

Inside Yamaha's New '76 Four-Strokes



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Ekings Previews Three Red Hot 175



5 MX Bikes



BY DAVE EKINS
PHOTOGRAPHY: PPC

Funny thing about California. They don't believe in 175cc. Here we are, in the busiest racing area in the country, vast deserts, numerous motocross tracks, sunshine all

ways, and they don't have a class for 175's. There's nothing wrong with the bikes—you won't get bubonic plague riding one—it's just that in California they have to race 'em against 250s because 175s don't exist.

In Ohio they are nosed out by 125s as being the most popular motocross and enduro mounts. Down South they rank third behind 125s and 250s. There are usually classes for the 175s with a token number showing in the Northwest. We won't ask why. People buy according to their needs and the size of their wallets.

The way things are now most guys begin racing on a 125. After a season they generally go to the next higher displacement and take another step upward the following year. 125s are considered the easiest to ride (they are not), and competition is keenest among them. 175s are thought to be just oversized 125s. This is generally true, but in some cases false.

We are stepping away from our normal test procedure and are presenting some of the 175 MXers to let you know what's available. This is a comparison of sorts, but more importantly, it is a showcase of three very different 175s intended for the competition rider.

Yamaha, Husky and Can-Am are the three. We might have had Penton but they sell so many back east few ever reach this end of the world. We tried.

Yamaha MX 175 B

Yamaha touts their MX175B as the natural step up from lower displacement machines. It's as close to punching out a 125 to make a bigger displacement bike as you're gonna get these days. But this is not entirely the case; the MX125 and MX175 share many pieces yet the bikes are quite different. They have the same 50mm stroke; the 175 has a 10mm-larger bore.

Engine/gearbox units are alike yet the 175 has a beefier clutch and CDI ignition. Both mount a 28mm Mikuni carburetor and breathe through identical reed valves. The 175 is a shade taller and a little longer simply because it has a different set of forks.

The MX125 forks have 145mm of travel, the 175 moves 160mm, that's about .6-inch more. The overall length is greater because damping rods (which control travel as well as movement) are longer.

Swing arm lengths and Thermal-Phase shocks are identical. Not too much has been said about these shocks because they've been accepted with mixed emotions. They are much better than the units which preceded them, hold all kinds of fluid (6.2 ounces versus half that much for the old units), but are not as good as Girling or Koni in the action department.

A full double-cradle-design frame is used which is the same for both. It is fully welded and made from mild-steel tubing. The Yamaha is 2.5 inches shorter than the Can-Am and four inches less than the Husky, axle to axle.

Yamaha's lightweight polypropylene fenders are virtually unbreakable. Plastic number plate/side covers hide some "unsightlies" as well as shield the air filter inlet area. It uses a steel gas tank and lightweight seat with fiberglass base. The MX175 is fitted with magnesium brake backing plates, but there has to be more than just that to justify the six-pound weight difference between it and the MX125; the 175 is the lighter of the two.

Now comes the mind blower: According to Yamaha the MX125B puts out 20 hp at 9000 rpm and the MX175B gets 18.3 at 8500 rpm! The 125 also pulls a tad more torque. Yet when you ride the two the 175 gets around the MX course a little easier. It has a smoother powerband, puts its power to the ground instead of spinning it off, and rides better because of the superior fork. It's not a mistake, Yamaha wanted the bike this way. The 175 is an ideal learning vehicle. It is light in weight, has Automix, and the best set of water brakes around. You should be able to ride it for a long, long time without having to fix anything. This is not a YZ and it is not an overbored MX125, it is a 175.

Husqvarna 175

We know it's hard to believe, but the Husky puts out the same kind of easy useable power found with Yamaha's MX175. This is understandable, neither is a highly tuned engine, both use reed valve induction, and neither is a pure 175. By that I

175s Are A Gas

mean Yamaha's is an enlarged 125 while the Husky is a shrunk 250/360.

Make no mistake about it, Husqvarna's Motocross 175 is a 250 GP with a shorter stroke, smaller bore, and wide-ratio gearbox. It also has the large-diameter Motoplat CDI ignition, lighting coils, and future 175s will come with a three-gallon gas tank. (Seems they started out making a CR and somewhere down the line decided to build a WR out of it.)

The full-width Leleu front hub is also not motocross; it does have slots for a speedo drive. Another indication that this bike leans heavily toward enduro useage is the spark arrester/muffler exhaust system, this one being taken from Husky's 250WR model. What we really have is a 175cc Husqvarna Motocross/Enduro machine with appropriate concessions for both. If you want to enduro it you'll need to purchase more pieces, but the gearbox and power are correct.

The frame is pure and simple, the same one used for the bigger GP. It is of the best-grade chrome moly-steel Husky can buy, heat-treated and stress-relieved to make an end product good enough for Heikki Mikkola's personal racer. These were designed from the drawing board up to utilize the longer rear axle travel gained by mounting rear shocks at an exaggerated angle.

Mikkola won last year's 500cc World Championship using prototypes of this frame and experimental Girling gas/oil shocks. Most gas/oil systems feature the Bilstein patented idea of placing a floating piston between the fluid and nitrogen so they can't mix. Girling mixes the two together and sizes the orificing and damper valves to work in foam instead of pure fluid.

The avid motocrosser can go out and purchase gas/oil Girlings at his corner bike shop, but they're not the same. Husky's units use a longer spring, and special retainer. Girling requires a short 120-pound-rated spring, Husky is fitted with an inch-longer 110. Travel in the shock is the same as are the damping rates, the genuine Husky unit produces a little softer ride.

Husqvarna's own Electron forks are fitted to their GP bikes and produce a ride a bit stiff for the purpose of the 175. The choice of a soft, well-controlled ride found with Betor forks better suits this bike. The 6.5 inches of travel is less than what the Electron units have but still offer an acceptable balance with the slant-shock rear section.

Basically it has the very successful GP 250/360 engine. Straight-cut



Yamaha The Play Bike

Steel gas tank and thick-wall mild steel frame tubing, no-magnesium engine and plastic fenders bring the total wet weight to 199 pounds.



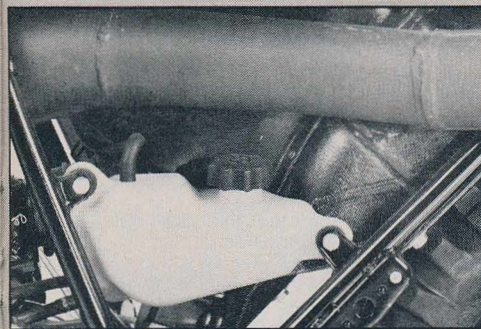
Husqvarna The Play Racer

Husky 175 is built around proven GP frame. Very long seat is new and contours around rear of fuel tank which is now held with a rubberband.

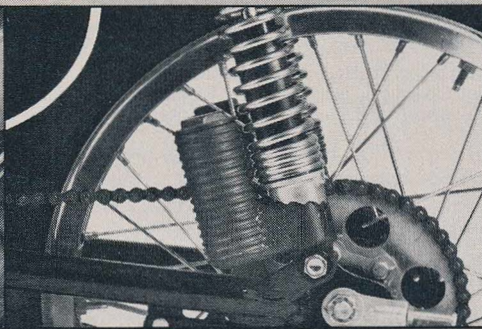


Can-Am The Racer's Racer

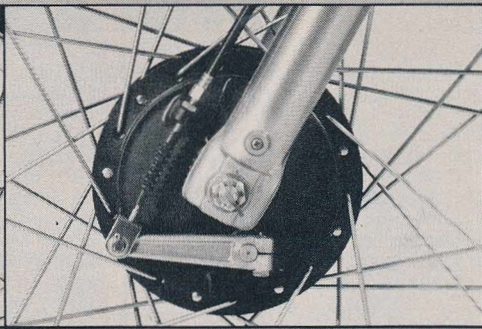
The bike uses many outside components but concept and design are original. It is the only pure MXer still utilizing an oil-injection system.



Above: Long, dark cylinder shown above is part of tuned expansion chamber. Plastic oil bottle is mounted in rubber grommets; 1/2-quart capacity is ample.

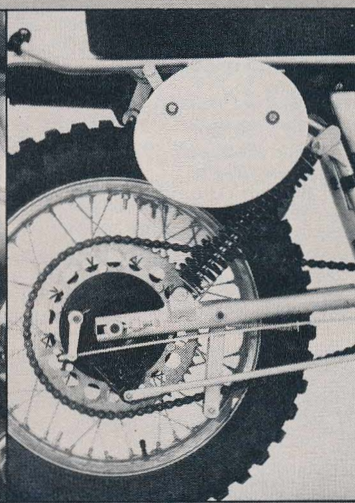
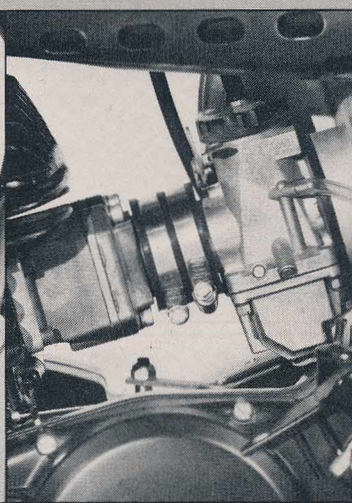
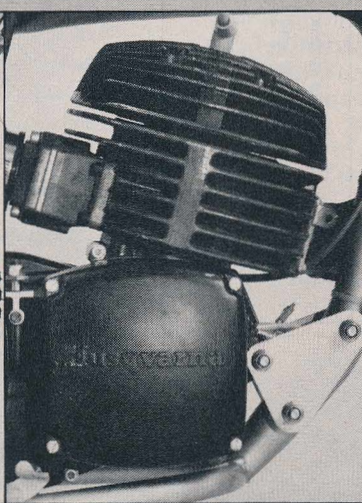
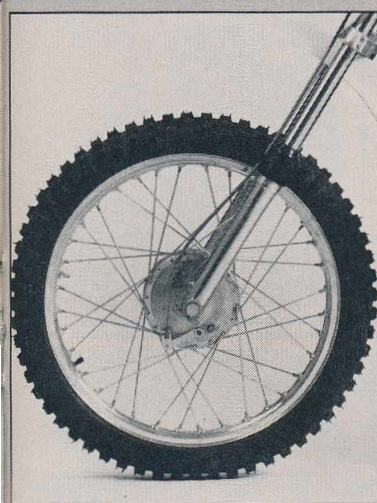


Top Center: Familiar Thermal-Phase rear dampers have fair action and are heavy. Aluminum sprocket is offset to allow ample chain/tire clearance.



Bottom Left: Famous U.S. Forest Service-approved spark arrester looks less like a motorcycle part and more like something from the hardware store.

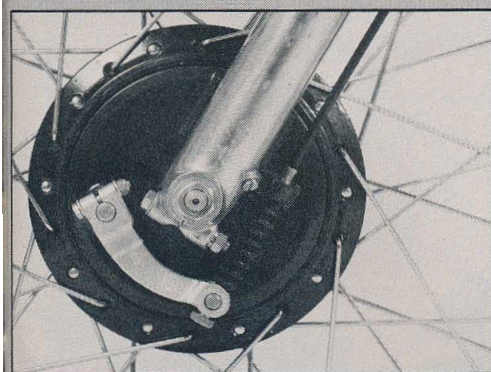
Above: Front hub is full-width aluminum casting with steel liner for brake shoes to rub on. Magnesium backing plate has labyrinth-type seal to hub.



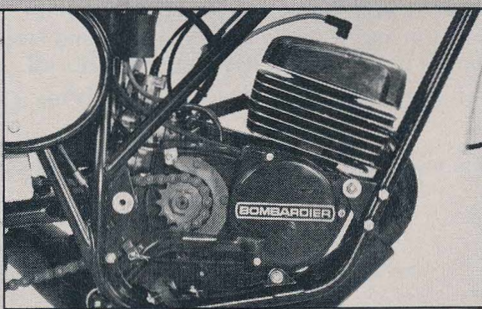
Above Left: Pictured are the non-Husky parts of the Husky, Betor forks and French hub. **Above:** 175cc engine has one less cylinder fin than 250.

Above Right: Very latest Spanish Amal carb. is mounted in rubber. Manifold contains dual set of digestible reeds.

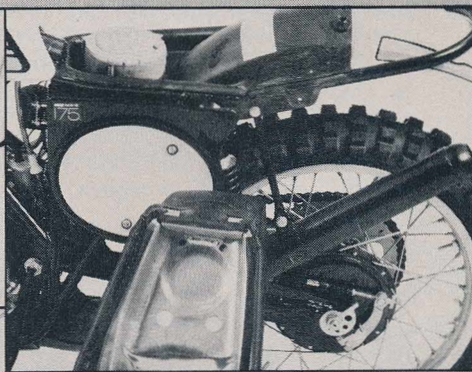
Right: Large sprocket is a giveaway of engine's small displacement. Girling gas/oil shocks are fitted with inch-longer 110-pound springs; they work.



Above: Cast-aluminum hub is of the conical configuration, backing plate anchors over shoulder on fork slider.



Above Right: 175cc engine turns out 30 pure ponies, more than anyone else. Steel plate bolted around chain and sprocket protects expensive magnesium cases.



Left: Swing arm requires a lot of gusseting since shock has been moved forward several inches. Snail-type chain adjuster has lines to help wheel alignment chore when adjusting chain. **Above:** Ideal location of air filter gets added protection from seat bottom and plastic fender tray.

	Yamaha	Husqvarna	Can-Am
Engine Serial	101043	0213	5854001136
Base Price	\$1095 West Coast	\$1495 West Coast	\$1445 East Coast
Engine Type	Two-stroke, single-cylinder	Two-stroke, single-cylinder	Two-stroke, single-cylinder
Displacement	171cc	172cc	173.6cc
Bore x Stroke	66x50mm	62x57mm	62x57.5mm
Claimed hp @ rpm	18.3 hp @ 8500 rpm	N.A.	30 hp @ 8700 rpm
Compression Ratio	7:1 corrected	13:1	14:1
Lubrication System	Injected, metered	Oil mist	Injected, fixed setting
Carburetor	28mm Mikuni	32mm Amal	32mm Bing
Starting	Primary kick	Folding kick	Primary kick
Primary/Ratio	3.89 (19/74)	2.41 (29/70)	2.91 (23/67)
Gear Ratios	1st 37.04; 2nd 24.51; 3rd 17.89; 4th 14.26; 5th 12.51	1st 28.97; 2nd 20.96; 3rd 15.97; 4th 12.82; 5th 10.32; 6th 8.34	1st 30.32; 2nd 23.60; 3rd 18.01; 4th 14.93; 5th 12.43; 6th 10.94
Clutch	Wet, multi-disc	Wet, multi-disc	Wet, multi-disc
Final Drive/Ratio	3.36 (14/47)	5.09 (11/56)	3.61 (13/47)
Frame	Dual-cradle	Single down tube, chrome moly-steel	Dual-cradle, chrome moly
Trail	6.3 inches	5.59 inches	Adjustable
Suspension, Front	Telescopic	Betor telescopic, 6.53 inches	Betor telescopic, 6.53 inches
Suspension, Rear	Swing arm, four inches	Swing arm, slant-mount	Swing arm, forward-mount
Brakes, Front	SLS 5.25-in.-dia.	SLS 5.5-in.-dia.	SLS 6-in.-dia.
Brakes, Rear	SLS 5.25-in.-dia.	SLS 6.3-in.-dia.	SLS 6-in.-dia.
Tires, Front	2.75x21 Dunlop	3.00x21 Trelleborg	3.00x21 Yokohama
Tires, Rear	3.50x18 Dunlop	4.00x18 Trelleborg	4.10x18 Yokohama
Weight, Wet, Unladen	199 pounds	220 pounds	221 pounds
Fuel Capacity	1.5 U.S. gallons	Two U.S. gallons	1.9 U.S. gallons
A. Overall	A- 79	A- 83	A- 83
B. Axle to Seat	B- 33	B- 33	B- 33
C. Seat Length	C- 20	C- 23.5	C- 23.5
D. Axle to Peg	D- 31.5	D- 35	D- 35
E. Ground Clearance	E- 10	E- 10	E- 10
F. Wheelbase	F- 52	F- 56	F- 56
G. Handlebar Width	G- 34	G- 35	G- 35
H. Seat Width	H- 7	H- 6.5	H- 6.5
I. Bars to Ground	I- 42	I- 43.5	I- 43.5
J. Bars to Seat	J- 10	J- 9	J- 9
K. Seat to Peg	K- 20	K- 22	K- 22
L. Seat to Ground	L- 32	L- 34.5	L- 34.5
M. Peg Width	M- 18	M- 19	M- 19

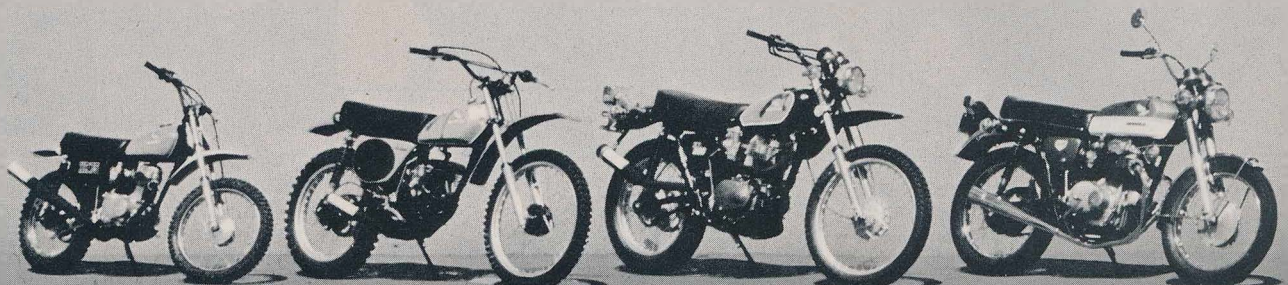
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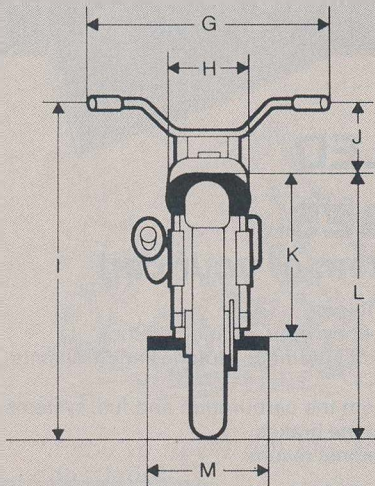
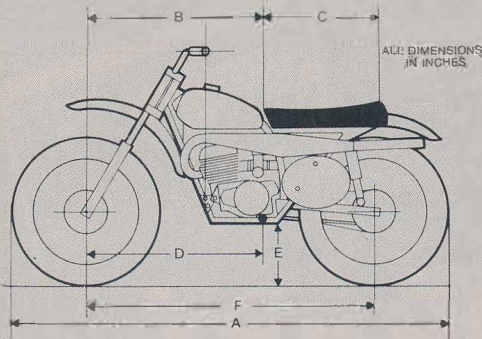
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Three Hot 175 MX Bikes



primary-drive gears are lapped to a perfect match, the clutch assembly is all aluminum alloy with six rubber bumpers to act as a shock cushion between engine and gearbox. Every piece is sized and stressed to handle the powerful 360cc motocross engine. When put to use in conjunction with a mildly tuned 175, the thing should be indestructible.

Husqvarna's 175 motocrosser is kind of a compromise motorcycle. It's built around the superb chassis that has won world motocross championships, has the wide-ratio gearset that has allowed Husky to dominate cross-country racing, and fits a very soft, easy-to-use 175cc engine for those who don't need to ride wide-open all the time.

Can-Am 175 MX2

At Bombardier MX-2 means flat-out, full-house, no-holds-barred racer. They call their motorcycles Can-Am. These are as close as you can get to the works jobs without spending triple the money, and you've got to be good to ride one. Power is strong, suspension is stiff, and handling is strictly berm-shooting and MX jumping. It's a racer's racer.

This is a very young company coming on like gangbusters. The

Canadian-based firm assembles and makes most of the bike at home, the engine is built at the Rotax factory in Austria which Bombardier also owns. Design and concept, though, is by the Canadian firm.

Frame difference between this and the MX-1 is a forward-mount rear shock. The effect is more travel; the penalty is a taller saddle height. Rear suspension is with Girling's gas/oil unit in an inverted mounting. It uses the short spring. And, like the Husky, Betor forks are fitted up front, only these have a heavier damping/spring rate than the Swedes.

The frame is a complete double cradle, fully welded; it has the longest swing arm known to man. Unique to all Can-Ams is an adjustable fork angle. Betor's forged aluminum triple clamps hold the fork tubes parallel to the head stem so alterations to the steering angle apply directly to the forks. The fork angle is adjustable in 1/2-degree increments from 25 to 21 degrees. Head angle of the frame is 28 and the bikes come shipped with the forks set at 30 degrees.

They have available three cones of different center hole offsets that allow 13 combinations. Few pure-racing types can identify with 1/2-degree variations, but they are available.

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SUZUKI CAFE PROJECT

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Mirrors "Continental Style" that solves all problems. They mount inside the end of the handlebars and can be adjusted to any desired position. One added feature is the retractable arm that can be swiveled inward for sliding through tight areas such as doorways or parked cars.

The final touch is the installation of the windscreen. Jerry makes available a variety of screens in both clear or smoke versions. We picked a smoked one as it improves the bike's appearance. The windscreen is made from acrylic and is DOT-approved. To gain this approval a smoked screen must have a 50-percent light transmission or it's illegal. So make sure when purchasing a smoked screen that the DOT is stamped on the side. Jerry mounts all his screens with nylon bolts even though they're rather expensive. Nylon bolts help cut down on vibration and can be cinched down fingertight without fear of coming loose.

All of Jerry's products are finished in factory colors using (Gelcoat) paint. Or, if you like doing your own painting, you can acquire them in plain black or white. Since our Suzuki was sort of special Jerry sent the entire package out for painting and striping to "Damon" in Fullerton, California. We wanted a black paint job that really looked black so he used a resin-base paint called "Pre-stec." Most black lacquer finishes end up with a brownish tint but Pre-stec comes out as black as night and twice as hard as lacquer. Apparently it's extremely difficult to apply correctly and Damon isn't about to let his spraying secrets out to anybody—not even Jerry. He sure has the technique down perfectly as the result was absolutely beautiful.

In the beginning we thought we'd surely trim some more weight off the bike with the addition of the glass products. Well, we did. Then again, we didn't. The glass tank and seat are, in fact, lighter than the parts they replace. However, we neglected to take into consideration the weight of the additional full fairing. The bike finally rested at a weight of 455 pounds, which is three pounds heavier than the last time we weighed it. Now we know the fairing is more than three pounds, so in fact we did end up saving weight.

We started this project intent on proving a point and we think we succeeded in doing so. The 550 is not the most powerful bike, nor is it the most popular for Cafin', yet we've turned it into a fantastic-looking machine that's really a thrill to ride. ●

THE RED-HOT 175 'CROSSERS

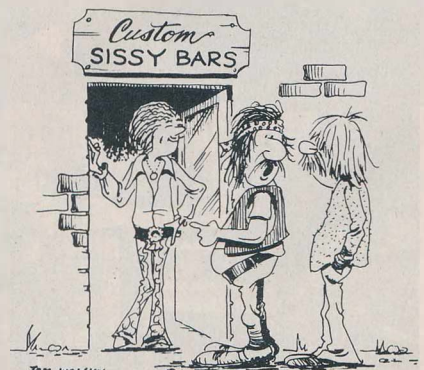
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simplified form, oval-type racing (flat-track) would require 25- to 28-degree settings. Motocross is 30 to 31 and fast road work, sporting TTs would use 28 to 30-degree fork-angle settings. Trail is altered with the fork angle and additional fine adjustment is available by simply sliding the fork legs up in the triple clamps. This adjustment does require a bit of disassembly and time as the forks have to come off to change the cones. But who else offers a custom-tuned adjustable steering head?

Another unique feature brought on by Can-Am is an oil tank in the top frame tube. The engine uses an oil injection system but feeds it at a constant rate; MX-1 and T'NT models use the Mikuni oil pump in variable flow. The oil tank holds 2.3 U.S. quarts. The fuel tank capacity is 1.9 gallons and we've seen enduro riders in need of more fuel capacity utilize the frame tube oil tank for gas and run premix.

These particular engines are 125, 175 and 250cc capacities. The smaller two use a close-ratio six-speed gearbox. MX-2s are magnesium cases with die-cast aluminum cylinders and heads, much like the Husky. Different from the Husky is all the horsepower the Can-Am gets off to the rear wheel. They have nearly the same bore/stroke measurements but the ram-inducted, disc-valve Can-Am really gets it.

The smaller jobs are using Motoplat CDI and no facilities for lights. The forged-aluminum piston is fitted with a single Dykes-pattern ring. This places the ring at the very top of the piston where it has a positive valving effect against the ports. A 32mm Bing carburetor feeds the engine and gets its air through a well-placed foam air filter. The entire motorcycle is a nearly flawless, well thought out piece of racing equipment. The kind you can go out and win races on. ●



"This is the place."