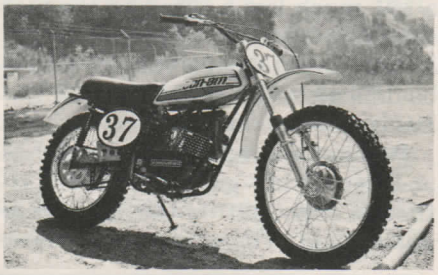
CAN-AM 125 MX-1

Overweight it is, slow it ain't

It's been an interesting year in the moto-toaster business. First off, Honda rang our collective bells by showing us that it's possible for a company with no motocross experience to step in and immediately build superior racing iron—both "works" and production models, instant motocrossers. Just pour in a giant-sized portion of technology, add money and stir. Now, Canada's Bombardier Ltd., makers of Ski-Doo snowmobiles (are you ready for *that?*), has shown that a company with no motorcycle experience at all can build an acceptable motocrosser its very first year out—and *without* having to buy the engine from Sachs. How? Combine innovative engineering ideas, top-quality accessory products, the hand of an old master and—you guessed it—money. And if the Can-Am MX-1, Bombardier's fledgling motocrosser, has a ways to go before it can be considered a top-flight racing machine, the company's initial effort and success suggest that the bike may get there very quickly.

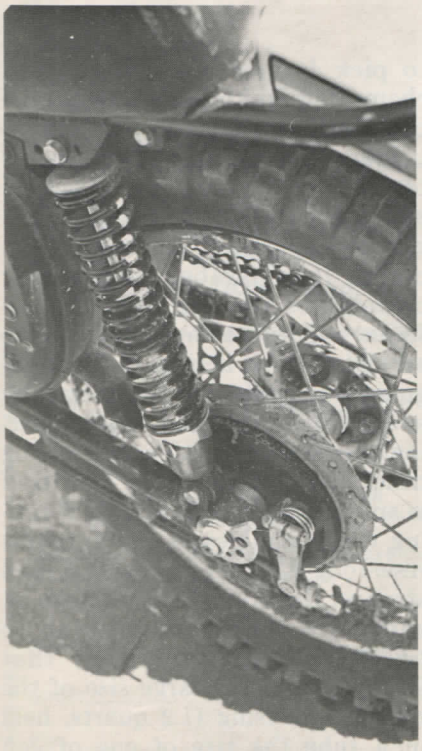


125 MX-1.

There's a good reason for the instant success of Honda and Bombardier, and it's expressed in two simple words: planning and money. Neither company has taken a haphazard approach to building race bikes, and neither has left many loose ends—a refreshing change. And when Bombardier decided, in an extravagant moment of corporate daring, to build a motorcycle that could go racing, they had the good sense to pick former world motocross champ Jeff Smith to help design the bike. It shows.

Start with the frame, one source of the Can-Am's massive strength, and at the same time one of its biggest weaknesses. It's a steel tubing, double-loop number, with strong cross-braces running from the top frame rail to the rear loops. The swingarm pivot acts as the rear engine mount, rake can be changed by as much as six degrees by readjusting the eccentrics within the steering head, and the top frame rail itself is an incredibly large chunk of tubing which doubles as the autolube reservoir. All very innovative, and stronger than dirt. It would take an endo into the Grand Canyon to tweak the thing. But all that strength, and the large size of the reservoir housing (1.2 quarts, held in a tube the size of one of Jeff Smith's arms) means weight—lots of weight. While we didn't weigh the

It's heavy, but it sticks.

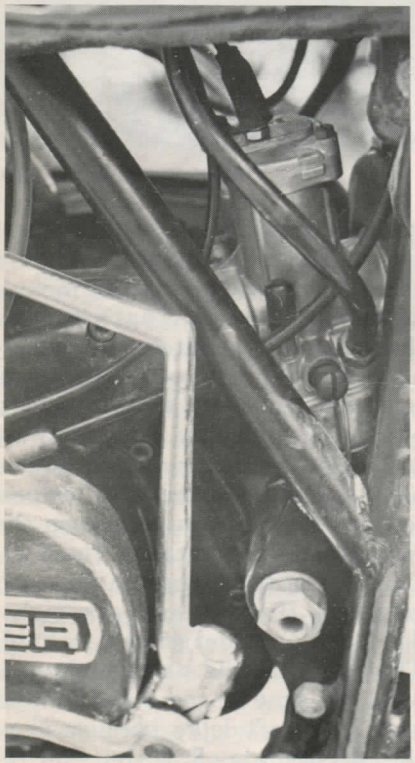


Soften the spring adjustment and pipe and shock collide. Ouch.

frame itself, the entire bike weighs in at a portly 233 pounds, heavy for a 250, much less a 125. And the fact that there's so much inherent weight in the frame means that it would be difficult to do a serious Jack LaLanne job on this baby.

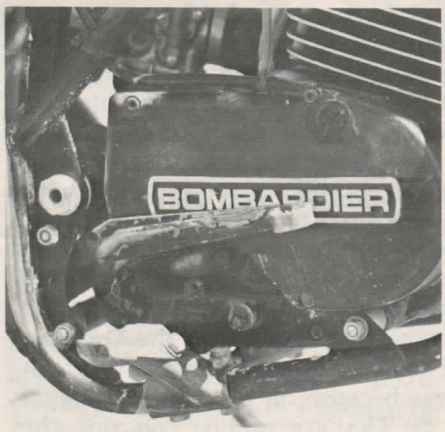
Besides its strength, the frame has another saving grace, however, although it doesn't do the 125 owner much good. There's room in there for more engine, just as there's room in the engine itself for a bunch more cc's. In fact, Can-Am's 175 MX weighs not an ounce more than the 125. If the company can follow through with this example on its already prototyped 250, maybe even drop some pounds here and there, it could make next year's 250 market interesting. Because the power package is there—almost—right now.

Sure throws a lot of dirt for a one-two-five.



With the carb placed behind *the cases, Bombardier's rotary valve is narrow enough for a MX bike.*

Can-Am has opted to go with a rotary valve engine, rather than the usual piston port. They claim that the RV delivers a broader range of torque and a smoother power curve, but we suspect that the fact that the Bombardier snowmobile engines (of which the Can-Am engine is simply a modification) are RVs had a lot to do with their decision. Whatever. In any case, Can-Am's RV



Brake lever sits way too high. A wire hook will pull it closer to toe level.

Eccentrics in the steering head allow rake to be changed by six degrees.

Well protected air box keeps those compulsive Austrian tolerances right on.

CAN-AM 125 MX-1

SUGGESTED RETAIL PRICE: $855
ENGINE TYPE, INDUCTION: Two-stroke, rotary valve
ACTUAL DISPLACEMENT: 123.7cc
BORE AND STROKE: 54mm x 54mm
COMPRESSION RATIO: 13:1
CARBURETOR: Bing, 32mm
CLAIMED HORSEPOWER/RPM: 20 @ 9500
ACTUAL HORSEPOWER/RPM (rear wheel): 19.6@ 9500
PRIMARY DRIVE: Gear
GEARBOX/SHIFTING: Six-speed, left side
GEARBOX RATIOS: 1) 3.4:1, 2) 2.31:1, 3) 1.68:1, 4) 1.31:1, 5) 1.09:1, 6) 0.96:1
AIR FILTER: Foam
ELECTRICAL: Bosch CDI
LUBRICATION: Autolube
FUEL CAPACITY: 1.9 gallons
SUSPENSION:
Front: Betor Teledraulic, 6-inch travel
Rear: Girling Hydraulic, 9-way adjustable, 3-inch travel
TIRES/RIMS:
Front: 3.00x21 Trelleborg/steel
Rear: 4.00x18 Trelleborg/steel
WHEELBASE: 54 inches
SEAT HEIGHT: 30 inches
WEIGHT: 233 pounds
Front wheel: 105 pounds/45 percent
Rear wheel: 128 pounds/55 percent
STARTING: Primary kick
COUNTRY OF MANUFACTURE: Canada
DISTRIBUTOR:
Bombardier Corp.
325 Lake Avenue South
Duluth, Minnesota 55902
COST OF REPLACEMENT PISTON AND RINGS: $18.85
COST OF REPLACEMENT LINER AND/OR CYLINDER: $22/$134.95

You're* sure *it's a 125?

seems to work quite well, and the company has overcome at least one of the traditional bugaboos of the RV setup by rigging the carb outside and to the rear of the cases, much like piston port positioning. This gives the engine a reasonably acceptable width of ten inches, narrow for an RV.

In other ways, the RV solution is an acceptable one too—you just have to get used to it. One of our testers who thinks that 125s are the best thing since long hair, initially thought the Can-Am 125 was the biggest turkey since the Gobbler That Devoured Sioux City. But that was because he was riding it like a 125. That's a no-no. You ride the Can-Am like a gutty 250, diving low into the corners, squaring off and torquing out. Try to hit the berm and scream it, and you'll probably be left behind by everything including the water truck. That's because the bike has a definitely odd powerband. It'll rev right on up the scale to about 10,500, but the power goes away *very* suddenly at a bit over 9000. One millisecond, grunt. The next, nothing. So you don't rev and scream the bike, you just keep the revs down some through the judicious use of the extra-fine six-speed gearbox. Hit the corners tight, downshift once and screw it on hard. The revs will build strong and quick until it's time to toe into the next gear. But don't delay, because when the MX-1 shuts off, it shuts off totally. It's just something you have to get used to. Ridden correctly,

there aren't many stockers around that'll beat the red, white and yellow grunter out of a corner.

We tend to believe that the reason for the Can-Am's astonishing power drop in the upper range is the very poorly designed expansion chamber/silencer. In fact, we're tempted to call it a reduction chamber. The thing was obviously designed to be super-quiet, and quiet it is. Good. But it's so restrictive that it defeats its basic purpose. There's no point in putting a super-quiet pipe on a bike if, 1) people just rip it off and buy an accessory number because the stocker's useless, or 2) people don't buy the bike at all. The Can-Am is designated the MX-1. MX means "motocross," and motocross means RACING. We're all for noise abatement, but there must be a more practical way to achieve it.

Not only is the pipe/silencer restrictive, but the silencer itself (a circular type) will be constantly banged and scraped by the shock unless it is set at its stiffest position. Turn the adjustable Girlings to a softer position, and they'll soon break the silencer off altogether. Ask us, and we'll be glad to show you our welding bill.

Yet the word is out that just taking off that silencer and replacing it with an accessory item (or with nothing at all if you're a complete idiot) actually cuts horsepower. Obviously, the solution is a totally redesigned pipe. In fact, the idea intrigues us, and we may just play with it. If there were some way to get at that extra top-end power that seems to be lurking in the Can-Am's innards, then, weight or no, you'd have a blow-mind speedster. We'll let you know if we come up with something.

Suspension-wise, the Can-Am is just OK. The Girlings at the rear work well, but are handicapped by that silencer. Nine-way adjustable effectively becomes non-adjustable. The six-inch Betors at the front are good units, but oddly enough the fork caps aren't vented. This gives the forks all the cushioning ability of a concrete pillar when you come off a high, hard one. We suspect the hand of Jeff Smith here. Smith is so damn strong he could probably ride a bike cast from a single piece of steel and not be any the worse

for wear, but we mere mortals need suspension. Come on, Jeff, have a heart. Seriously, venting the fork caps, experimenting with different weights of oil and correcting the silencer/shock problem would help the suspension a lot.

The Can-Am's hubs are conical, the brakes respectable. The front stopper works pretty well, with good feel and enough power to get you stopped fairly quickly come what may, but the rear unit is a trifle strange. It's a full floating brake, and its efficiency is proportionate to its newness. When we first rode the 125, even thinking about the brake would lock up the rear wheel, with all the dire consequences generally associated with that kind of *faux pas*. Then, after several near heart failures and assorted bruises, the brake loosened up. *Way* up. After a while, there wasn't much in the way of braking left at all. Finally, one of the springs which secure the shoes went away, freeing them to dance blithely about inside the drum. Luckily, the shoes are of very soft alloy, while the drum itself is of steel (and heavy), so when we took things apart to find out what was shakin', we found a reasonably healthy drum and a lot of alloy fragments. No sweat. New springs and shoes cost only $5.75, and it was a freak thing anyway, we assume. And it's comforting to know that if something like that does happen, you're not going to trash the entire rear hub.

Though heavy, and with a fairly long 54-inch wheelbase, the 125 does not strike you as being a big bike. The seat is only 30 inches off the track, and the center of gravity is fairly low. It's a decent, if not spectacular, handler. Get some weight off it, and it wouldn't be bad at all. However, you're likely to find yourself out of shape after touching down from a high jump simply because of the suspension problems and the sheer weight of the thing. The Can-Am doesn't really *touch* down, it *slams* down. Trying to get close-up photos of the bike as it hits is reminiscent of tap dancing in the middle of an earthquake. You get a certain amount of camera movement. When the Can-Am hits, the sound of the engine is momentarily drowned out by the anguished thud of the suspension. And the equally anguished scream of the rider. If you like to jump, bring a truss.

As was mentioned earlier, Bombardier had avoided one big error that so many other manufacturers commit with abandon, and in having done so they've made some accessory dealers very unhappy. The bike's non-proprietary items, which is a fancy way of saying the stuff that Bombardier doesn't make itself, are all top of the line. The list reads like a "How to Trick-Out the Ultimate MX" story. Bosch CDI, Bing carb, Betors and Girlings, Reynolds chain, chrome moly bars, alloy rear sprocket, Magura controls, Trelleborg tires. Can't bitch about that.

In fact, for all its obvious drawbacks, we find it hard to seriously bitch about the Can-Am. It *is* one helluva first effort. Strong, decently fast, respectably nimble and with one of the best transmissions we've ever toe-tickled through the gears. If Bombardier can just get some weight off the bike and design a reasonable pipe, it'll be a competitor. And if they can incorporate the 125's graces while solving its failings on the promised 250 MX, that could be a positive, first year winner. *