

FIRST TEST! YAMAHA IT400 SHOCKER

# DIRT BIKE

JUNE 1976

34355

\$1.00  
UK40p

**HUSKY 360  
AUTOMATIC  
RIGHT THE  
FIRST TIME**

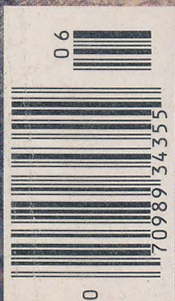
**FALSETTO  
FLASH-OUT!  
SUZUKI 100 vs.  
YAMAHA 100 vs.  
HODAKA 100**

**TIPS ON  
SURVIVAL,  
FORKS &  
PHANTOMS**

**ONE DAY IN  
ALABAMA**

**TWO HOURS  
IN FREMONT,  
CALIFORNIA**

**OFF-ROAD MODS FOR HONDA'S XL-350**





# DIRT BIKE

JUNE 1976 • VOLUME SIX • NUMBER SIX

## SHOOTOUT

- 36 HODAKA SUPER RAT vs. SUZUKI RM100 vs. YAMAHA YZ100  
*Down in the pits with the screamers.*

## TESTS

- 24 YAMAHA IT400  
*First test of Yamaha's first serious enduro bike. It's a winner.*
- 76 HUSQVARNA 360 AUTOMATIC  
*If it works, how it works and why it works.*

## FEATURES

- 70 DOWN AND OUT WITH THAT MARATHON MADNESS, AGAIN  
*You could spend two of the longest hours of your life in Fremont, California. You might even enjoy them.*
- 88 2nd SEMI-ANNUAL DONNER EXPEDITION MEMORIAL TRAIL RIDE  
*Survival of the strangest.*

## COMPETITION

- 50 ONE DAY, PELL CITY, ALABAMA  
*Not to be confused with one night in Phenix City.*

## TECHNICAL

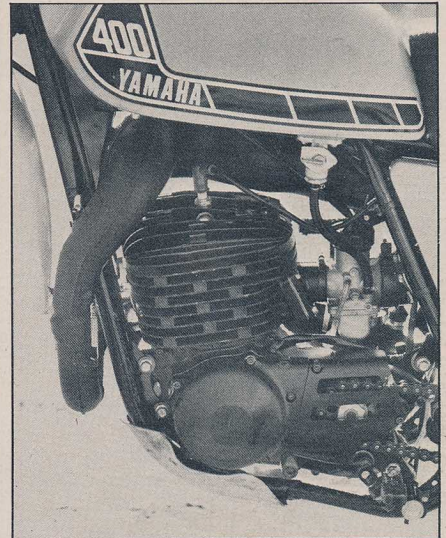
- 63 TRAFFICATOR TRANSFORMATION: ENDUROIZING THE XL350  
*Neither snow, nor sleet, nor dead. . .*
- 86 OSSA PHANTOM UPDATE  
*Handles for the spectre.*

## PRODUCT EVALUATION

- 48 GOKI AIR FORK CAPS  
*Low bucks and high flying.*
- 67 SHENOBI WATER-COOLED HEAD  
*Maybe, maybe not.*

## DEPARTMENTS

- 4 EDITORIAL  
*Welcome to Gunnar Lindstrom.*
- 6 CHECKPOINT  
*A few words about dedication.*
- 8 ASK THE EXPERT  
*But not about the Desert Fox.*
- 10 BITS AND PIECES  
*Can you really make \$1,000,000 collecting string? No.*
- 14 RIDERS WRITE  
*Fitfully.*
- 16 NEW PRODUCTS  
*The Dow-Jones is depending on you.*
- 19 HOLESHOT  
*Stuffing your crank with grasshoppers.*
- 20 HOT SET-UPS  
*Drilling your blimp for lightness.*
- 114 CRASH AND BURN  
*Down for pain.*



First test of Yamaha's newest. p. 24



The Small Three meet the press. p. 36



Thoughts on the food chain. p. 88

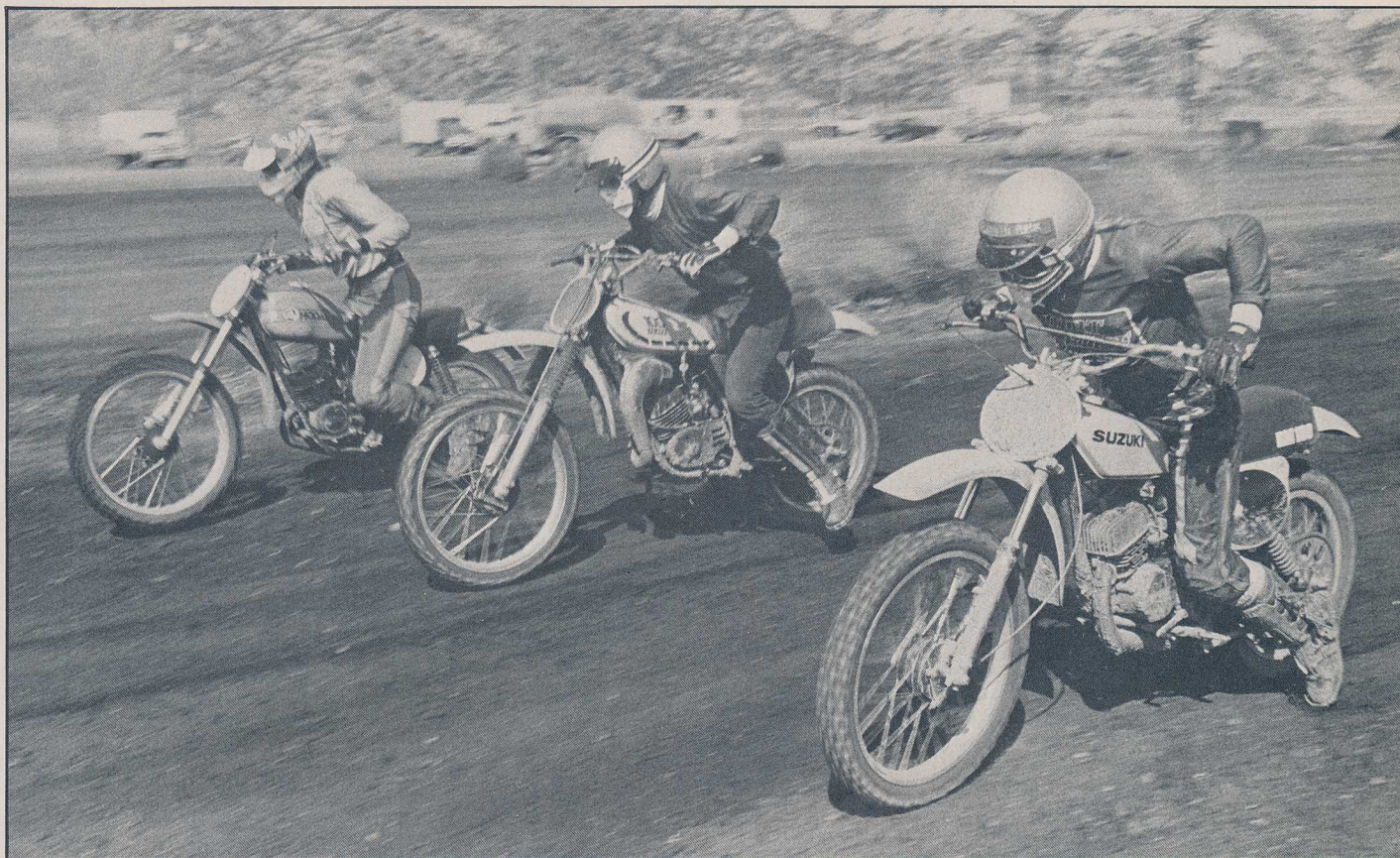
ON THE COVER: Jim Connolly and Yamaha's IT400 get on better than expected. By either of them. Photo by Len Weed.

NEXT ISSUE ON SALE JUNE 10









*If it's not yellow, why bother?*

# SUPER RAT vs. YZ vs. RM...

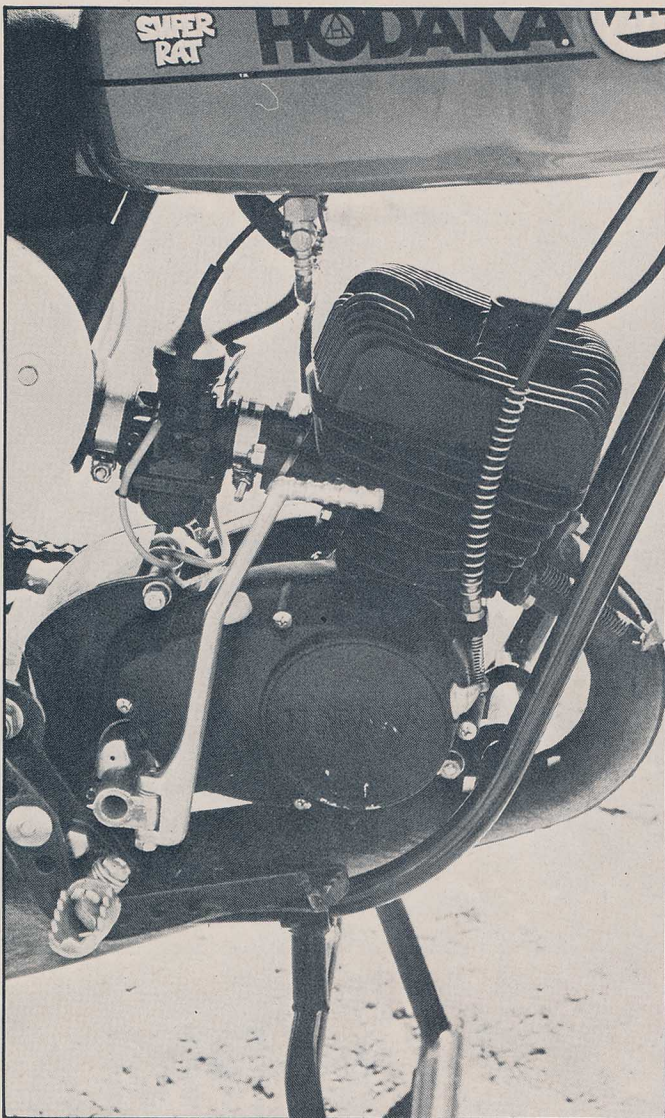
by the Staff of DIRT BIKE

Many moons have passed and many changes have gone down since we last looked in on the Hundred's gang. The day has long gone since the bunion nibblers were mere 98cc weaklings. They're now muscle-bound, fire-breathing demons, blazing their way across the wild and wooly West, grabbing a firm toehold in the power crazy world of motocross. One member of the group, standing alone behind his feared reputation, remains untouched by time, looking exactly as he had over a year back. His name, Ho Daka.

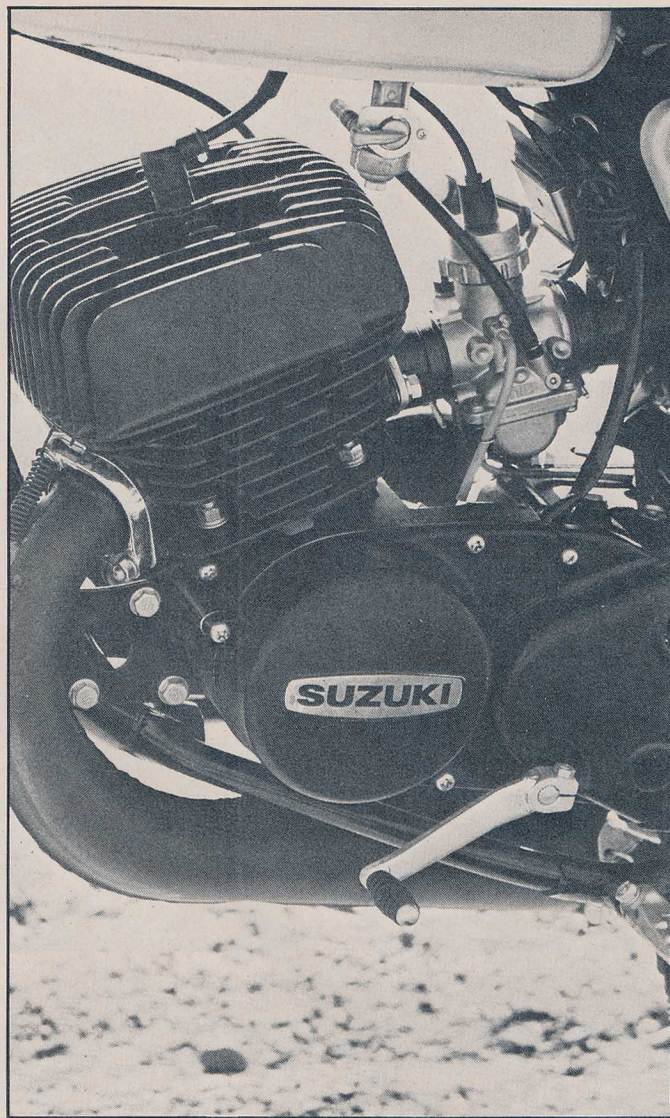
The others... Ya Maha will scarcely be recognized by his old and true friends. The months have been good to him, for he has been transformed from a baby Screamin' White Zonker into a fun-sized Yowlin' Yellow Zoomie. A relatively new member, Suz Uki, had not yet joined up when we last shot it out with the Hundreds. Little Suz brings along







This year's, or last year's?



Master of motory.

the nickname passed down to him by his bigger brothers, RM. Those two initials alone are now enough to strike terror into the cranks of lesser bikes, near and far.

But let's climb over this berm and take a closer look.

Ho, known to his close buddies as Super Rat, comes in stunning orange and blah blue and looks like a racer — at least last year's. Styling is definitely late '60s Buick.

Ya, YZ for short, has come a long way from the little scooter we race tested last year. This year, the baby YZ uses virtually all of the components found on the jazzy air-forked 125, except that it's debored and has last year's 125 forks. It even has a couple of things last year's quarter-liter didn't have, including a big 520 chain with a tensioner. And it comes with the new redesigned, longer travel, monoshock suspension.

The RM is your basic scaled-down rip snorter, with at least a couple of

parts borrowed right off the bigger ones. The only thing the RM has in common with the YZ is that they are both mellow yellow.

#### WE MAY AS WELL LAY IT ON YOU NOW

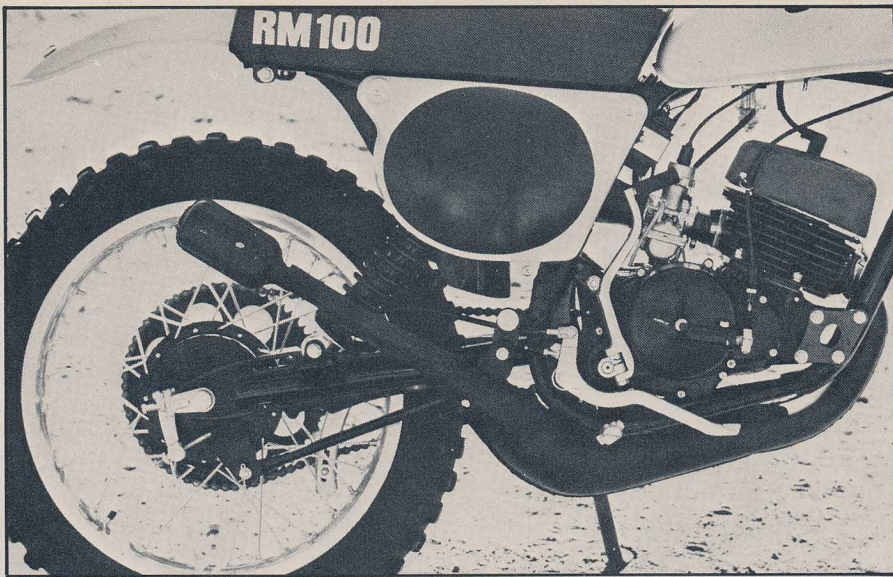
When the echo from the last shot had faded away and the dust had settled, one bike stood alone. The RM. It is our combined opinion after countless hours of exhaustive testing that when comparing each package, feature for feature, the RM is indeed, an RM. And in the tradition of RMs, its power, handling, suspension combination brought victory.

The Super Rat was the first to bite the dirt (hit the bullet?). Although the bike was not too far out of line last year, it has been lying dormant since then, and sends you back to the days of the dinosaurs as you straddle the little orange rat and resign yourself to chasing the yellow

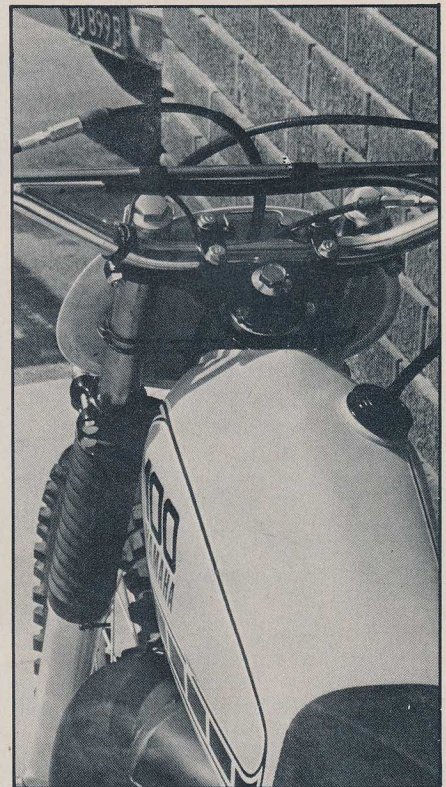
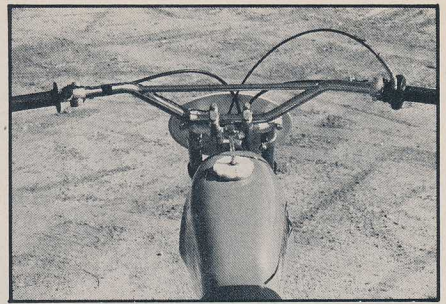


zoomies. The Hodaka's power is more usable than that of the others, but there's not quite enough of it. You can count to two in the time it takes from when you push the shift lever, to the time it downshifts. We found that by keeping the shocks





The winning RM bears certain similarities to the TSs of yesteryear.



bolted to the front top mounts you gain a full 7.5mm over the conventional rear mount. Not enough.

The Hodaka's suspension was only good enough for smooth tracks, and was unacceptable for rough stuff, front and rear. But when you tried to ignore the suspension, it was obvious that the geometry and steering were right in the ballpark. When you combine that with the Rat's broad powerband and then consider the price, it wouldn't be too bad a scoot if it only had suspension.

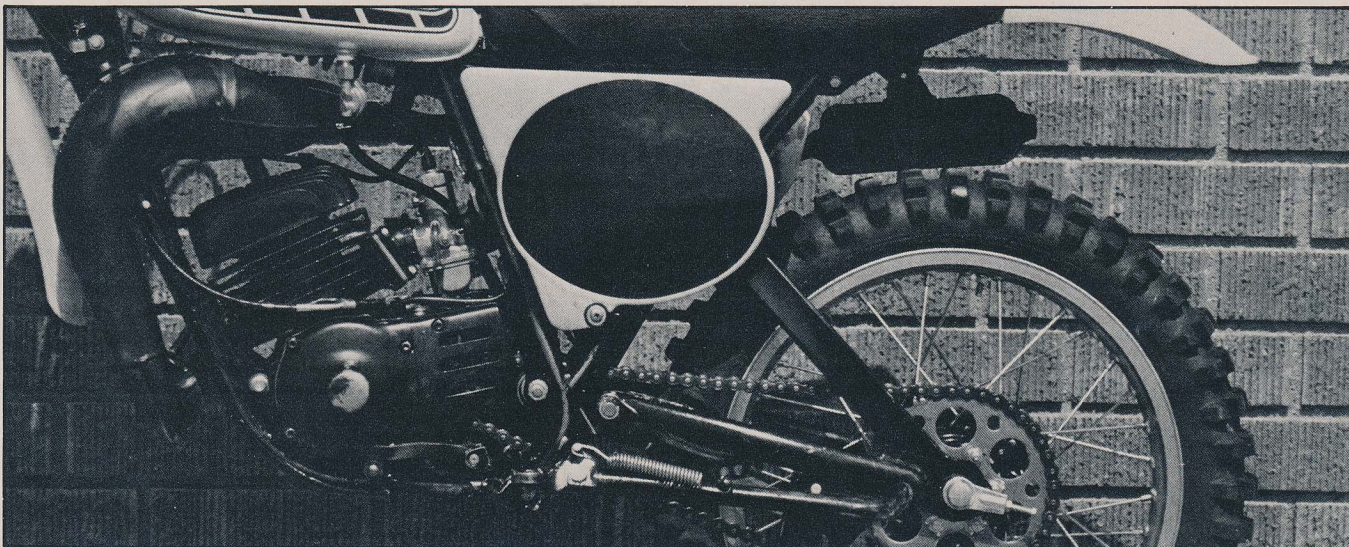
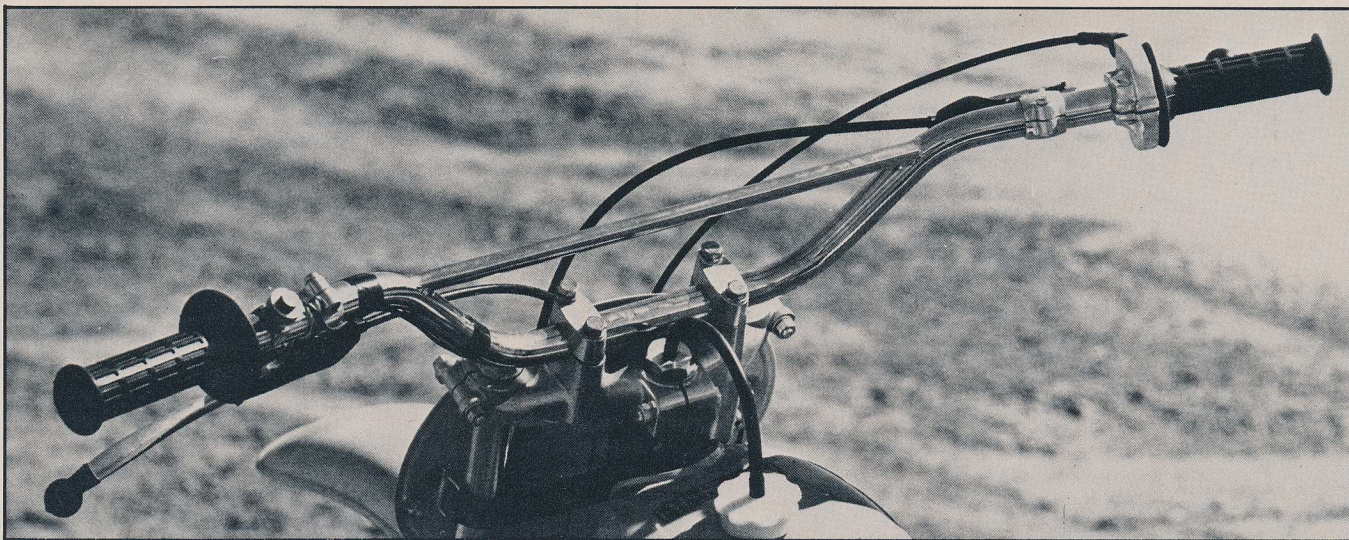
Power figure was 14.3 horses at 9500. If your bag of beans is play riding rather than serious competition, where things like peak horsepower, quick shifting and the ultimate suspension don't play as big a part, the Hodaka's smooth, usable power and dependability may be the way to go.

Blasting around on the second place yellow bike (the YZ) revealed









Your basic debored 125.

that it had the best suspension system of any 100 we had ever ridden — that is, when it comes to carrying 130- to 190-pound riders. The redesigned monoshock, like the bigger monos, works more like a shock absorber now. And this one has an additional 14.5mm of shock travel over last year's 125cc unit. Up front, we couldn't find anything good or bad to say about the telescopic, hydraulically dampened, spring suspended forks. Well, we could say that they actually worked like forks should, unlike Yamaha forks of old. Travel front and rear was well beyond the limits of hundreds of the past, as well as of our other two competitors. Strangely enough, it was more like a 125's. But suspension isn't everything, just a lot.

The YZ's handling was not up to our expectations, in spite of the suspension. Stability was lacking in the turns and on the straights, due

partly to the peaky motor. And we had a problem with the tight-shifting gearbox, almost from the beginning. It was hard to get the bike to follow the same line lap after lap. There was a tendency to start sliding before it was necessary, and sometimes without warning. And the slides weren't easily controlled. The YZ explodes from 6 hp at 7000 rpm to 14.6 at 9000. In between, the dyno freaked out, hence part of the handling problem.

The mono was slightly on the stiff side rearward, even for our heavyweights, so figure what it would be like for your basic 100-sized rider of considerably less weight and size on a tallish full-sized 125 chassis with a very pipey motor. . .

That brings us around to the RM. Rear suspension was equal to or a little better than the YZ because it was a little softer, while doing the same job and offering five spring preload positions that are easily

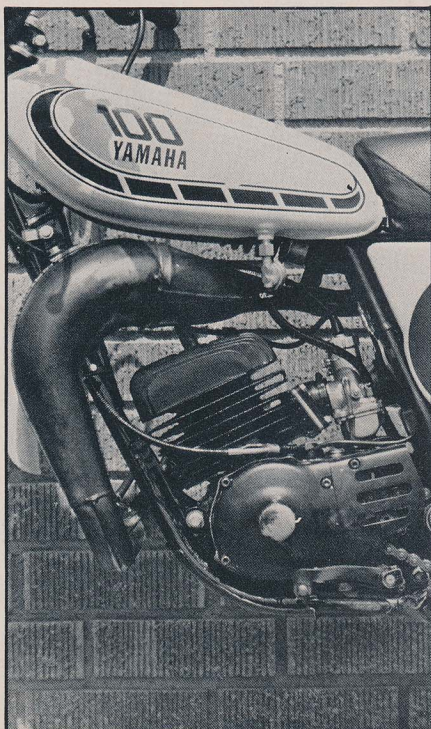
altered. The forks weren't as good as the rear — especially when landing off large jumps — possibly due to the rider overload. Our lightest rider felt less of a jolt as the forks stopped, but still the dampening isn't quite right. Some places it didn't bother you at all, in other places it was a major. A change of oil didn't help. Maybe a little stiffer springs for the heavier hundred riders would do the trick.

Halfway through our testing, we figured that the RM would edge out the YZ by a nose. The more time we put in on them, the more we realized how much better the RM handled. It's much easier to ride than the YZ. We expect even more so for the smaller 100 racer who needs all the help he can get in the way of smooth, easy power and fine handling. Lay the RM over and it sticks. It's unbelievable how close to the larger RMs it handles. It gives you confidence. Power builds smoothly up to 17 at 11,340. The RM's an









Peak perfection.

excellent slider and very predictable. Shifting is like the old hot knife through butter ideal — with or without pulling in the clutch lever. Much better than the slow-to-downshift five-speed on the Hodaka or the problem-plagued YZ box.

#### PEG TO PEG, PIECE BY PIECE

Bars, yes, we have a total of three pair (or is it three sets?). They all felt alright, with the narrowest set on the Hodaka (90.2cm), 5mm wider on the RM, and a tad more width on the YZ.

Throttles all worked fine, all levers had covers of one type or another. There were neither lock nuts, lock washers or cotter pins to secure the Rat's lever pivot bolts.

The big, ugly orange tank on the Rat held a full 2.5 liters more than the sleek little yellow units. All were steel. The side-mounted filler hole on the YZ made spotting petrol levels much easier than on the RM. The

Hodaka's filler was very large, and offered an unobstructed view of the juices within. Caps didn't leak, but petcocks on the Hodaka did.

No complaints on the YZ seat. The RM's is exactly the same fine unit as found on its relatives. Relaxing on the Hodaka is a lot like sitting on a swaybacked horse.

The YZ had a chain tensioner for the first day. Sometime during the second, either the bolts loosened up or the chain cut through them, because the pad disappeared.

Detail work on the Hodaka included a plastic roller for the chain to roll against on top of the swingarm, instead of the usual rubber block. Grease fittings sticking out of and hanging onto everything were another nice touch.

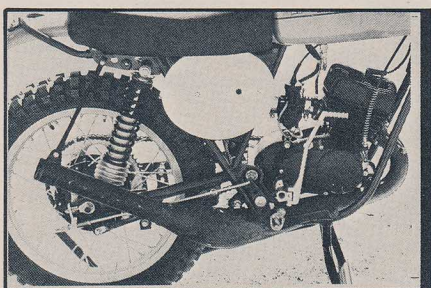
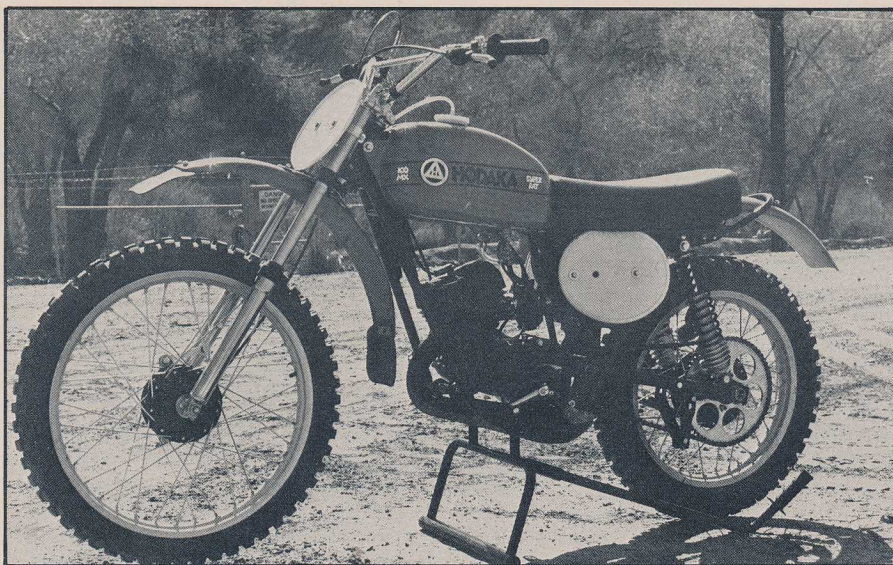
Materials used for the yellow fenders get the nod over the orange stuff, which is a little more brittle.

An alloy rear sprocket was bolted to the rear hub of the YZ. The others









Complete with finned shocks and spare shock mounts.

were steel.

We got into some heavy mud riding on the YZ, and barely a speck landed on the dual foam filters because of the new, improved air box design. The Suzuki carries a unit very similar to that of the other RMs. Super Rats come with an oiled foam number, but the distributor installed a K&N because the factory felt it would work better.

The orange and blue is the only 100cc motocrosser we know of with a quickly detachable centerstand. The yellow bikes had sidestands attached.

Best tires of the bunch were on the YZ. They're the same type of Bridgestone we found on our 250 RM. Yokohamas on the Rat were about as good as the IRCs on the RM — just OK.

The old, good style D.I.Ds on the Super Rat were the strongest. Ridged, shoulderless Takasagos and D.I.Ds on the screaming yellows were about the same.

Of the 436 spokes and nipples tested, we lost one of each on the RM — due to lack of preventative maintenance, mostly. All six tubes were holding air, or were last time we looked.

Brakes were smooth, strong and

progressive on the RM, almost that good on the YZ, and a little less so on the Rat.

There were no brake pedal adjusters on either the Hodaka or the Yamaha. Ridiculous.

None of the bikes were very quiet. Boo.

Because of the courses we rode on, neither of the downpipes took too much abuse. The "with it" up-pipe on the Yamaha burned only a couple of knees.

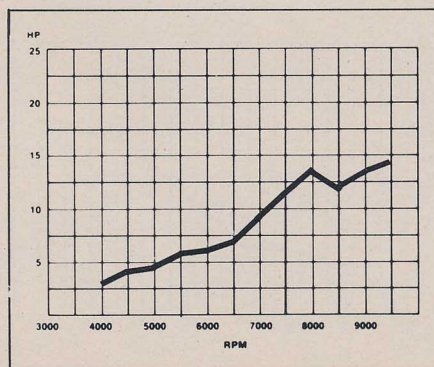
The Suzuki and Hodaka had wipers on the forks, while the YZ had nifty little booties to protect the seals from dirt. One of the YZ seals leaked.

A big 520 chain comes with the YZ. 428s, as usual, on the others.

#### MOTOR STUFF

Clutch on the RM felt like a real motorcycle's. The YZ's worked well, but had a shorter throw. On the Rat it was more like a switch. No matter how hard you tried, the bike always lurched forward from a stop and felt weird when shifting.

You had to downshift ahead of time on the Hodaka, because it seemed to take a second or two for all the parts to fall into the right



#### HODAKA 100 SUPER RAT MX

Price:  
(approx. retail, West Coast) — \$695

Engine:  
Two-stroke single, piston port,  
reed valved  
Displacement ..... 98cc  
Bore and Stroke ..... 50mm x 50mm  
Compression Ratio ..... 8.0:1  
Carburetion ..... Mikuni VM28SC

Standard Jetting:  
Main jet 250, needle jet N8, jet needle  
5f3, needle clip position 3rd notch,  
pilot jet 60, idle screw 1 1/2 turns from  
closed, slide 2.5, starter jet 40

Horsepower ..... 14.38 at 9500 rpm  
Clutch ..... Wet, multi-plate

Primary Drive .. Straight cut gears 2.81:1  
Transmission Ratios:

- 1) 2.90
- 2) 2.00
- 3) 1.50
- 4) 1.29
- 5) 1.17

Final Drive:  
D.I.D 428  
14-tooth countershaft  
64-tooth rear sprocket

Air Filtration ..... Oiled foam  
Electrics ..... Nippondenso PEI  
Starting ..... Non-primary kick  
Lubrication ..... Pre-mix 20:1  
Recommended Fuel ..... Premium  
Recommended Oil ..... Whatever  
Fuel Tank Capacity: 7.57 liters (2 gallons)  
Frame ..... Double loop, double cradle  
Suspension:

Front:  
Kayaba telescopic forks with  
19.2cm (7.5 inches) travel measured

Rear:  
Kayaba oil-type shocks with  
10.85cm (4.25 inches) travel measured  
on forward mount and 10.1cm  
(3.94 inches) travel measured on  
rear mount

Wheels and Spokes:  
D.I.D shoulderless, ridgeless  
aluminum alloy, steel spokes,  
2 rim locks

Tires:  
Front:  
3.00 x .21 Nitto Special 4PR

Rear:  
3.50 x 18 Nitto Special 4PR

Dimensions:  
Wheelbase ..... 133.0cm (52.3 inches)  
Swingarm length ..... 42.2cm (16.6 inches)  
Ground clearance ..... 18.1cm (7.2 inches)  
Bars, height ..... 107.9cm (42.5 inches)  
Bars, width ..... 90.2cm (35.5 inches)  
Pegs, height ..... 30.5cm (12.0 inches)  
Pegs, width ..... 45.0cm (17.7 inches)  
Seat height ..... 83.2cm (32.75 inches)  
Fork angle ..... 29.2 degrees claimed

Weight:  
82.7 kilos (182.5 pounds) without  
petrol, 41.8 percent on front wheel,  
58.2 percent on rear

Brakes:  
Front:  
Full-width cable-operated drum

Rear:  
Full-width rod-operated drum  
Instruments ..... None  
Lights ..... None  
Silencer ..... Yes, MX only  
Spark Arrestor ..... None  
Warranty ..... None

Parts Prices:  
Piston ..... \$21.92 with pin  
Rings ..... \$2.95  
Clutch cable ..... \$3.00  
Brake pedal ..... \$9.38



## YAMAHA YZ100C

Price:  
(approx. retail, West Coast) — \$850

### Engine:

Two-stroke single, piston port,  
reed valved

Displacement ..... 98cc

Bore and Stroke ..... 50mm x 50mm

Compression Ratio ..... 7.2:1 (actual)

Carburetion ..... Mikuni VM30SS 1J400

### Standard Jetting:

Main jet 190, jet needle 6DP10, 3rd clip  
position, needle jet Q-2 (169),  
cutaway 2.0, pilot jet 40, air adjusting  
screw 1 1/2 turns out, air jet 2.5,  
float level 16.5 plus or minus 1.0mm

Horsepower ..... 17.5 at 11,000

### Clutch:

Wet, multi-plate aluminum and fiber  
discs

Primary Drive ..... Helical gear 3.894:1

### Transmission Ratios:

1) 2.538:1

2) 1.933:1

3) 1.555:1

4) 1.300:1

5) 1.142:1

6) 1.042:1

### Final Drive:

D.I.D 520T

12-tooth countershaft

40-tooth rear sprocket

Air Filtration ..... Oiled foam

Electronics ..... Hitachi CDI magneto

Starting ..... Primary kick

Lubrication ..... Pre-mix 20:1

Recommended Fuel ..... Premium

Recommended Oil ..... Yamalube R

### Fuel Tank Capacity:

4.9 liters (1.3 gallons)

Frame ..... Double loop, double cradle

### Suspension:

#### Front:

Kayaba telescopic forks with  
19.5cm (7.68 inches) travel measured

#### Rear:

Yamaha monoshock with  
16.5cm (6.5 inches) travel measured

### Wheels and Spokes:

D.I.D shoulderless, aluminum alloy

with ridge. Front — 1.60 x 21,

Rear — 1.85 x 18, steel spokes,

3 rim locks

### Tires:

Front:  
2.75 x 21 Bridgestone Motocross 74PR

Rear:  
3.50 x 18 Bridgestone Motocross 64PR

### Dimensions:

Wheelbase ..... 137.4cm (54.1 inches)

Swingarm length ..... 44.7cm (17.6 inches)

Ground clearance ..... 29.5cm (11.75 inches)

Bars, height ..... 109.5cm (43.2 inches)

Bars, width ..... 91.0cm (35.8 inches)

Pegs, height ..... 33.5cm (13.3 inches)

Pegs, width ..... 45.8cm (18.0 inches)

Seat height ..... 87.6cm (34.5 inches)

Fork angle ..... N/A

### Weight:

89.36 kilos (197 pounds) without petrol

— 44.6 percent on front wheel,

55.4 percent on rear

### Brakes:

Front ..... Conical, cable-operated drum

Rear ..... Conical, rod-operated drum

Instruments ..... None

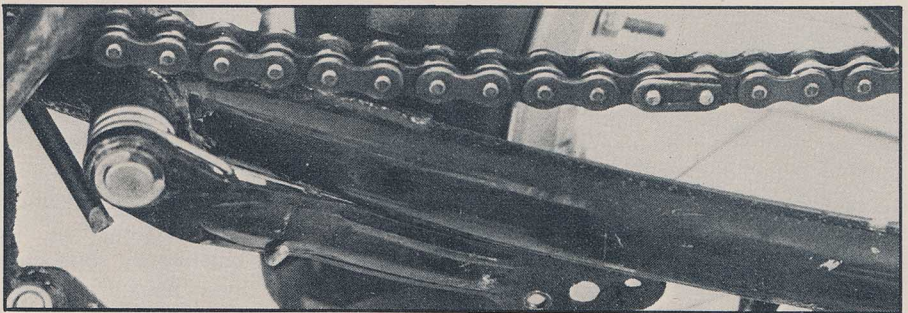
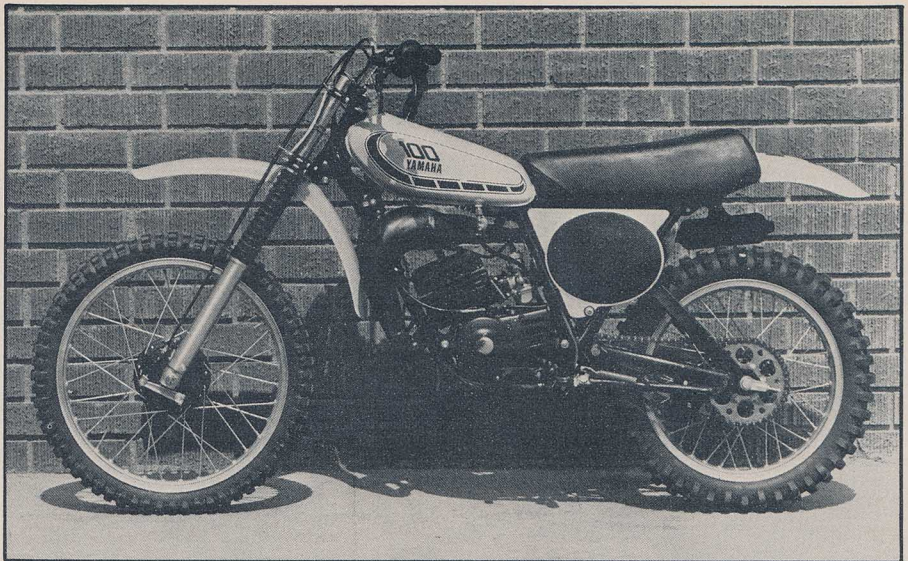
Lights ..... None

Silencer ..... Yes, MX only

Spark Arrestor ..... None

Warranty ..... None

Parts Prices ..... N/A

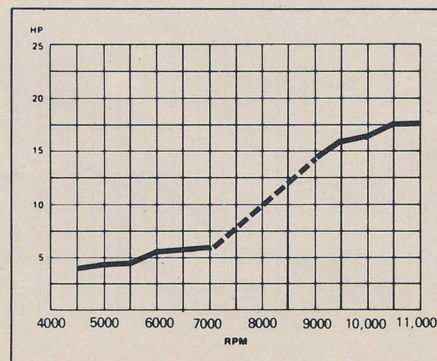


Neat tensioner, while it lasted.

places. Spacing was good. There was a loud whining, *whirr* (probably from the primary gears) that made you wonder if everything was all right inside.

At first, some riders found extra neutrals when downshifting the YZ. Others never missed a gear. Not once. Eventually, though, everyone found more neutrals than they needed, usually between third and second. Very annoying, sometimes dangerous.

Drag racing proved that the wider powerbands were better for getting mass in motion. You had to slip the clutch on the pipey YZ. Once underway, the six-speed YZ started pulling up on the RM, making them almost equal, while the Rat was back a few lengths studying knobby



patterns.

### MISCELLANEOUS MUTTERINGS

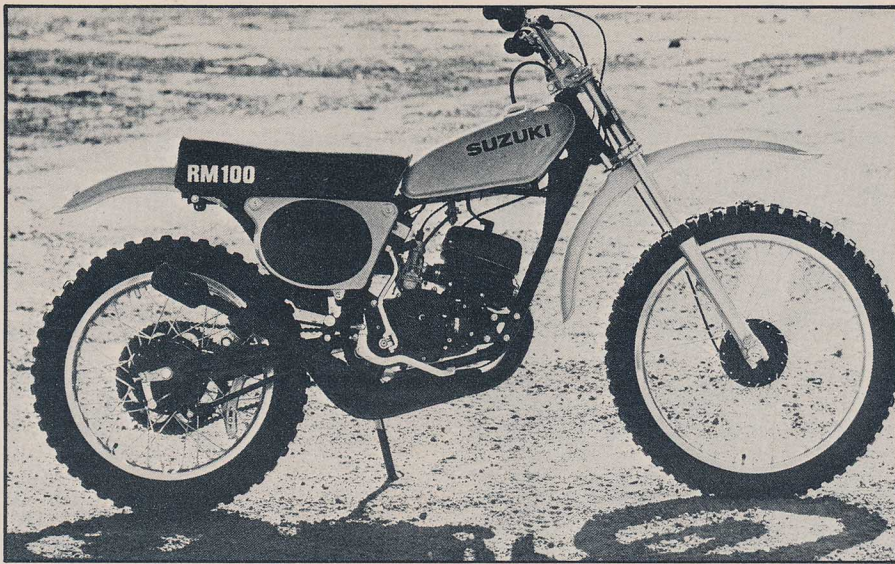
Zeal on the Yamaha: "Boy, if I had only had this one at Hopetown last year. It's fast. It handles really neat, but it doesn't have a wide enough powerband to have the right gear for some corners. It keeps popping into neutral when I downshift."

Don on the Hodaka: "It feels like the geometry is right, but you can't get it steaming because the suspension is too soft. I bottomed it front and rear. Because of the mild powerband, it's down on speed in any gear. It's a good play bike, but it's frustrating to see the other 100s pull you so bad. Shifting is slow and bothersome. I never missed a gear, but since it was a little slow already, shifting slow doesn't help."

Len on the Yamaha: "I hate pipey motorcycles, especially pipey little motorcycles. I've never liked pipey motorcycles. Never. Ever."

Don on the Suzuki: "I expected it to be a little down on power just because it was a hundred. It was on the bottom, but it would always pull you through if you feathered the clutch a little. I liked the way it dug in through the corners better than





the Yamaha. The forks weren't dampening the way they should. The back end worked fine. Overall, I liked it a hair better than the Yamaha."

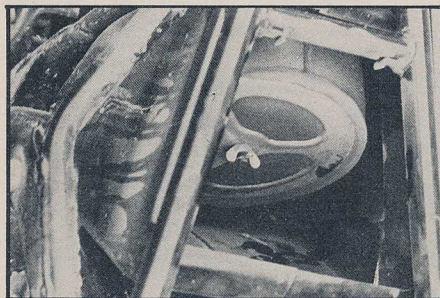
George on the Yamaha: "I never had one problem shifting until the last day. I also had to straighten the shifter each time the bike came back to me. It softened quickly. I often had to downshift in the middle of a turn, because of the narrow powerband. It's too squirrely when it comes on the pipe. Suspension is good front and rear, but the way it turns and slides is not so hot."

Don on the Yamaha: "I liked the way it felt, just sitting there. Maybe it wouldn't feel so good to your average 100 rider."

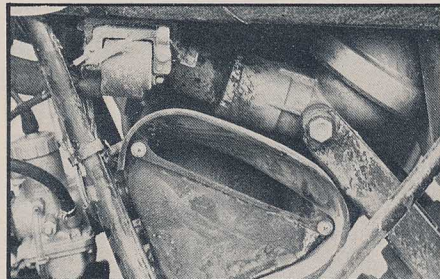
George on the Suzuki: "That bike is an exact scaled-down replica of the big RMs. (Pants heatedly.) It works so neat. (Pants more.) The more you ride it, the more you like it. (Begins to salivate.) It shifts, turns and slides so well that it never tires you out and seldom lets you down. (Begins to moan softly.) The forks aren't so hot. (Makes a small concession.) Everything else is fine, especially the power when you compare it to the others. (Quickly forgets concession.)"

### WHAT TO DO

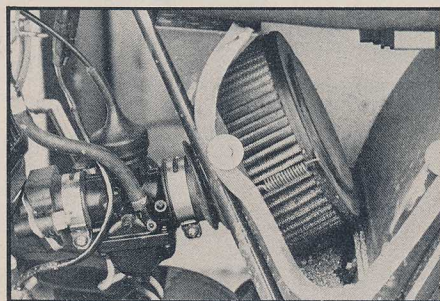
Given the right circumstances, you could win on either of the three nibblers. But, you may as well start with a bike that is more likely to put you in front race after race. This narrows it down to a couple. And with a closer look, the Suzuki is the nibbler most likely to succeed. So give yourself a break, don't give the competition one.



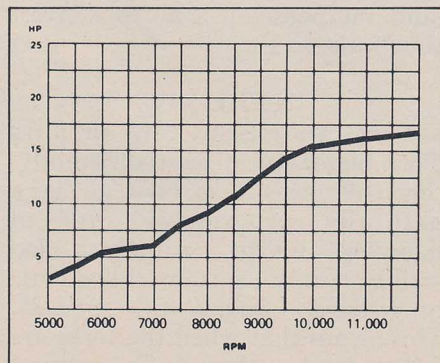
Air (Suzuki).



Box (Yamaha).



Bonanza (Hodaka).



### SUZUKI RM 100

- Price:  
(approx. retail, West Coast) — \$859
- Engine ... Two-stroke single, piston port  
Displacement ... 98cc  
Bore and Stroke ... 50mm x 50mm  
Compression Ratio ... 8.1:1 (actual)  
Carburetion ... Mikuni VM28SS  
Standard Jetting:  
Main jet 160, jet needle 5DP7 — 4th, needle jet 08, cutaway 2.5, pilot jet 35, air adjusting screw 1 1/2 turns open, float level 25.0mm
- Horsepower ... 17.0 at 11,500 rpm
- Clutch:  
Wet, multi-plate with aluminum and fiber discs
- Primary Drive:  
Straight cut gears, ratio 3.388:1
- Transmission Ratios:  
1) 2.143  
2) 1.588  
3) 1.250  
4) 1.045  
5) 0.913
- Final Drive:  
D.I.D 428TM  
14-tooth countershaft  
64-tooth rear sprocket
- Air Filtration:  
Wet polyurethane foam element
- Electrics:  
Nippondenso PEI (Pointless Electronic Ignition)
- Starting ... Primary kick  
Lubrication ... Pre-mix, 20:1
- Recommended Fuel:  
95 research octane or higher (premium)
- Recommended Oil:  
Castrol R30, Golden Spectro Synthetic Blend, Shell Super M, B.P. Racing, Bel-Ray MC-1
- Fuel Tank Capacity:  
Five liters (1.32 gallons)
- Frame ... Semi-double cradle
- Suspension:  
Front:  
Kayaba telescopic forks,  
15.8cm (6.25 inches) travel measured  
Rear:  
Kayaba nitrogen gas shocks,  
16.45cm (6.5 inches) travel measured  
5 preload positions
- Wheels and Spokes:  
Takasago ridgeless shoulderless aluminum alloy rims with straight spokes
- Tires:  
Front:  
3:00 x 21 IRC 4PR motocross GS-45  
Rear:  
3:50 x 18 IRC 4PR motocross GS-45
- Dimensions:  
Wheelbase ... 136.8cm (53.8 inches)  
Swingarm length ... 45.0cm (17.7 inches)  
Ground clearance ... 21.65cm (8.5 inches)  
Bars, height ... 112.9cm (44.4 inches)  
Bars, width ... 85.1cm (33.5 inches)  
Pegs, height ... 31.8cm (12.5 inches)  
Pegs, width ... 47.0cm (18.5 inches)  
Seat height ... 83.8cm (33.0 inches)  
Fork angle:  
Claimed and measured, 30 degrees
- Weight:  
87.9 kilos (194.2 pounds) without petrol, 43.8 percent on front wheel, 56.2 percent on rear
- Brakes:  
Front ... Full-width, cable-operated drum  
Rear ... Conical, cable-operated drum
- Instruments ... None  
Lights ... None  
Silencer ... Yes, but for MX only  
Spark Arrestor ... No  
Warranty ... None
- Parts Prices:  
Piston ... \$13.00  
Rings ... \$5.12  
Clutch cable ... \$5.28  
Brake pedal ... \$7.64