

GIANT SHOOTOUT SPECIAL!

DIRT BIKE

JUNE 1987

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EXCLUSIVE FIRST TEST: TEAM GREEN'S AWESOME KDX250!

ENDURO COMPUTER SHOOTOUT!

125 SHOOTOUT: CR125 vs. KX125 vs. RM125 vs. YZ125!

500 SHOOTOUT: CR500 vs. KX500 vs. YZ500 vs. KTM 500!

MINI-CYCLE SHOOTOUT: CR80 vs. KX80 vs. RM80 vs. YZ80!



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HONDA CR250E, PART II

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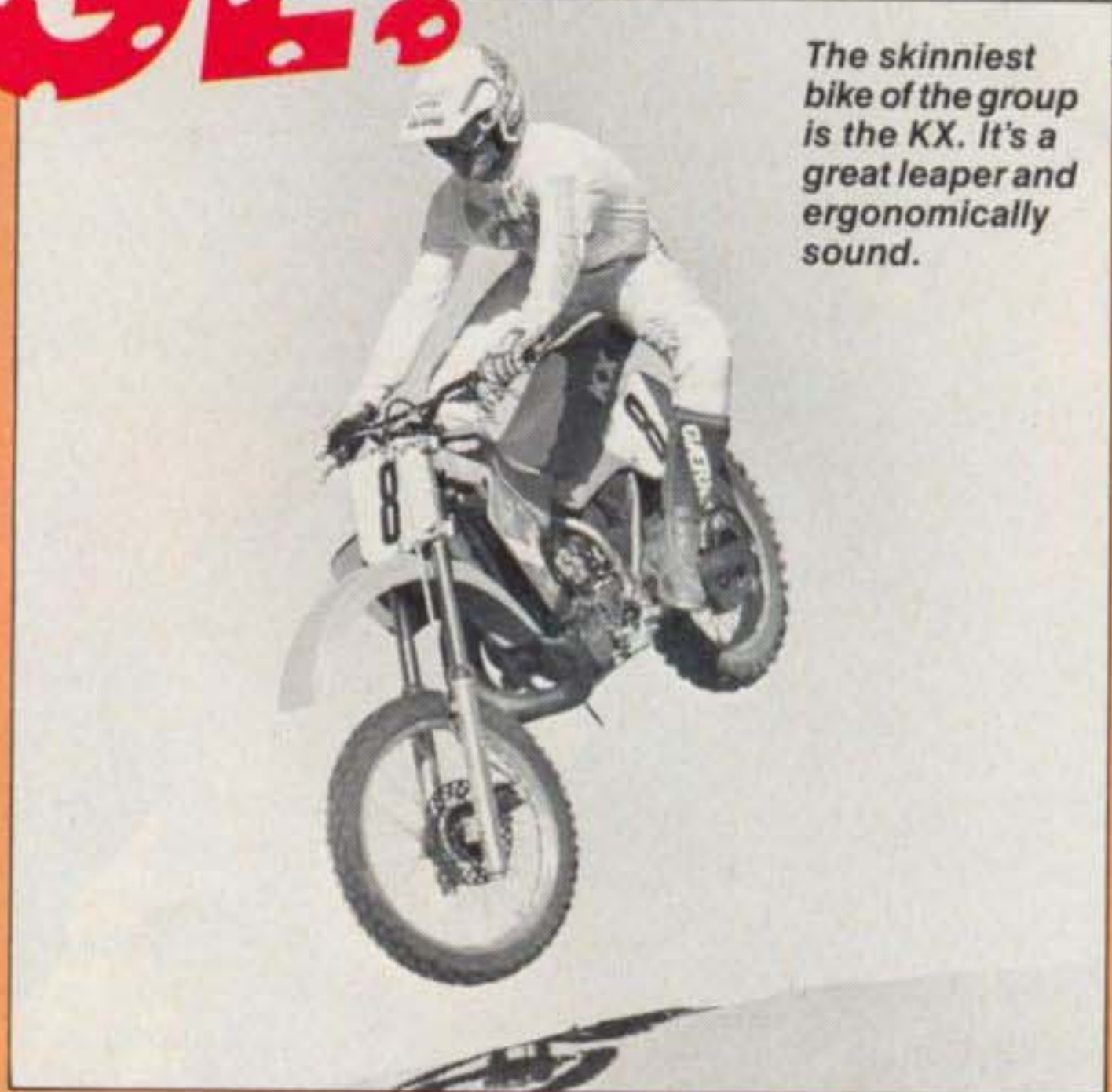
By the Staff of DIRT BIKE

RAMBO'S REVENGE!

CR500 vs. KX500 vs.
KTM 500 vs. YZ490



None of the bikes have the turning prowess of the Honda. It's a shredder.



The skinniest bike of the group is the KX. It's a great leaper and ergonomically sound.



◀ KTM fixed a too-soft saddle in mid production. Besides that glitch, our only complaints are a notchy shift and a clutch that lacks the feel of a Japanese unit.

Larry Roeseler puts the YZ through its paces. The bike is easy to move around on and corners with the best of them. ▶



Life in the *sane* lane is just a slogan for the Open class motocrosser. All the bikes are enormously sophisticated in both motor technology and chassis development. What logical person needs a 60-horsepower, 230-pound missile? We'll admit it, we do! Open bikes are the F-15s of the dirt world. They don't accelerate, they obliterate! For some unexplainable reason, riding an Open class motocross machine is like having your cake *and* eating it too.

Because we're called *Dirt Bike* and not *MX Track Bike*, we rate the Open class machines for both their motocross abilities and their versatility. Most 500s don't find

their way to the local MX track every week. In fact, you'll find a glut of them playing in the desert, hee-hawing through the woods and clawing their way up hillclimbs. They're basically the do-it-all bikes of the motocross fraternity.

There are only four bikes in our Open shootout this year—last year's winner, the Honda CR500; Kawasaki's KX500; the Yamaha YZ490; and the KTM 500. All are water-cooled, with the exception of the YZ, and all are five-speeders. You might be asking, where's the Husky 430MX? Sorry, as of this time Husky still doesn't have the production bikes in the States.

We're going to break down the shootout into a number of categories and talk about the strengths and weaknesses of the machines. The categories range from the engine's performance to the chassis, handling and suspension, and finally to reliability and glitches. Here goes...

THE MOTOR

Starting out in last place is the Yamaha YZ490. While the air-cooler is more refined than last year's blubbing giant, it vibrates like an American Motors V-8, shifts too harshly, and simply doesn't fork out enough competitive horsepower in the right areas. As far as the off-roader is concerned, the



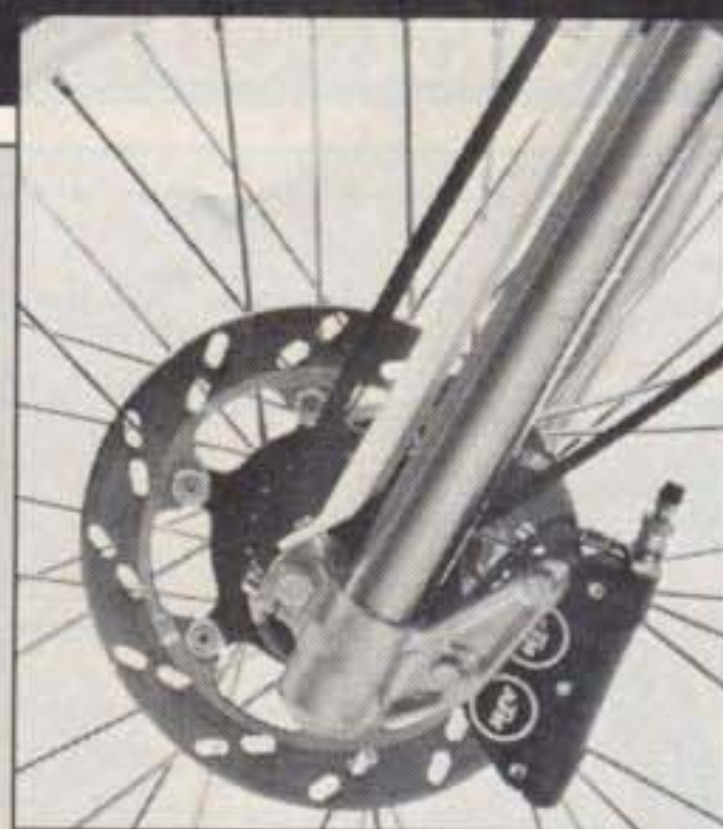
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Here's the "Jedi Master" of the fork wars. The Honda Showa telescopics are nearly perfect in damping action and spring rate, giving the racer a plush, uncompromising feel. The grade in the front brake department is an easy A.



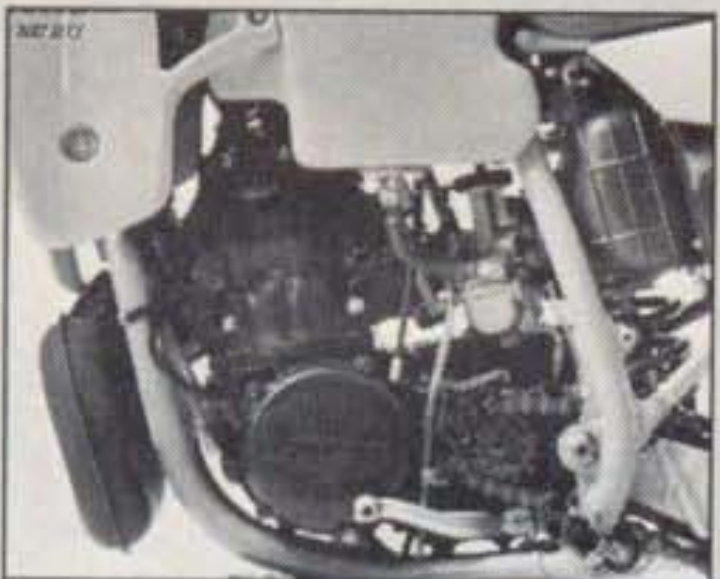
It's too bad Kawasaki fell short in the fork department, especially since it's offering a retrofit cartridge kit through the dealers. The damping action is decent, but the spring rate is too soft, and they quickly sack out. This results in a stinkbug ride that causes the front end to push. Even sprung perfectly, they can't take the big hit like the cartridge Showas. Team Green's front brake rates nearly perfect.



These are the best forks KTM has ever fit its bikes with. For the first time, the bikes come valved in the ballpark and respond with good overall damping action. They're sprung too light and have a nasty habit of pumping all the damping lube out of the rebound stroke on successive hits, but they're super strong and not flexible. The brake is the KTM's best, but a little grabby compared with the other 500s.



Yamaha pulled the boner of the year with its VD forks. The Variable Damper KYBs need help as the damping suffers from a valving mishap in the new travel control valve. The Bridgestone tire is a great hard-pack meat, and the front brake is extremely strong.



Here's the master blaster of the Open class. The Honda CR500 is soft off the bottom but shrieks like an Indy car everywhere else. The clutch is great, the tranny spot-on and it shifts precisely. They should make it more rideable with a stronger lower hit—the bike would be more versatile.



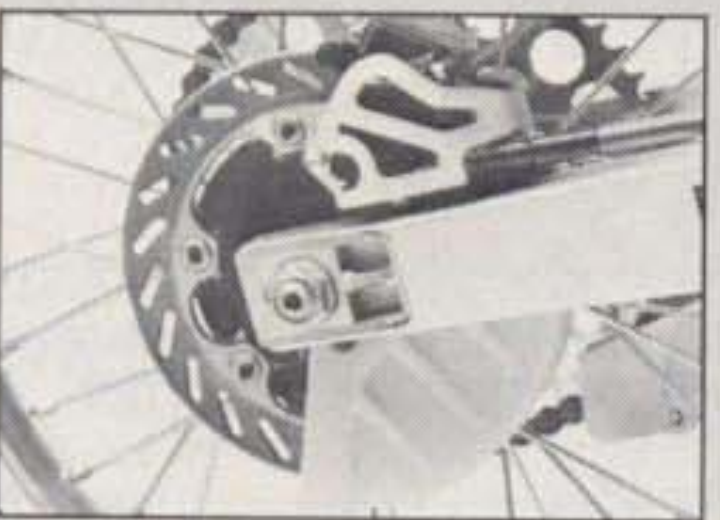
Kawasaki nailed the "right" kind of Open power with the KX500. The strong-pulling, low-end charging brute has a do-it-all engine that is a pleasure to ride. The clutch isn't great, as the handle goes away too quickly when it's abused, and the bikes run stronger with a carburetion mod. . . switch to a Keihin.



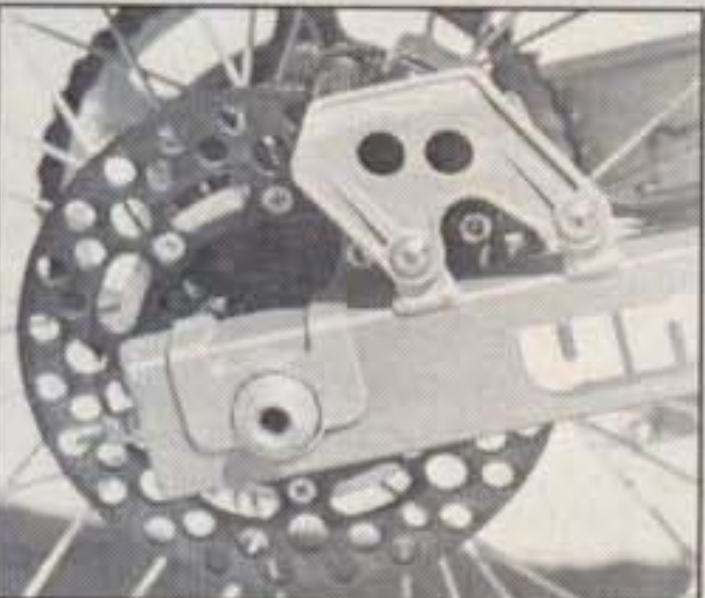
The Austrian factory smoked the competition with a superior pipe design. It tucks up much better than any of the other bikes. KTM's water-cooler pumps out loads of low- to mid-range bark, then abruptly hits the skids. We tossed on a Keihin carburetor. It helped lengthen the top-end hit, and gave it more everywhere else.



While it's popular with off-riders, the air-cooled YZ has seen better days. It's got a rideable powerband, though not electric. It still shifts too hard and is a bit throaty in the jetting department. For the MX, there's not enough "whapp" in the snap.



CR rear brake: excellent feel and strength.



KX rear brake: Magic.



KTM rear brake: strong but too grabby.



YZ rear brake: fairly strong, great over stutter bumps, but the low-hanging torque arm is a nuisance for the off-roader.

YZ is packed with smooth, almost docile power, and can be geared to the moon for some serious speed. It's a good do-it-all grunter, but not in the hunt for competitive motocross snap.

Next comes the KTM 500. It's the easiest starting Open bike of the bunch and has a rip-snorter of a powerband from zero revs into the mid-range, but most of the usable power dissipates if it's overrevved. The water-cooled KTM likes to be short-shifted and has enough grunt to ride an enduro. We swapped the Bing carburetor for a 38mm

Keihin and felt a noticeable increase in the spread of the power *and* a huge gain in gas mileage. It shifts pretty well, much better than past KTMs, and the clutch actually works but is still not in the same league as the Honda. With a usable powerband and excellent versatility, the KTM rates right up there.

Here's where things start to get sticky. Both the Honda and the Kawasaki have mind-blowing motors. The Honda is a hard starter, unless you know the routine. It shifts slicker than monkey spit and has a work-

horse of a clutch that thrives on abuse. It gets sticky in the powerband itself, though. It's too fast! Off the bottom, the Honda is a bit meek, but from there on out, it's all damnation and hellfire! Perfect carburetion and a turbo-charged powerband have this bike aimed at the pros and experienced riders. Novices should apply somewhere they don't need an oxygen mask to ride.

On the other hand, the KX500 has a smooth, broad powerband. It's also a tough starter, even with the decompression device. The R-bottomed Mikuni carburetors fairly

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A poorly valved rear shock has the Honda hammering through the stutters and flinching at higher speeds. Still, it jumps like Superman.



With the proper setup, the KX will rail the corners. It's just more sensitive to personal suspension guidelines. The General demonstrates.



Surprise, surprise! The KTM, under the tutelage of Greg Bleckman, likes to carve. Like the KX, it responds well to proper suspension setup.



Overall, the YZ is an excellent do-it-all machine. It vibrates too much and has grim forks, but it is still loved by the versatile minded.

cleanly, though it will detonate under a load, but it's easy to ride. The clutch works well, but it's a little grabby. It pulls from negative revs into a healthy upper hit and won't scare the normal human into retirement. Overall, it's got the best Open class powerband we've ridden, so the Kawasaki KX500 takes the motor honors.

HANDLING

All the machines have problems here. Handling encompasses steering, stability and suspension. At the bottom of the heap is the Yamaha, but only because it comes equipped with forks that defy logic. Somehow, the engineers figured out how to close off the TVC (Travel Control Valve) *right*

when it's supposed to open. The result is an extremely harsh set of front silverware. Out back, the BASS shock system has the freest-moving linkage of the bunch but is a bit harsh on compression. We've tried an Ohlins shock, and it's a substantial improvement over the stocker. Everywhere else the YZ is right in the hunt; it turns without too much effort, is stable at speed and fairly thin and comfortable.

The Kawasaki and KTM tie for second, barely a hair's width behind the Honda. While the KX's TVC forks do an okay job on the bumps, the springs are too soft for the majority of riders, and they still aren't close to the cartridge Showas. On the rear-

ward side, the new Lower Link Uni-Trak is excellent for most riders but a shade harsh on low-speed compression. With the proper springs and the sag set at 105mm, the KX is super stable, super thin, easy to maneuver, and turns with only a minor amount of rider input. On the KTM, both suspension ends are plush—maybe *too* plush. Most riders will need a stiffer set of springs for serious MX work. The bike turns well, is fairly stable, sits low and turns better than the KX. Give them a tie for second.

Logically, the Honda wins the handling category. It wins in spite of a rear shock that's harsh on the small bumps, yet hacks to an ugly bottoming on G-outs. There's too

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much low-speed rebound damping and not enough at high speeds, which transfers into a ride that's harsh and a front end that shakes its head too much when you chop the throttle. However, it's still the finest cornering machine of the shootout, and features,

by far, the finest forks of all the machines. Ergonomically, the Honda fits and feels perfect, and it is the easiest machine to roost around a motocross course, bar none. Of course, once the shock is revalved, it's *sayonara* time for the competition.

BRAKES

After hours of bickering, sneering, fighting and screaming among the conflicting members of the *DB* staff, we gave the Honda and Kawasaki a tie in the brakes department. Both feature double disc units that offer intense, yet progressive stopping power. Plan on spending some time getting

Honda CR500



Kawasaki KX500



KTM 500



Yamaha YZ490



	1987 HONDA CR500	1987 KAWASAKI KX500C-1	1987 KTM 500MX	1987 YAMAHA YZ490T
Engine type	Single-cylinder, liquid-cooled, 2-stroke	Single-cylinder, liquid-cooled, 2-stroke	Single-cylinder, liquid-cooled, 2-stroke	Single-cylinder, air-cooled, 2-stroke
Bore and stroke	89mm x 79mm	86mm x 86mm	89mm x 78mm	87mm x 82mm
Displacement	491.4cc	499cc	485cc	487cc
Carburetion	38mm flat-slide Keihin	38mm Mikuni	38mm Bing	40mm Mikuni
Factory recommended jetting:				
Main jet	165	360	195	470
Needle jet	N/A	R-0	6L6	Q-6
Jet needle	R137ON	6DJ6-3	282	7F10-3
Pilot jet	58	35	70	40
Slide number	N/A	3.0	160	3.0
Fuel tank capacity	7.5 L (2.0 gals.)	9.0 L (2.4 gals.)	9.0 L (2.3 gals.)	10.0 L (2.64 gals.)
Lubrication	Pre-mix	Pre-mix	Pre-mix	Pre-mix
Gearbox ratios:				
1	1.750:1	2.000:1	1.435:1	1.933:1
2	1.388:1	1.450:1	1.624:1	1.500:1
3	1.150:1	1.181:1	1.821:1	1.222:1
4	0.954:1	0.954:1	2.019:1	1.000:1
5	0.791:1	0.791:1	2.721:1	0.833:1
Gearing, front/rear	14/51	14/47	14/50	14/48
Ignition	CDI	CDI	Motoplat CDI	CDI
Recommended spark plug	NGK BR8E6	NGK B9EGV	Bosch W2CC	NGK B8EGV
Silencer/spark arrester	Yes/no	Yes/no	Yes/no	Yes/no
Wheelbase	1500mm (59.1 in.)	1500mm (59.1 in.)	1500mm (59.1 in.)	1475mm (58.1 in.)
Ground clearance	330mm (13.0 in.)	375mm (14.8 in.)	385mm (13.0 in.)	335mm (13.2 in.)
Seat height	950mm (37.4 in.)	950mm (37.0 in.)	960mm (37.4 in.)	935mm (36.8 in.)
Rake/trail	27°/114mm	28°/120mm	27°/122mm	28.5°/120mm
Claimed weight, dry	223 lbs.	220 lbs.	222 lbs.	226 lbs.
Tire size and type:				
Front	80/100-21 Bridgestone M23	Bridgestone M23	90/90-21 Dunlop	300 x 21 Bridgestone M23
Rear	110/100-18 Bridgestone M22	Bridgestone M22	130/90-18 Dunlop	110/100-18 Bridgestone M22
Suspension, type and travel:				
Front	Showa CDA, adj. comp., 305mm (12.0 in.)	KYB, with TVC, adj. comp., 300mm (11.8 in.)	White Power, adj. comp./reb., 310mm (12.2 in.)	KYB telescopic, adj. comp., 305mm (12.0 in.)
Rear	Showa Pro-Link, adj. comp./reb., 320mm (12.6 in.)	Lower Link Uni-Trak, adj. comp./reb., 330mm (13.0 in.)	Pro-Lever, White Power, comp./reb., 320mm (12.5 in.)	Monocross single shock, adj. comp./reb., 320mm (12.6 in.)
Intended use	Motocross	Motocross	Motocross	Motocross
Country of origin	Japan	Japan	Austria	Japan
Suggested retail price	\$2998	\$2949	\$3669	\$2949
Distributor/Manufacturer	American Honda Motor Corp. 100 W. Alondra Blvd. Gardena, CA 90247	Kawasaki Motor Corp. 9950 Jeronimo Rd. Irvine, CA 92718	KTM America, Inc. 315 W. Bradley El Cajon, CA 92020	Yamaha Motor Corp. 6555 Katella Ave. Cypress, CA 90630

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used to their powerful braking ability. Once you're dialed in, there's no returning to average brakes.

The YZ front stopper is much improved over last year's disc, and just a shade weaker than the CR and KX. It's a good one. In the rear, the only drum unit is a full floater that does an excellent job of keeping the rear end in line under hard braking. Our only problem is with the low-hanging torque arm that is required. It's fine for MX but can get ripped off pretty easily on rocky trail rides. The YZ gets second.

Immediately behind the Yamaha is the KTM. The dual disc system on the KTM is about 230 million times better than last year's fiasco. Their action is strong. Our only complaint is that they get grabby under abuse.

GLITCHES AND RELIABILITY

Every one of the contestants, with the exception of the KTM, suffers from an inadequate pipe design. The designs are inadequate because the pipes dent, crush and get smashed by virtue of their low-hanging header sections. The KTM, on the other hand, has a design that wraps the header around the side of the frame, keeping it up and out of harm's way.

The consensus on Yamaha's choice of handlebars was overwhelming—they're awkward, forcing your arms into a premature cramp. Although the YZ has the biggest tank of the bunch, it uses the most fuel with the monstrous 40mm Mikuni. The tank stickers do the big peel at about the two-week point, and then disintegrate. We had to richen our needle position to get rid of mid-range detonation, only to have it blubber. Overall, the YZ craves abuse and will live a long, long time.

Like the YZ, the KTM seems to hold up well under fire. We bent a shift quadrant in a crash, but that saves the shift forks from damage and a case splitting. The number-plate backgrounds are lacking, the handlebars groan and squeak under a G-out situation, and the clutch starts acting funny when it heats up. Three cheers for a virtual plethora of zerks on the linkage, and three sneers for the side panels that keep popping out of the grommets. We wish KTM would junk the Bing carbs and use something out of this century.

Kawasaki uses the most brittle plastic of the group. Rock roost will break the radiator shrouds and simple tip-overs will split the side panels. The brake pads wear too quickly, and the rear wheel is an absolute pain to reinstall. Either the pads close or the caliper floats, it's always something. Compared with the Honda, whose rear wheel can be changed in seconds, the Kawa is a joke. Plan on replacing the sprockets and chain after very little time; they're weak. We chose a SideWinder chain and a grooved sprocket, and they're still holding up. The airbox is a cinch to service and is extremely waterproof. The KIPS power-valve system

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On the inside are two carvers, the CR and KX. The outside lane is filled by the versatile YZ and the hard-hitting KTM.

never requires servicing. On one occasion, we split the cases and noticed premature wear on the shift dogs, but we've never experienced any missed shifts.

We're going to give the Honda excellent marks in reliability since we've flogged, abused, scorned, kicked and beat our machine, and it's *never* whimpered. In fact, it's been as reliable as a hammer. The brake pads last forever; nothing ever leaks; the engine is still unbelievably strong, even though we have logged well over 2000 miles. No fork seals have blown, or radiators leaked. It doesn't miss a shift or loosen a bolt. Our big snivel is the crummy seat foam that breaks down after a few rides, and a shock that fades in a long race. It seems that a lack of airflow must mean something. It is a nightmare to get the bolt on the air filter started, and you should change the fork oil every four or five rides.

MOTOCROSS

It was a close battle between the Honda and Kawasaki, but the Red Mauler gets the nod in the end. State-of-the-art forks and a more conscious attention to detail and reliability turned the tables. Had the Kawasaki come with cartridge forks, the race would have been even closer, by virtue of its incredible motor. Hovering close in third is KTM, who could have edged closer with better shifting and clutch manners. Still, it ain't giving away much. In last place rests the YZ, which simply can't overcome the grim forks, poor shifting and docile hit produced by the dated air-cooled mill.

GENERAL OFF-ROAD RIDING

In this department, the KTM and the Kawasaki tie because of excellent, easy-to-ride motors. The KTM makes a better enduro/hare scrambles scoot, while the KX rises to the top in the faster play and desert riding categories. Give the Yamaha and the Honda a tie, since the YZ will run forever and doesn't risk ripping off radiators in a crash, and the Honda has so much excess power that any trip to a hillclimb makes the bike more than worthwhile.

THE LAST PICTURE SHOW

There you have it, a rather small tribe of Open MXers that should offer the power-hungry dirt freak enough of a choice to keep his head spinning and his throttle arms pumped up to the moon. Until next year, that is. □