been enhanced by the changes. It is one of the best, if not the best, out-of-the-box 125s available on the market today. There is so little room for improvement that it seems strange that one would want to buy anything to put on it. If something else is better, then you can expect to see it on the RM-125D—next year.



## RM-125C SPECIFICATIONS

Name and model ..... Suzuki RM-125C  
 Engine type ..... Air cooled, single, 2-stroke  
 Bore and stroke ..... 54x54mm  
 Displacement ..... 123cc  
 Compression ratio ..... 8:0.1  
**Horsepower:**  
 Claimed by factory .. 23 hp at 9700 rpm  
 Engine red-lines at ..... 10,750 rpm  
 Carburetion ..... Mikuni VM32SS  
 Recommended gasoline ..... Premium  
 Fuel tank capacity ..... 1.6 gal.  
 Fuel tank material ..... Plastic  
 Lubrication ..... Premix  
 Air filtration ..... Oiled foam  
 Clutch ..... Multi disc, wet  
 Transmission .. Constant mesh, 6-speed  
 Gear shifting ..... One down, five up  
**Gearbox ratios:**  
 1. 2.333 to 1                      4. 1.190 to 1  
 2. 1.750 to 1                      5. 1.045 to 1  
 3. 1.411 to 1                      6. 0.956 to 1  
 Primary drive ..... Gear  
 Countershaft sprockets ..... 14 tooth  
 Primary reduction ratio ..... 3.705 to 1  
 Final drive ..... 422H chain  
 Rear wheel sprockets ..... 59 tooth  
 Final ratio ..... 4.538 to 1  
 Ignition ..... Magneto, CDI  
**Starter (type, location)** ..... Kick, right side  
 Primary starter? ..... Yes  
 Recomm. spark plugs ..... NGK B9EV  
 Recomm. plug gap ..... .024"  
 Exhaust system ..... Up through frame  
 Frame (type) ..... Single down tube  
 Overall length ..... 82.1 in.  
 Wheelbase ..... 55.3 in. (1382.5mm)  
 Ground clearance ..... 11.8 in. (300mm)  
 Overall width ..... 33.1 in. (827.5mm)  
 Steering head angle ..... 30°  
 Trail ..... 5.1 in. (129mm)  
 Weight ..... 194 lbs.  
**Wheels/rims:**  
 Front ..... Aluminum, spoked  
 Rear ..... Aluminum spoked  
**Tire sizes:**  
 Front ..... 3.00x21, 4 PR IRC  
 Rear ..... 4.10x18, 4 PR IRC  
**Brakes/hubs:**  
 Front ..... Shoe, conical  
 Rear ..... Shoe  
**Suspension:**  
 Front ..... Telescopic, air/spring  
 Fork travel ..... 9.1 in.  
 Rear ..... 9.0 in.  
 Fender material ..... Plastic  
 Color ..... Yellow  
 Intended use (fact.) ..... Motocross  
 Where made ..... Japan  
 Price ..... N/A  
**Distributor:**  
 U.S. Suzuki  
 13767 Freeway Dr.  
 Santa Fe Springs, CA 90670