Side-by-side comparisons reveal a lot about individual bike's performances.

It's no secret that the 125cc moto-cross class is popular. The reasons are simple; initial low cost for the machinery and the built-in safety feature of less power. You can still get cross-threaded on a 125, and you can still go on your head hard, but more often that's from a judgement error on the part of the rider rather than too big a handful of throttle. What's more, 125's don't take the superman efforts required to get in the hunt with big machinery. Most of all they're fun and make for good racing.

The Honda Elsinore and Yamaha YZ are popular machines in this ever-growing class for several of the above reasons. They are not too expensive, they're readily available and they are competitively powered, good motorcycles. There are others, to be sure, but the names Honda and Yamaha and their availability make them naturals. For this reason we chose to use the both of them in a comparison test with the new Can-Am GP model, designed and built strictly for moto-cross competition in the 125 class.

Can-Am models have been getting a lot of magazine coverage over the last few months and it's all been favorable. Their initial 125/175 MX and enduro models garnered more praise from the motorcycle press than any new machine in recent memory. They are well made, handle great and run like the proverbial striped ape. They combine the performance always associated with European MXers with the features and conveniences we've come to expect from the new breed of Japanese machines. Oil injection, primary kick starting, adjustable geometry are all thrown in with the deal. You can imagine the anticipation around our office when we tore open a crate containing their first effort at a genuine, no-holds-barred limited production MX version aimed at putting anyone who owns one in the money every time out. Before we even saw the machine we knew they must be serious because they'd already given it a price tag of $1250 per copy. That's enough for an Elsinore or a YZ complete with a spare engine!

The obvious question everyone will ask once they're faced with the prospect of considering a comparatively unknown brand over two established household words is, "what do I get for all that extra money?" We put the question to Can-Am's VP, Gary Robison, and he wasn't stuck for an answer. "We built the GP model to win races. Cost considerations were secondary since if the machine wins races, as we're sure it will, everyone will want one no matter what it costs." That whetted our appetite even more, especially in view of the fact that we were going to run it side by side with machines that we knew to be capable of winning. If it could hang in there with both of them, they had a competitive machine, but not necessarily one that was worth that much money. If it could outperform them to the satisfaction of the staff, then Robison's philosophy was correct and the price wouldn't deter those hungry to win.

The little Elsinore has been with us for over a year now and we well remember how impressed we'd been during the very first ride. It's light, handles well and has perhaps the best suspension on any mass-produced off-roader. The engine is a little peaky, but once you become accustomed to using the transmission every forty feet or so it's no problem to keep the engine revs where they'll do the most good.

An easy starter, the Elsinore makes you feel at home by the time you round the second corner. The chassis is so nimble and the engine so responsive that riders unaccustomed to the instantaneous zap find themselves lofting the

CAN-AM 125GP
vs.
HONDA CR125
vs.
YAMAHA YZ125

A newcomer, a classy champion and a standard-bearer meet on the motocross course.

by Tony Murphy

front wheel at will. Providing the transmission is in the right gear the machine can be flung into a corner or banked off a berm with full confidence that there's power on tap to rocket on down to the next corner, where you can do it all over again. The only aspect that takes a little practice and pre-planning is being in the right gear. With only 125cc to work with, there's not much grunt power available, and for the first half hour or so you'll find that you don't change down enough times when entering a corner.

Long before you do get the hang of changing back at least two gears for every turn, you'll have found that the engine's not the only outstanding feature of the Elsinore. Criticism of suspension systems on Japanese machines could always be counted on for one or two paragraphs in every road test, but since the advent of the Elsinore series, both the 250 and the 125, Honda gets off the hook every time. Both wheels on both models work as well as anything we've ever ridden, and we'll challenge anybody who says otherwise. The Japanese, at least the ones working for Soichiro Honda, are light years ahead of any other production Japanese machine. If you spot a guy with Konis or Girlings on the back of his Elsinore you can be sure he's either a misguided groupie or a sales rep for accessory shocks.

Those two vital ingredients, good power and suspension, are held together (or apart, depending how you look at it) by a frame that places the weight where it should be and the forks where they have to be for good steering. It is a delightful package that is hard to criticize if your prime consideration is function. You could point your finger at the vulnerable exhaust system or the poorly placed on/off switch that occasionally gets flicked by accident, but that would be like panning the Mona Lisa because you didn't like the way it was framed.

The major reason that the Elsinore is so good is the fact that Honda designed it from the ground up as a moto-crosser, unhampered by the need to use existing components. Devoid of any need for streetable items such as lighting equipment or the conveniences of oil injection, tool kits or instruments, each component was designed to be as light as possible while still retaining function and durability. A fully-fueled weight of 192 pounds was the result. If the performance and weight wouldn't sell it, the availability and ridiculously low $749 suggested retail would; and obviously has as a stroll through the pits of any weekend event will attest.

Yamaha's YZ series has proven to be a slow starter in spite of all the pre-introduction ballyhoo. Due in part to the fact that realization never does reach the same level as anticipation, the YZ's, both the 250 and 125, didn't live up to expectations. The 125 is good in many respects and would be much more impressive if it weren't run side-by-side with a machine like the Elsinore over particular types of terrain. While the reed valve engine doesn't have the explosive, and therefore impressive, power of the Honda, its tractability makes it equally as good when the concern is getting from one corner to the next in the shortest time. As a result the gear lever doesn't have to be stirred nearly as much to keep the engine revs at a usable level.

Like the Honda, the Yamaha's engine unit is compact, designed as a 125 and free from all frills and unnecessary features. Unlike the Honda, it's fitted with a five-speed transmission, but the engine's broader power range doesn't require the addition of both the weight and expense of a sixth gear. Creature comforts are much the same, although

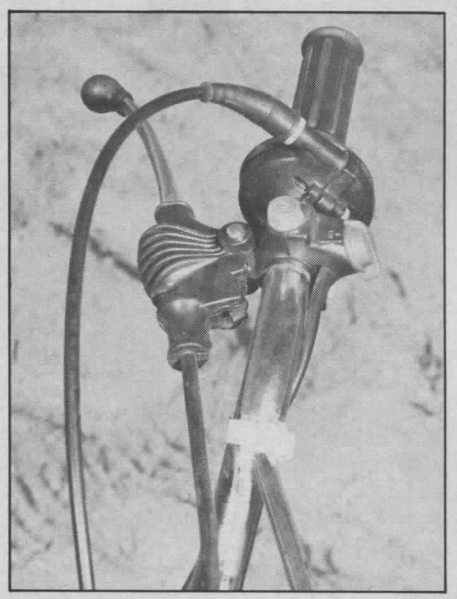
the right-side-mounted kickstart lever likes to wave in the breeze over bumpier ground and occasionally slams the rider in the back of the leg. The upswept exhaust system is well hidden and no amount of contortions can get the rider's leg close to it.

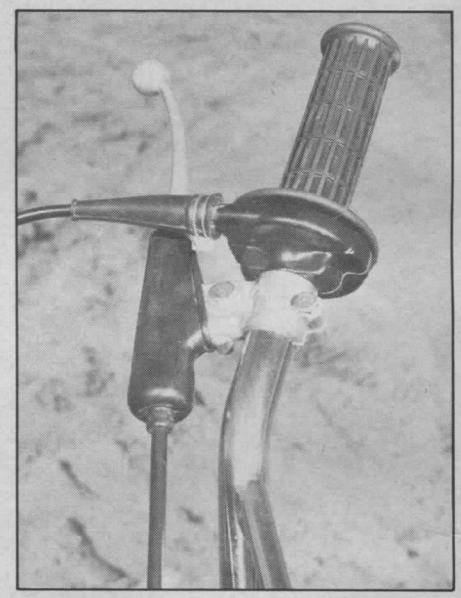
Powerplant for powerplant they're in the same league, the Honda buzzing its way around while the Yamaha can get down and grunt. In the long run that spells about equal power-to-the-ground performance. However, the YZ falls short in the chassis and suspension game, giving the Honda an advantage that's hard to overcome. Smooth corners are easy to negotiate at competitive speeds, indicating that the weight distribution and geometry are a direct result of Yamaha's serious racing efforts with top name riders, but we doubt that any of those names use the same suspension supplied with the machine we tested.

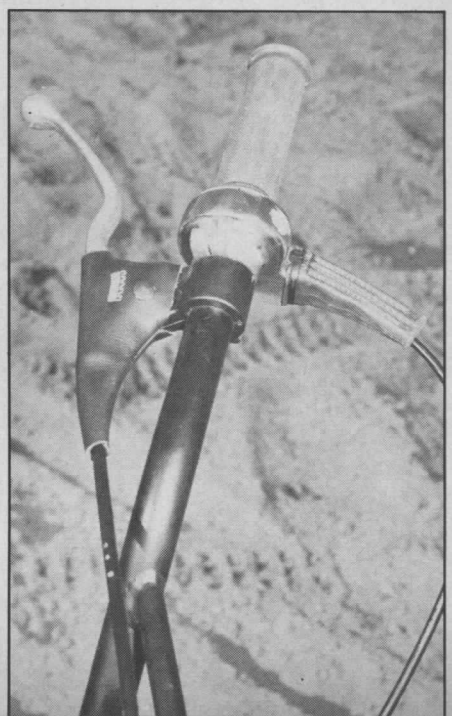
The YZ is sprung so stiffly that we seriously wondered if there had been a mistake somewhere along the assembly line. Every ripple is felt through the handlebars and more substantial jolts jar every bone in the rider's body and send the rear wheel what feels like several feet straight up in the air. Sections that are wide open on the Elsinore are lethal with the YZ, requiring the rider to pick the smoothest path rather than the fastest.

We really wished that we could have juggled spring rates and given the YZ a chance to prove its chassis was up to the standards of the engine, something that new owners will most certainly do after their first ride. But, the way we rode it is the way it comes and that's the way it has to be tested. Sadly, on the smoother portions it was delightful, surprising us in one-on-one encounters because of the deceiving way in which the engine gets the power on the ground. No fuss, no whirring or whizzing or fancy wheelies, just rheostatic acceleration that was a match for the Elsinore. If you could get the Honda off the corner straight enough to pull the trigger it might get to the next one first. But, as we all know, that's not always possible. The YZ's power makes it easier to get the gas on sooner, more often. Its smoothness and broader power range cancels most of the Honda's edge in that seat of the pants impression of more power.

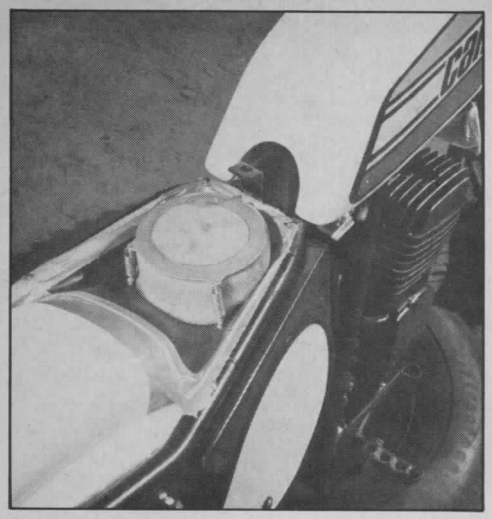
Well, what about the Can-Am? Is it as good? Is it worth all that money? Whether or not it's worth $1250 is up to the individual, but the cold hard facts are that it is just what they said it would be. It is a jet, easily outdistancing both the Honda and Yamaha in both acceleration and top speed, and possessing a chassis that allows it to do







This is where the winning decisions are made on any machine. Honda's throttle (above left) is ¼-turn with small diameter grip and panic button nearby. Yamaha (above) uses larger diameter ¼-turn grip. Both have form-fitting dust covers on brake and clutch levers. Can-Am (left) uses Magura ½-turn throttle and "dog-leg" levers. Cover is not as efficient as the other two.



Can-Am air cleaner (above) sits atop large air box. Yamaha and Honda locate theirs beneath seats. All three have easy-as-most access.

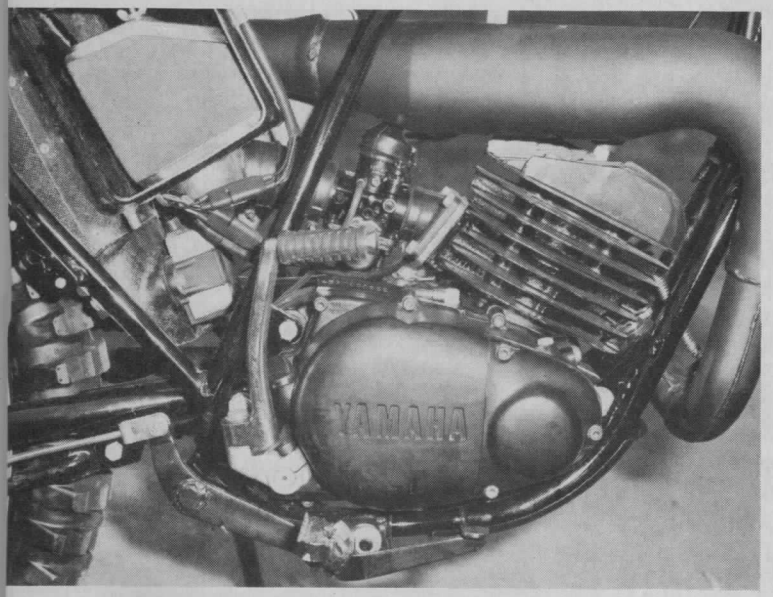
PHOTOGRAPHY BY ERIC RICKMAN & DAVE EKINS

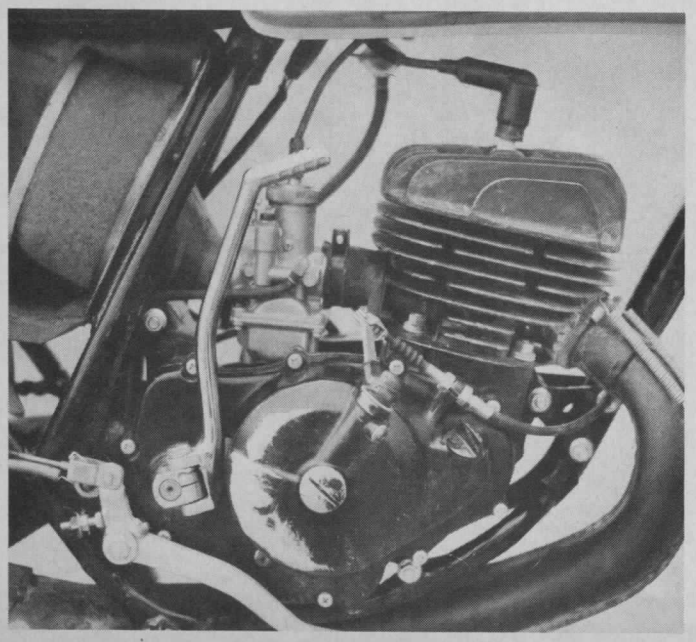
its thing over any terrain. We've never ridden a faster 125!

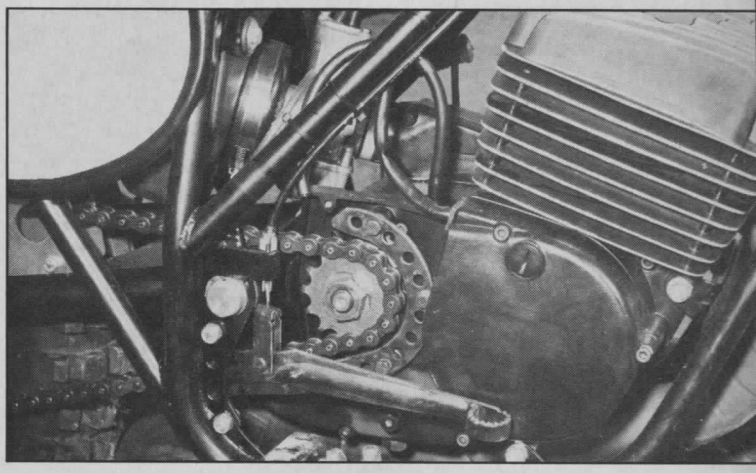
Built on a little longer (53½-inch at its shortest) wheelbase, it has a big bike feel whether just sitting on it in the pits or steering it around a race track. It's not big, it just feels bigger even though its wet weight of 197 pounds is only five pounds more than the Honda and Yamaha. This is due in part to the fact that the machine was designed to house a 175 and 250cc engine as well as the 125. Such requirements make the compactness so evident in the Honda and Yamaha almost impossible because many of the Can-Am's chassis components must serve to withstand the added power outputs of the larger displacement versions of this engine.

While the two Japanese machines achieved their light weight by basic design, the Can-Am got it down by using lighter materials than the first enduro-MX versions. The crankcases and side covers and cylinder head are cast in magnesium, but the cylinder itself is still in aluminum just like the production machines. To reduce both unsprung and total weight, magnesium hubs replace the aluminum ones on the other machines. Existing components such as the Betor forks have been lightened by removing the cast-in bosses on the sliders and liberal drilling of the fork crowns. Our test model had 35mm fork tubes, but the first batch offered for sale will be fitted with 32mm tubes, further reducing the weight by some three pounds. We're told some internal engine changes will account for another two pounds, eliminating the weight disadvantage completely.

The engine's specifications are much the same as the enduro machine, increases in power brought about by modified rotary valve and port timing and an increase in compression ratio from the stock 13:1 to 15:1. The 32mm Bing carburetor is retained as are the gear ratios of the top three gears. First,

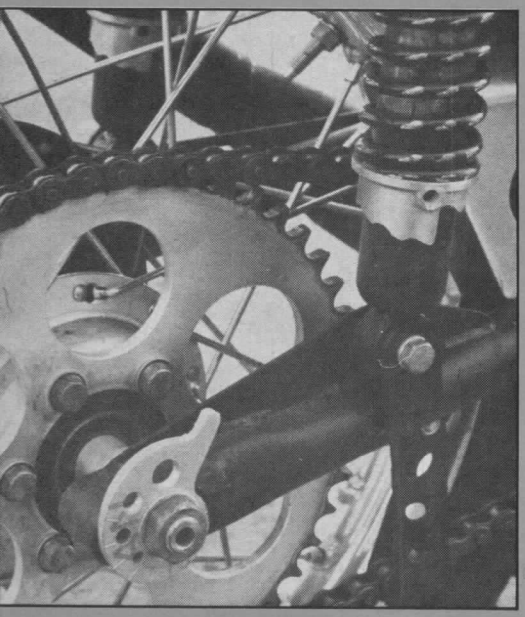


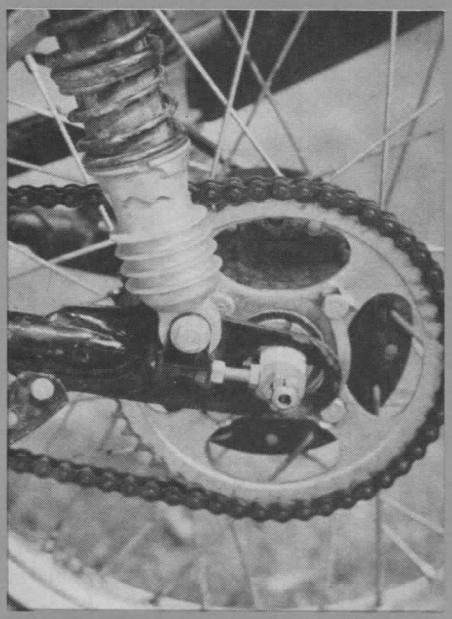




While the Can-Am's engine is physically the largest of the three, it is still very compact considering it's the basis of a 175 and 250cc as well.

125 MX'ERS

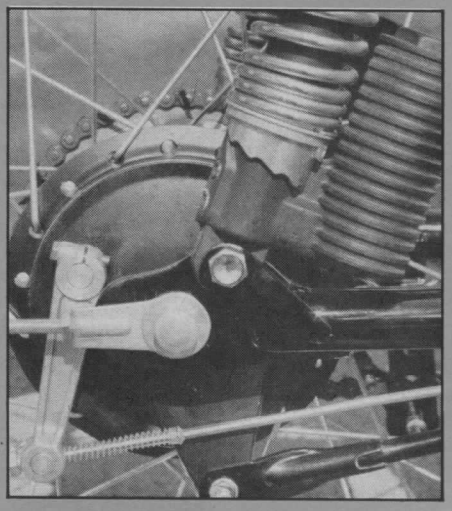


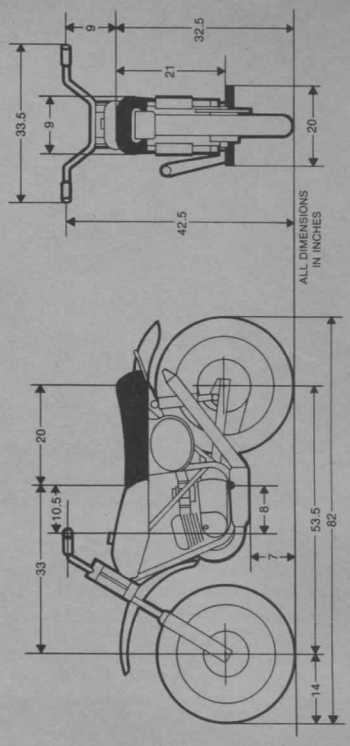


ABOVE: Forward-mounted rear shocks are the sign of an "in" moto-crosser. Can-Am is the first into production. Units are USA-made S&W's.

ABOVE RIGHT: Honda really has found the inside track when it comes to building good suspension units. Front or rear can't be faulted by anyone.

RIGHT: Yamaha's rear units might work if you could get the spring to move. Rates on both ends are far from right for a 200-pound machine.





CAN-AM 125 GP

TEST BIKE

Engine serial	none
Base price as tested	$1249

ENGINE

Type	Two-stroke rotary valve
Displacement	123.7cc
Bore x stroke	54 x 54mm
Claimed HP @ RPM	22 @ 9500
Claimed torque @ RPM	NA
Compression ratio	15:1
Lubrication system	Pre-mix
Carburetion	32mm Bing
Air filter	Foam
Ignition system	Bosch CDI
Electrical system	None
Starting	Kick
Exhaust	Downswept w/muffler

DRIVE TRAIN

Primary/ratio	3.286:1
Clutch	wet, multi-plate
Transmission/shift	6-speed left foot, down for low
Gear ratios	2.67/2.07/1.59/1.31/1.09/0.955

CHASSIS AND SUSPENSION

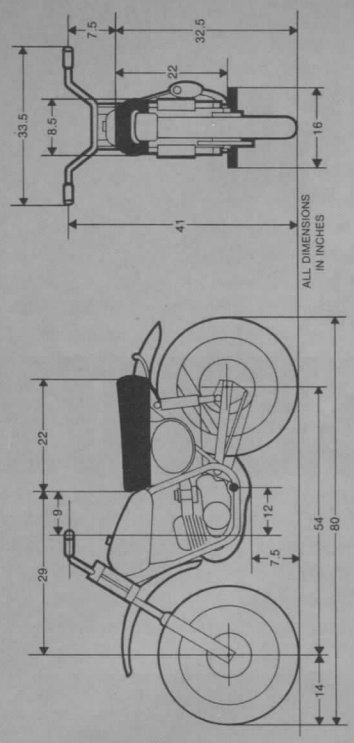
Frame	Tubular, double loop
Suspension, front	Betor, 32mm tubes
rear	S&W, adjustable
Brakes, front	Magnesium, SLS
rear	Magnesium, SLS
Tires, front	3.00 x 21 Trelleborg
rear	4.00 x 18 Trelleborg
Rim locks, front/rear	YES

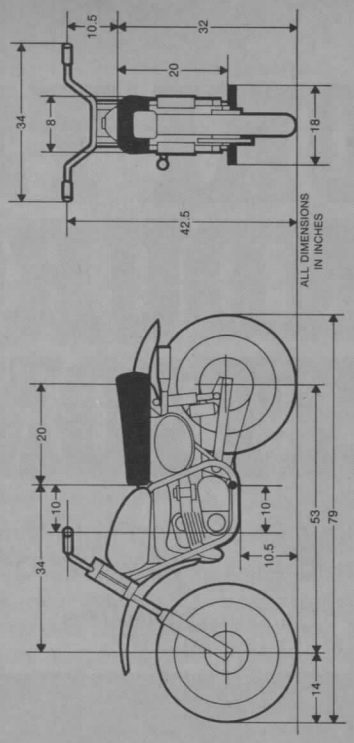
WEIGHTS AND CAPACITIES

Weight, wet, unladen	197 lbs.
Fuel capacity	2.0 gal

STANDARD EQUIPMENT

Speedometer	No
Tools	None
Stands	None
Passenger provisions	None





HONDA CR125

TEST BIKE

Engine serial	1001083
Base price as tested	$749

ENGINE

Type	Two-stroke, piston port
Displacement	123cc
Bore x stroke	56x50mm
Claimed HP @ RPM	NA
Claimed torque @ RPM	NA
Compression ratio	7.6:1
Lubrication system	Pre-mix
Carburetion	28mm Keihin
Air filter	Wet foam
Ignition system	Magneto
Electrical system	None
Starting	Kick
Exhaust	Downswept w/muffler

DRIVE TRAIN

Primary/ratio	4.00:1
Clutch	Wet, multi-plate
Transmission/shift	6-speed left foot, down for low
Gear ratios	2.13/1.61/1.30/1.09/0.958/0.880

CHASSIS AND SUSPENSION

Frame	Tubular, single downtube
Suspension, front	Telescopic
rear	5-way adjustable
Brakes, front	110mm drum
rear	120mm drum
Tires, front	2.75x21
rear	3.50x18
Rim locks, front/rear	Yes

WEIGHTS AND CAPACITIES

Weight, wet, unladen	192 lbs.
Fuel capacity	1½ gal.

STANDARD EQUIPMENT

Speedometer	No
Tools	Yes
Stands	side
Passenger provisions	None

YAMAHA YZ125

TEST BIKE

Engine serial	002588
Base price as tested	$845

ENGINE

Type	Two-stroke, reed valve
Displacement	123cc
Bore x stroke	56x50mm
Claimed HP @ RPM	23 @ 10,000
Claimed torque @ RPM	11.9 ft-lb. @ 9500
Compression ratio	8-1
Lubrication system	Pre-mix
Carburetion	28mm Mikuni
Air filter	Wet foam
Ignition system	C.D.I.
Electrical system	None
Starting	Kick
Exhaust	Upswept w/muffler

DRIVE TRAIN

Primary/ratio	3.894:1
Clutch	Wet, multi-plate
Transmission/shift	5-speed left foot, down for low
Gear ratios	2.83/2.06/1.61/1.31/1.14

CHASSIS AND SUSPENSION

Frame	Tubular, double loop
Suspension, front	Telescopic
rear	5-way adjustable
Brakes, front	110mm drum
rear	130mm drum
Tires, front	2.75x21
rear	3.50x18
Rim locks, front/rear	Yes

WEIGHTS AND CAPACITIES

Weight, wet, unladen	192 lbs.
Fuel capacity	1½ gal.

STANDARD EQUIPMENT

Speedometer	No
Tools	Yes
Stands	side
Passenger provisions	None

second and third are new ratios. Like all the Can-Am's we've ridden previously, this one starts on the first kick, idles, and could be shifted bare-footed. In fact, all the controls work as smoothly as you could possibly want. The dog-leg Magura levers are the only way to go but we'd have removed the half-turn twistgrip after just a couple of laps. In fact we eventually did, and after complaining about it to Can-Am they stated that they will probably replace it themselves. The main problem with it is the inability of the rider to get the throttle open under racing type situations. A normal person's wrist just doesn't bend far enough to go from closed to wide open in a crossed-up corner, a time at which it's difficult to release your grip and grab another handful.

Chassis changes are minimal, and are aimed at weight reduction. The engine runs on premix gas so the top tube oil tank is sealed and the necessary fittings eliminated. The Can-Ams have eccentric fork adjustment at the steering head, therefore the GP's 29½-degree fork angle is accomplished by moving the forks, not modifying the frame. The swing arm, however, has been modified, moving the lower mount for the shocks forward in keeping with the current MX trend. Write and tell us if we're wrong, but that makes the Can-Am the first production machine, limited though that production might be, to conform to the latest trend aimed at more wheel travel. In this case the axle is free to move through about 5 inches, enough to satisfy any shock mover.

Out on the race track, the only place that matters, the place where all those mouth-watering specifications are put to the test, the Can-Am has to be ridden to be believed. Its combination enduro-moto-cross heritage is nowhere in evidence. From the first corner on you know you're on a thoroughbred and the only thing that stands between you and winning races is your ability.

On the same track on the same day it was as though it was indeed a 175, or even a 250, when compared to the Honda and Yamaha. You could fluff a start and still get to the corner first. You could get into a corner a little hot, square it off and get enough of a grip on the ground that the front wheel would lift simultaneously with a slide, all with a confident feeling of complete control. Thanks to the dog-leg Maguras, our smallish hands could use the front brake with far less effort than the Elsinore's or YZ's, a problem that some will not have but one that's always plagued smaller riders.

We've already praised the Elsinore's suspension, and the Can-Am's might rival it but it is not any better. Both machines, but not the Yamaha, can attack the roughest sections with the confi-

(Story continued on page 80)

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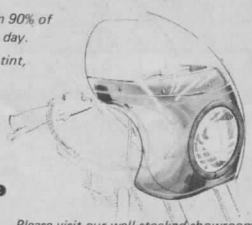

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125 MX'ERS

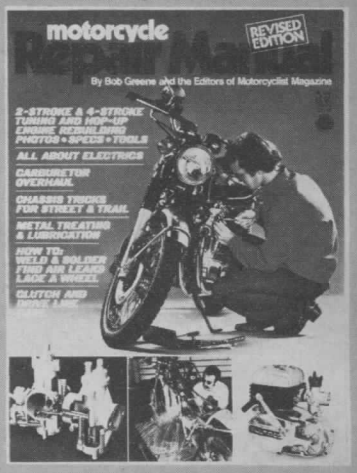
Continued from page 37

dence that machine and rider will go straight while the wheels and suspension do all the work. On par in such a situation, the rider aboard the Can-Am knew that he could get around the upcoming corner just as quick as the Elsinore with some degree of assurance that he'd easily outdrag him to the next one. After that, it was a slow motion disappearing act, grabbing a few feet here and a few more there. Soon, even the Can-Am's dust would have settled by the time the Honda and usually trailing Yamaha came by. Switch riders and it was the same story with a different hero on the Can-Am.

During our testing we even had a real life hero along just to see how the machines performed in the hands of a pro. Gary Jones had recently signed a contract to ride Can-Am 250's during the 1974 season and had more than a casual interest in how the new GP performed. Naturally he might well be accused of a slight prejudice since he's on their payroll, so we carefully screened his opinions and concentrated on watching how he went on it rather than what he thought of it. He flew, as he does on most anything, but the combination of his ability and the Can-Am's performance belied the fact that the machine was actually a 125. The most knowledgeable bystander could easily have been convinced that it was a 175 and many, no doubt, that it was a 250. Case closed.

How will the GP fare, both on the racetrack and in the marketplace? How will its existence affect the sale of Hondas and Yamahas? The answer to the former is simple. They'll sell all of the "less than a thousand" that they plan to make and most of those will find themselves at or near the front of the pack. Much still depends on who's twisting the throttle. The latter question is easier to answer. Honda and Yamaha will still sell boat loads, and the sting they'll get from the Can-Am's superiority will have them making improvements, probably by the time you read this. Of that initial batch of machines you can rest assured that at least a few of them will wind up in Japan, never to be seen again. This phenomenon called a Can-Am has come on fast and strong, offering innovations that should seemingly be coming from the larger more established companies. What'll be next? Whatever it is, we'll bet that most of their steps will be closely monitored by both the industry and the riders interested in winning. Even if it does cost $1250 to do it. •

MOTORCYCLE BROKEN?



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