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JUNE 1980
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DIRT BIKE

KAWASAKI KDX175

1500 MILES ON A HONDA XL250

FIRST TEST: YAMAHA FIVE-STROKE TT250

SUPERCROSS: MID-BATTLE

ISSN 0364-1546

DIRT BIKE

JUNE 1980 VOLUME 10, NO. 6

TESTS

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TECHNICAL

DEPARTMENTS

ON THE COVER:—Zahrt the Dart shows the effects of watching too much winter olympics, as he gets a 9.86 in the 80-meter bike jump. Rick Sieman photo.

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MX-6
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CAN-AM 400 MX-6

ORANGE CRUSH

A Large One to Go, Please... And Make it Snappy

By The Dirt Bike Staff

Jim O'Neal helped us unload the new Can-Am from the vomit-colored Mazda/DIRT BIKE Truck, walked around the bike a few times, then made the following observation: "Well, you know for sure that it'll be fast enough."

Since O'Neal has been racing Can-Ams for a few years, his statement was a bit more qualified than that of the casual observer. The first few laps on the big orange bike proved his guesswork right. While the Can-Am *is* fast, the way it produces power is different from other Open class bikes. Consider the RM400 Suzuki. It has a broad spread of power and the throttle can be rolled on and the motor will willingly lug. Gear selection is not critical.

A big-inch Maico also gives smooth power, but there's a mid-range rush that makes the front end light in most any gear. And, the Maico will not lug right down in the lower rpm range unless the carburetion is spot-on.

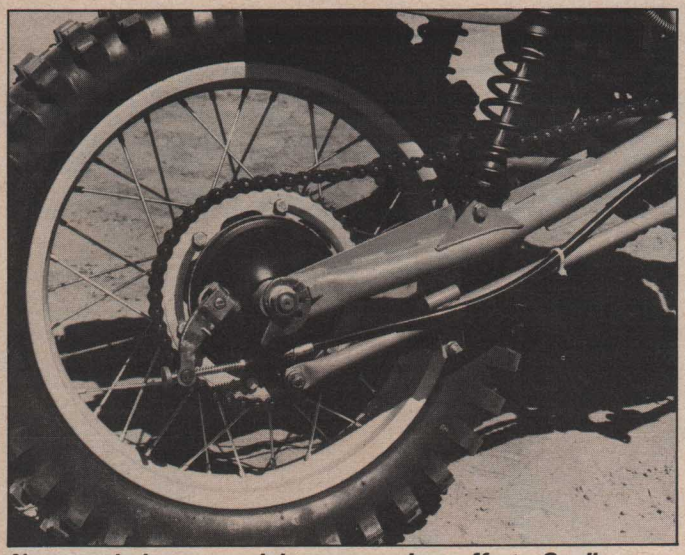
A 390 Husky is a smooth torquer that can be short-shifted and will pull amazingly tall gearing without awkward gaps between cogs. Then we get to the Can-Am 400. It pulls like a muscular 250... but not like any 250 you've ever ridden. You see, the big Can-Am revs lightly and easily, much like a clean-running 250, but, unlike a 250, they put out power everywhere in the rpm range.

This translates into a bolt of power every time the throttle is opened, rather than a mellow, smooth delivery. Oh sure, the 400 MX-6 can be shifted early and lugged a bit, but the engine is happiest when the revs are building hard and the engine is starting to sing.

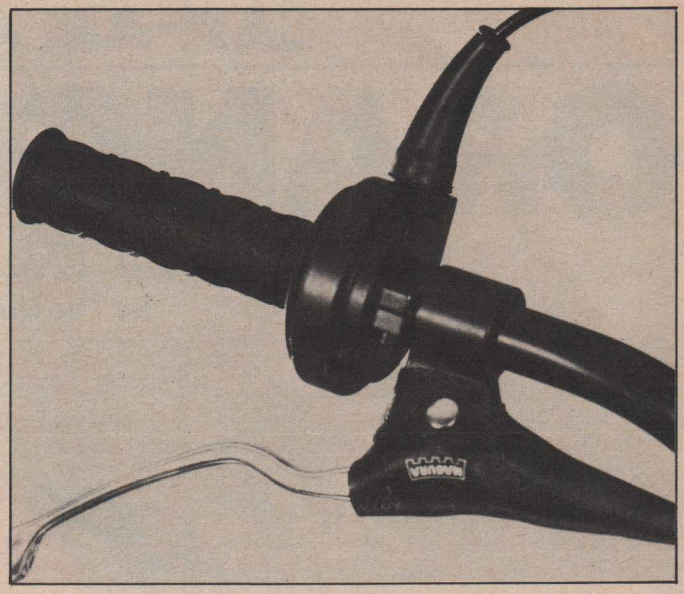
Because of the way that the power comes on, the correct gear selection is critical with the Can-Am. Pick the right gear and nothing will out-accelerate the MX-6 from corner to corner. If you happen to pick too low a gear for the situation, the Can-Am will spin the rear wheel and waggle the rear end around, resulting in a lot of rpm and inefficient acceleration. Pick a gear too high and the Can-Am will not fall on its face, but then, it won't pull as hard as it can.

In other words, the Can-Am 400 is one Open bike that works best being

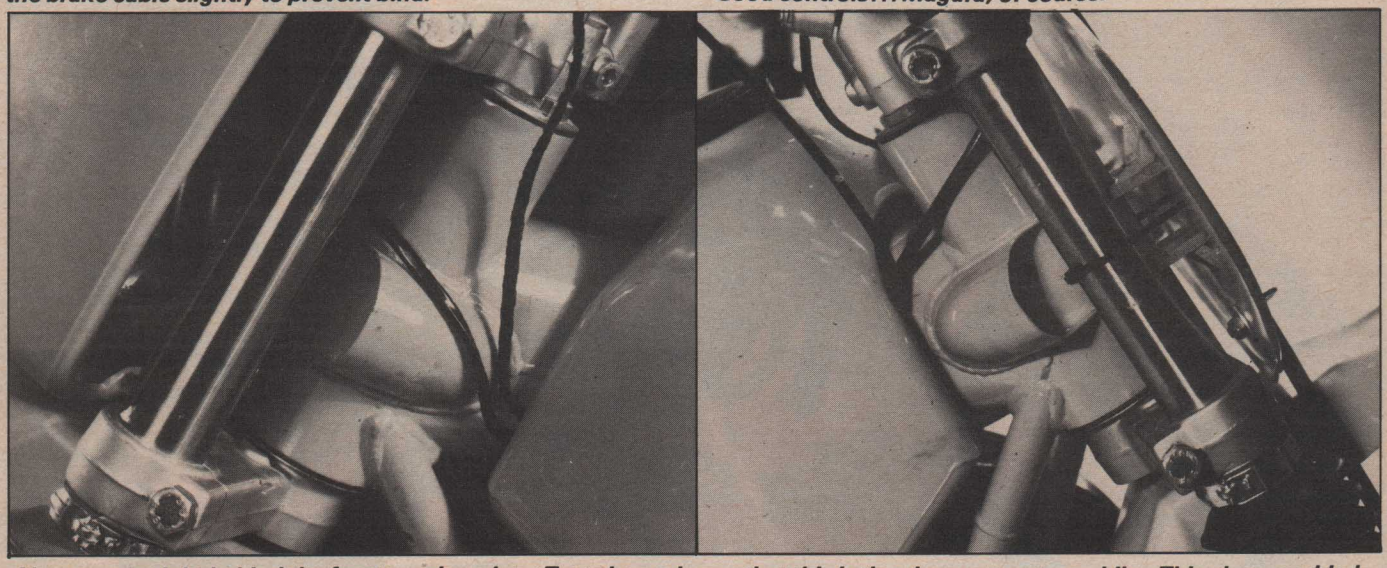
With Jim O'Neal at the grips, the Can-Am floats effortlessly back down to earth.



New rear hub saves weight over previous efforts. Snail-type chain adjuster is neat and easy to use. We rerouted the brake cable slightly to prevent bind.



Good controls... Magura, of course.



Air comes in right behind the front number plate. Tests have shown that this is the cleanest spot on a bike. This change added two horsepower to the Can-Am engine without any other modifications.

ridden like a 250, but like a very strong, forgiving 250 powerplant. Please don't think we're saying that the Can-Am 400 is no stronger than a 250. One tweak on the throttle lets you know that you're on a powerful bike. It's just that the lack of heavy vibration and the willingness of the motor to rev, give the MX-6 a feel that's not characteristic of a big-inch machine.

While it takes a bit more thought and planning to use the power on a 400 Can-Am than most other big bikes, there's a plus factor to consider. The engine does not beat you to death like other Open class hardware. With all big-bore bikes, fatigue is a real consideration. Ride a 500 class bike as hard as you can, and your arms turn to jelly and brain fade sets in rather quickly. This is one of the reasons you'll see 250 bikes turning faster lap times at most tracks than bikes in the Open class. And, carrying this through to a logical conclusion, one often sees the fastest lap times turned in the 125 class. Especially if the track is rough. Rider fatigue is a very real problem, and the problem increases almost geometrically with the amount of power the bike puts out.

First Impressions

You sort of like the 400 Can-Am immediately because of the no-hassle starting. The left-side kickstarter is short enough to reach without having to stand on a milk crate, even for riders around the five-seven level. One prod with the right foot usually gets things stirred up, hot or cold. In fact, once the bike is warmed up, it can be started easily with the rider's left foot, while seated. It's not necessary to find neutral to start the Can-Am, as a primary kickstarting system is incorporated on the bike; however, there is a fraction of clutch drag at kicking speeds that makes neutral a wiser choice.

When the fire is lit, two things are immediately apparent. One, is that the bike likes to rev quickly and easily, and secondly, there's not much exhaust noise coming from the muffler. Can-Am must surely be considered the leader in noise suppression. Why others cannot follow their suit, we don't know. But it's obvious they know how to make power without ripping the lining out of your ears.

Very little mechanical clatter comes out of the engine. In fact, our bike stayed fresh and tight-sounding for the duration of the test. With some of our test bikes, one month of hard riding demands a set of rings and performance drops appreciably. The Can-Am engine—as with all of the Can-Ams we've tested—seems to be put together well and made to last. Parts prices for an up-

per end are on the high side, with a complete piston/ring assembly going for a bit over 80 bucks, but, if your Can-Am runs like most of the ones we've had experience with, you should be able to go a full year of racing without replacing the rings.

Can-Am shares this long-lasting trait with KTM. Not too surprisingly, both engines are produced in Austria.

You Pays Your Money and You Takes Your Choice

If you decide to add the Can-Am to your garage, you have to make a decision. You can pay $2299 and get the bike with S&W shocks, or you can write the check for $2449 and get it with Ohlins shocks. Our advice would be to pop for the extra money, as the S&Ws that come on the bike are simply not up to the task of handling the power. Actually, the Ohlins are a bargain for the potential Can-Am buyer. If you run out to your friendly local smiling dealer for an over-the-counter set of the big O's, you can expect to pay right around 300 bucks. Can-Am charges you a bit over $200 for the Ohlins, which must be perilously close to their actual cost, so they are apparently sincere in their optional offer.

The only thing that bothers us is that they even offer the S&Ws at all. Why not simply offer the bike with no shocks, and reduce the price by a hundred bucks or so? Last year, the Can-Ams came with gas Girling shocks, and while these are not state of the art, they are not all that bad. Still, Jim O'Neal rode the Can-Am 400 in virtually stock condition, shocks and all, in the Viewfinders Grand Prix. The race was over 100 miles long and Jim finished in the top five in the Expert class. Stone stock. But, it was a cold and rainy day, with no heat to fade suspension components. On a hot day, we feel that the S&Ws would fade on a screen door hooked to a busy bar.

After a few test and photo sessions and the 100-mile GP, we switched to the Ohlins shocks that Can-Am also supplied with the machine. Our Ohlins came slightly oversprung for the average rider and just about right for a hard-charging Expert. Switching the springs is not all that easy, as Ohlins just does not make a lot of information available about their units, and some optional springs and parts are hard to obtain.

If you do get a bike with S&W shocks on it, it'll work best with the preload set up to the maximum. With the preload on full soft, the rear end of the

CAN-AM 400 MX-6 Specifications

NAME AND MODEL	Can-Am 400 MX-6
ENGINE TYPE	Two-stroke, reed valve
BORE AND STROKE	84 x 72mm
DISPLACEMENT	399cc
HORSEPOWER (CLAIMED BY FACTORY)	42 at 6250 rpm
CARBURETION	Mikuni VM38
FACTORY RECOMMENDED JETTING:	
MAIN JET	320
NEEDLE JET	Q-8
JET NEEDLE	6DH7-3
PILOT JET	45
SLIDE NUMBER	2.0
RECOMMENDED GASOLINE	Premium
RECOMMENDED OIL (MFR.)	Bombardier two-stroke
FUEL TANK CAPACITY	7.7 liters (2.0 gallons)
FUEL TANK MATERIAL	Plastic
GAS/OIL RATIO	20:1
LUBRICATION	Pre-mix
AIR FILTRATION	K&N filter w/foam sock
CLUTCH TYPE	Wet, multi-disc
TRANSMISSION	Five-speed, constant mesh
GEARBOX RATIOS:	
1	2.91
2	2.00
3	1.4
4	1.11
5	.913
GEARING, FRONT/REAR	14/46
IGNITION	Bosch CDI
PRIMARY KICK SYSTEM?	Yes
RECOMMENDED SPARK PLUG	Bosch W275T2
SILENCER/SPARK ARRESTOR/ QUALITY	Yes/no/moderately loud
EXHAUST SYSTEM	Up-pipe, left side
FRAME, TYPE	Double downtube
WHEELBASE	147.9 cm (58.25 inches)
GROUND CLEARANCE	32.7 cm (12.87 inches)
SEAT HEIGHT AT TANK	95.2cm (37.5 inches)
STEERING HEAD ANGLE	29 degrees
TRAIL	N/A
WEIGHT WITH ONE GALLON GAS	234 pounds
RIM MATERIAL	Sun aluminum alloy
TIRE SIZES:	
FRONT	3.00x21 Dunlop
REAR	5.00x18 Dunlop
SUSPENSION:	
FRONT, TYPE AND TRAVEL	Marzocchi forks, 11.3 inches
REAR, TYPE AND TRAVEL	S&W shocks (Ohlins shocks), 11.0 inches
INTENDED USE, MFR.	Motocross
COUNTRY OF ORIGIN	Canada
PRICE, APPROX.	$2299 ($2449 Ohlins)
PARTS PRICES, HIGH-WEAR ITEMS:	
PISTON ASSEMBLY, COMPLETE	$84.30
RINGS ONLY	$15.17, $14.64
CYLINDER—LINER	$78.27
SHIFT LEVER	$19.84
BRAKE PEDAL	$8.50
FRONT SPROCKET	$15.33
DISTRIBUTOR:	Bombardier Corp. 4505 West Superior St. Duluth, Minnesota 55806

bike can be easily pushed down to nearly half-travel by pressing the heel of your hand on the rear section of the saddle. This makes the bike steer in a fuzzy fashion. Yes, the rear end action *does* affect the way a bike turns. You let the rear end of a bike sag too much and the front-end geometry changes. Instant wash-out and pushing in the turns.

Around The Track and Such

With the Can-Am properly set up, you'll find a bike that likes to go for the inside line on most corners. The 400 MX-6 is one of the very few long-travel bikes that like to turn. We rode the bike over a variety of terrains and found that the front end stuck well, even with the marginal front tire. A 3.00x21 Dunlop Sports Senior wraps around the front Sun rim and does absolutely nothing to help with the traction in the corners. At the rear, another Dunlop is called on to do the job, but this one is a special soft-compound, hard-terrain tire made just for Can-Am as an O.E.M. item (Original Equipment Manufacturer). While it bites well, it also wears out quickly. Ours was wasted in less than 150 miles of riding.

Up front, we put a new nylon carcass Metzeler 3.00x21 tire on and were rewarded with chuckles and grins. At the rear, we experimented with a number of different tires and received satisfactory performance with one of the latest split-knob Dunlops. For a bike with the power output of the Can-Am, we heartily recommend the most massive section of rubber you can stretch over the rim. A narrow tire will just not hook up when the Can-Am starts to breathe.

With the decent tires and shocks, steering accuracy was next to incredible. Just looking at a line was enough to place the wheels in the right slot. As long as the rider kept the outside peg weighted properly, there was no tendency for the 400 MX-6 to highside, even with the power shut off in a turn. The rider did not *have* to keep the throttle on to change lines.

Over bumps, the magnesium Marzocchi forks did a good job. They're on the firm side, which is OK with us, as it lends a degree of precision to the steering. Nitpicking, we'd say that the action could be improved over the small stutter-bumps, but, all things considered, the forks pull down a solid nine on a scale of one to ten. Not bad at all.

Over really bad whoopers, the Can-Am will move around a bit from side to

side, but normally, will not get grossly out of line. When a genuinely bad whoop is hit, the bike will generally shudder and pass over it without any violent reaction. All things considered, the chassis is strong and very little flex can be detected, even under the nastiest conditions.

The rider will not have to move around all over the bike to get the Can-Am to turn. Actually, the way the machine is laid out tends to put the rider in a sort of pocket, right where the gas tank meets the saddle. Seated here, the pegs are back far enough to let the rider go to a standing position easily, without any awkward tugging on the bars. The bars on our test machine felt too high at first, but we sort of adjusted to them and forgot about the slightly high hand position.

The Can-Am is what we'd call a natural jumper. You don't have to work the bike around to get a clean launch off a jump. Just hit the clear blue sky with a small amount of throttle and the bike will assume the proper attitude. Our only complaint here was the occasional bumping of the shift lever and hitting neutral while in the air. Then, the Can-Am would land very flat and hard (as would any bike under similar circumstances), and the rider would tend to flatten his family jewels on the bright orange tank. In the case of lady riders, jewellettes would no doubt be a more accurate description. Equal rights, you know.

Things You Might Want to Know

Lots of little things have been improved on the Can-Am for 1980. A high-breather frame is now stock on the MX-ers. The air sneaks in right behind the front number plate. Research has shown that this is probably the cleanest spot on a bike at the end of a day's racing, so Can-Am draws the air in right around the steering head and sucks it through the massive top frame tube to the nicely sealed air box. A lot of foam rides on the edges of the saddle, and this helps seal things off nicely. Still, keep an eye on the foam and make sure it lines up correctly on the frame rails for proper sealing. With everything tight and right, the Can-Am is a virtual submarine. In fact, some members of the Can-Am enduro team (Tom Webb and John Martin) use the MX bike for enduro work with slight modifications to the gearing.

We found the shifting much better than the 250 MX-6 we tested about a half-year ago. Some investigation revealed that the 250 did not have the new three-dog gearbox in it. Instead, it had the older-style five-dog gears, which, while incredibly strong, were not easy to engage. Our 250 was a pre-production prototype and things like that occasionally happen early in a model run. As previously mentioned, we paid a small price for the smoother shifting, as we could knock the 400 out of gear if we happened to bump the lever while airborne. We didn't experience this with the five-dog box, but that box was not as smooth a shifter. A trade-off of sorts.

A Mikuni carb comes stock on the 400 MX-6, and we felt that it was a big improvement over the Bings of the past. Chances are that your bike will come jetted a bit rich down low. Usually, one size smaller on the pilot jet and a notch leaner on the needle will clean this up nicely. The carb is a real bear to get at, but once the Mikuni is dialed in, no further tampering should be required, unless a major altitude change is encountered.

Air forks are standard on the Can-Am, but we ran no pressure in the caps un-

til the fork springs started to sag a bit. We ran only a few psi of air to keep the forks at full extension. Also, if you want to make the action of the forks very close to perfect, send the damping rods to Works Performance Company and tell Gil you want the rods slotted. Then, the stutter-bumps will disappear completely and you'll swear by the action of the Marzocchi forks.

A new rear hub shows up on the '80 line with the brake and the sprocket on the same side. Saves a few pounds and is claimed to be stronger, too.

Bits and Pieces

There should be some heat shielding on the pipe, so say several of our test riders, who happened to cook their legs.

A folding shift lever comes stock on the bike, as it should on all bikes.

To keep the chain from causing damage in the event of derailment, a case saver is fitted to the Can-Am. Every rider we saw at the track with a new Can-Am had this little item removed. This ought to tell you something. Apparently, if the chain does come off, it can rip the bosses off the cases if the case saver is used. Hmmmm.

Oh yes... the chain. This year, the chain is wretched compared to the Regina Extra used in years past. It stretched rapidly and was nearly worn out in less than 200 miles of riding. Savvy riders are taking the poor-quality 530 chain off and replacing it with 520 chain and gearing. This means money, but it does save a few pounds, and increases the useful lifespan.

We rode our test bike with some incredibly tall gearing one time, just as an experiment. With a 16- or a 17-tooth countershaft sprocket on the bike, the top end is enough to bring tears to your eyes, even with goggles on. In fact, Can-Ams have been making impressive showings in the Baja events lately and only ending up out of the money because of minor problems. Such is Baja.

Getting to the carb takes long and skinny fingers, or an act of God. Lots of frame rails protect the carb from prying hands and encourage lack of inspection in this critical area.

A hand hold is molded in to the right side number plate. Even though this sounds like a small thing, we blessed its existence every time we had to hoist the Can-Am up on our friendly neighborhood milk crate, stolen, of course, from our friendly neighborhood milkman (milkperson?).

Grips are good. Levers are nicely contoured, but a bit long by today's standards. The throttle is not a straight-pull item, but is a high-quality Can-Am piece.

Everyone liked the plush, yet firm saddle. It won't fall apart on you with the accumulation of time.

Brakes were decent, with the rear being the stronger of the two. With use and water, the front brake decreased in stopping power. Cleaning the shoes brings everything back to normal.

The Bottom Line

Hey, how does the Can-Am stack up? After all, you've got a lot of good bikes in the Open class. Here's our verdict, in the proverbial nutshell. With the good shocks and a better front tire, the Can-Am is as good a choice as you might want to make. With the S&Ws and the stock front rubber, the bike is not worth the price. If it were us, and we were you, we'd browbeat our local dealer for a few hundred bucks off that suggested retail. Then, the Can-Am would most assuredly be worth considering. And you'd probably end up with the most trouble-free bike on the market. Reliability and razor-sharp turning. Not too shabby. □