

BATTLE OF THE TITANS

Yamaha vs. Honda vs. Suzuki vs. Husqvarna vs. M-Star vs. KTM



All three of the European big bikes need to go on a diet. Overall, the best handling is the M-Star. Both the Husky and KTM are a little nervous on a motocross track.

The Honda, Suzuki and Yamaha are lighter than the Euro machines and are more at home on a motocross track. Of the three, the YZ has the best overall manners.

By the Staff of DB

Racing an Open class bike on the average motocross track is an exercise in futility. A pack of 250s will snap at your heels and slip under you in the tight sections. Even 125s will irritate you in practice and drive you whacko if you have to race with them. At the end of the moto, your arms will be aching, your hands numb from the vibration, and your spirit bent, if not broken.

Why, then, oh why do people ever bother racing one of these unforgiving monsters? Is it for the boost to the ego: "Yeah, I ride a big bike, buddy. None of those popcorn machines for me!"

Well, to genuinely understand a big bike, you have to race it in its element... where it's happy. Where the arm-wrenching power will be an advantage. Where you have room to let that sucker breathe in the top gears. Where the tears will be pulled out of the corners of your eyes in spite of good goggles.

Take that same 500cc bike that reduced you to dog vomit on the tight track, and get thee unto a Grand Prix. Something with a few long straights. None of this tight, pansy foo-foo bike track stuff. Nope. We want a track that has you in top gear and wishing you'd put one more tooth on the countershaft sprocket.

This is where the joy is... letting the engine wind and kick and snort. Exploring the

upper limits of never-never land. Experiencing the thrill of a power wheelie... in top gear. Now that's what Open bikes are made for!

THE FIRING LINE

Nineteen eighty-four hasn't been kind to the powerhouses of the motocross world. For some reason, their advancement is lagging behind the 250s and 125s. This year's crop of machines has seen the pendulum effect: Excellent 1983 bikes received big changes and took a step backwards, while mediocre sleds took the elevator up a flight or two.

We'll have six bikes in the shootout. They are the Honda CR500, the Yamaha YZ490, the Suzuki RM500, the M-Star 490, the KTM 495 and the Husky 500CR. Before we plunge into the shootout, we'll give you a very brief rundown on each machine.

Honda CR500R: Instead of updating its excellent 480R version, Honda chose to build a whole new motorcycle from the ground up. The 500 is bigger, heavier and faster than the older 480, sports a disc brake and exhibits inbred factory traits in the corners.

Yamaha YZ490: Yamaha's "run what you brung" theory carries over to the 490. They kept the looks very close to the '83 and opted to redistribute the weight to get handling gains. Actually, the big YZ is remarka-

bly close to what Glover rides in the outdoor series.

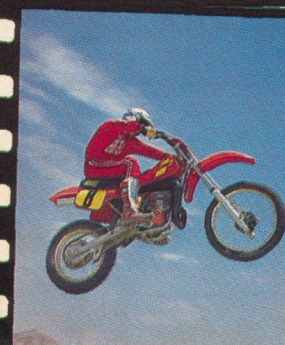
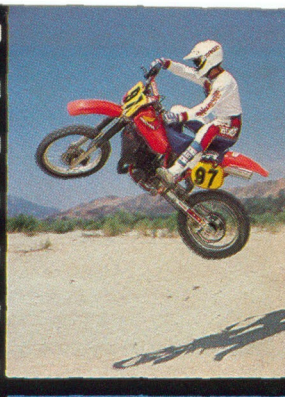
Suzuki RM500: New forks, blue boots, and surprisingly little else has been done to the RM. A few years back they punched the motor out, but it still retains the four-speed tranny, the dual airbox, and the same plastic as the '83.

M-Star 490: This baby looks remarkably similar to the deceased Maico 490. In fact, it's nearly identical! Big news comes in the five-speed trans and a rear Ohlins that hits closer to the mark. Internally, the same clutch and cylinder are activated, as are the forks (only with the Maico logo removed).

KTM 495: Energy went into the suspension department and into mellowing the power delivery of the KTM. Upside-down White Power forks are used, as well as a piggyback White Power single shock. A diet reduced the weight somewhat from the porky '83 model.

Husky 500CR: Big news comes in small packages on the Swede-mobile. A plastic low-hanger tank and an '80s-patterned rake for quicker turning mark the changes. It's the only six-speeder and dual-shocker of the bunch.

There you have it—six killers, head to head. The end results of each category will be graphed out so you can draw an easy conclusion as to the winner, and the losers.





The KTM is not really comfortable on the tight MX tracks. Tim Hanna (no relation to the Hurricane) muscled the big 495.



Once properly set up, the RM will turn with the best of them. But, take it out in a high-speed section and the head shakes so badly it's scary.



Handling the big Honda takes grit. An explosive motor rips off the bottom, and coupled with a strange mix of quick turning and a shaking head, it will take an experienced rider to handle Big Red.



PERFORMANCE

None of the six bikes in the shootout can be considered slow. They represent the blown fuelers of the motocross world, and what's important is the type of power they put out and how usable and/or rideable it is.

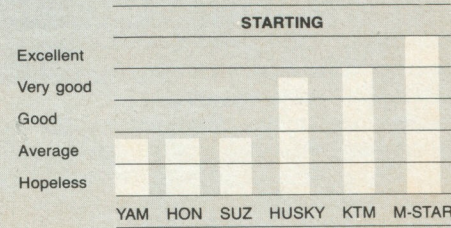
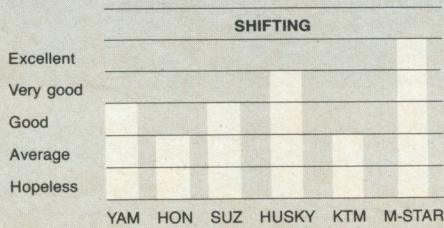
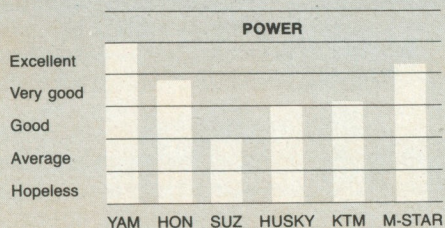
The KTM, Yamaha and Suzuki come equipped with four speeds, the Honda and M-Star with five speeds, and the Husky has a four- or six-speed transmission. For pure shifting ease, the M-Star tops the field, followed by the longer throw of the Husky. The YZ and RM are down a tad because of excess notchiness, and the KTM and Honda wallow in last for their less-than-stellar shifting performance.

Starting these beasts isn't best done in shower shoes. They require a healthy kick

with a good, strong boot on your foot. With a handlebar-mounted compression release, the M-Star is by far the easiest to fire. Next comes the KTM with a well-designed kickstart lever with which you can get the needed leverage to get a muscle boot in. Behind the KTM comes the Husky, which also has a fairly smart lever design. In last are the RM, YZ and CR. Awkward kickstarters and bizarre jetting hamper all three. Once the jetting is dialed, the YZ gets easier. The CR and RM are a hit-or-miss deal. Sometimes they fire, sometimes it's hopeless.

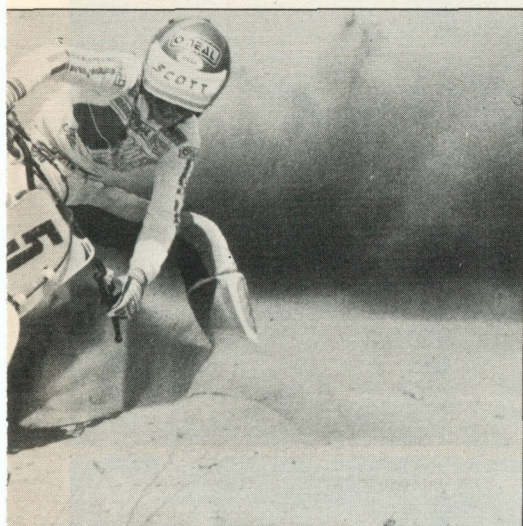
In the usable pony department, the Yamaha is the clear winner. A monstrous low end and killer mid-range are mated to a decent top end, making the YZ the king of the

power giants. Next in line comes the M-Star with its responsive low end, healthy mid hit, and the hardest and longest-revving upper hit of all the Open bikes. The Honda puts out a violent rasp that's potent and strong, but is downgraded because of the unpredictable blast that scares even the most experienced riders. To compound matters, sand riding produces a detonation that can only be fixed by reshaping the head. The KTM and Husky are tied, as both bikes have plenty of boost but vibrate like blenders and aren't too impressive in the upper-hook department. Last goes to the RM by virtue of the least power and the worst gearbox spacing. It's good for the Novice, useless for the Expert.





An aggressive stance is needed to manhandle the Husky. Stay forward and stay on the gas! ▼



Through the corners the M-Star is happy. It requires very little rider input; just point it and go.



Overall, the YZ has the best of both worlds: It turns like a mink AND is stable at speeds.

HANDLING

This department consists of two categories: turning and straight-line stability. Consider this: What good do 50 horsepower and 12 inches of travel do when the bike won't hold a line, or when it shakes its head at speed so badly that you go to bed at night with rubber sheets? It *has* to turn and it *has* to be stable. Bottom line!

TURNING

Leading in the "carve-ability" department is the Honda CR500. It tracks like magic in tight turns, soft dirt and no dirt. Even less-than-okay tires don't spoil the CR's manners through the corners. Yamaha did it's homework in the off-season and completely revamped the YZ's turning prowess. It holds a line, inside or outside,

but takes just a little more rider input than the Honda. Shadowing the YZ is the M-Star. Typical German heritage is inbred in the M-Star, and it likes to turn without much trouble.

Too much rider management is needed with the RM to get it to respond. It's not terrible, but it takes plenty of work to get through the corners at speed. Both the Husky and the KTM are marginal turners at best. The Husky simply doesn't feel at home on a motocross track, and the KTM is unfeeling through the turns. They require constant rider input and a cut-and-thrust technique that's fine for the advanced 'crosser, but it's asking too much from the masses.

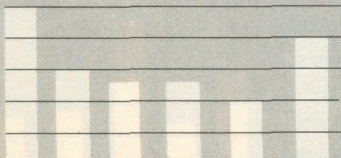
STRAIGHT-LINE STABILITY

Here's where the Jekyll and Hyde comes out. The low-rated Husky gets top billing in the stability department. You can take the Husky and go flat-out in sixth; in sand, chop the throttle and take your hands off the bars, and it will hold a straight line. With the YZ, things aren't quite as cemented, although it's close. It's stable and will not shake its head at speed. At a shade lower come the M-Star and KTM. Both bikes are comfortable in the upper gears and will not scare you coming down from speed.

In last place are the RM and CR, due to their glaring headshake of death. Both machines suffer from the DTs when the throttle is chopped.

HANDLING

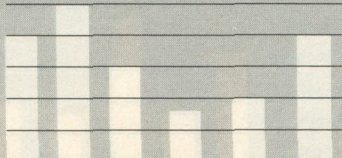
Excellent
Very good
Good
Average
Hopeless



YAM HON SUZ HUSKY KTM M-STAR

TURNING

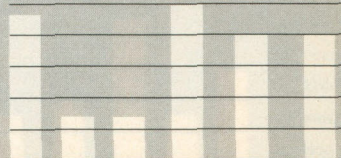
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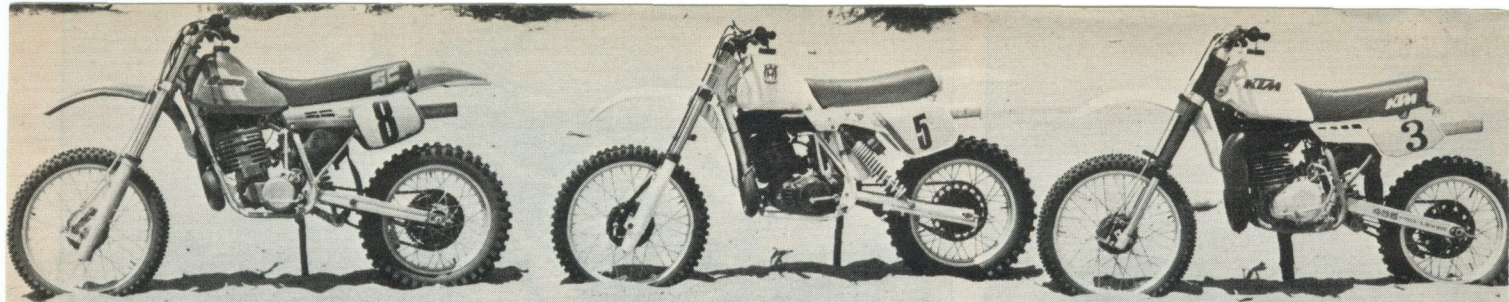
YAM HON SUZ HUSKY KTM M-STAR

STRAIGHT-LINE STABILITY

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YAM HON SUZ HUSKY KTM M-STAR



500cc SHOOTOUT

	HONDA CR500R	YAMAHA YZ490L	SUZUKI RM500E	HUSQVARNA 500CR	KTM 495MX	M-STAR 500 SUPERCROSS
Engine type	Single cylinder, air-cooled 2-stroke	Single cylinder, air-cooled 2-stroke	Single cylinder, air-cooled 2-stroke	Single cylinder, air-cooled 2-stroke	Single cylinder, air-cooled 2-stroke	Single cylinder, air-cooled 2-stroke
Bore and stroke	89mm x 97mm	87mm x 82mm	88.5mm x 80mm	86mm x 84mm	92.25mm x 74mm	86.5mm x 83mm
Displacement	491cc	487cc	492cc	488cc	495cc	488cc
Carburetion	38mm Keihin	38mm Mikuni	38mm flat-slide Mikuni	40mm Mikuni	40mm Type 55 Bing	40mm Type 54 Bing
Factory recommended jetting:						
Main jet	162	440	300	360	195	200
Needle jet	Fixed	Q-8	R4	AA5	284	280-2
Jet needle	28N	7F8-2	6FM46	79H3	6L6	4K2
Pilot jet	65	50	50	35	65	60
Slide number	3.5	2.5	2.0	2.5	160	2003
Fuel tank capacity	9.8 L (2.56 gals.)	10.7 L (2.77 gals.)	9.0 L (2.0 gals.)	12.5 L (3.3 gals.)	10.0 L (2.6 gals.)	10.1 L (2.7 gals.)
Lubrication	Pre-mix	Pre-mix	Pre-mix	Pre-mix	Pre-mix	Pre-mix
Oil capacity/gearbox	0.7 L (0.74 qt.)	0.8 L (0.85 qt.)	0.8 L (0.85 qt.)	1.4 L (1.5 qt.)	1.4 L (1.5 qt.)	0.65 L (0.68 qt.)
Transmission	5-speed	4-speed	4-speed	6-speed	4-speed	5-speed
Gearbox ratios:						
1	1.750:1	1.750:1	2.000:1	18.7:1	1.50:1	2.36:1
2	1.388:1	1.316:1	1.555:1	13.5:1	1.16:1	1.71:1
3	1.150:1	1.045:1	1.210:1	10.3:1	0.95:1	1.30:1
4	0.954:1	0.833:1	0.954:1	8.2:1	0.77:1	1.04:1
5	0.791:1			7.0:1		0.84:1
6				6.1:1		
Gearing, front/rear	14/51	14/46	14/46	12/53	13/52	14/52
Ignition	CDI	CDI	CDI	Motoplant	Motoplant	Motoplant
Recommended spark plug	Champion N-86	NGK B8EGV	NGK B8EGV	Bosch W4-C	Bosch W4-C	NGK B9ES
Silencer/spark arrester	Yes/no	Yes/no	Yes/no	Yes/no	Yes/no	Yes/no
Wheelbase	1490mm (58.7 in.)	1475mm (58.1 in.)	1475mm (58.1 in.)	1498mm (58.9 in.)	1500mm (58.3 in.)	1490mm (58.6 in.)
Ground clearance	335mm (13.2 in.)	335mm (13.2 in.)	370mm (14.6 in.)	385mm (15.2 in.)	355mm (13.6 in.)	372mm (14.6 in.)
Seat height	960mm (37.8 in.)	945mm (37.2 in.)	970mm (38.2 in.)	997mm (39.2 in.)	960mm (38.5 in.)	960mm (38.5 in.)
Rake/trail	28.5°/108mm (4.3 in.)	28.5°/120mm (4.72 in.)	29.1°/123mm (4.84 in.)	28.5°/131mm (5.2 in.)	28° (4.8 in.)	27°N/A
Wet weight, no fuel	230 lbs.	228 lbs.	237 lbs.	244 lbs.	239 lbs.	241 lbs.
Tire size and type:						
Front	3.00 x 21 Bridgestone M37	3.00 x 21 Bridgestone M37	3.00 x 21 Bridgestone M37	3.00 x 21 Trelleborg	3.00 x 21 Metzeler	3.00 x 21 Metzeler
Rear	5.10 x 18 Bridgestone M38	5.10 x 18 Bridgestone M38	5.10 x 18 Bridgestone M38	5.00 x 18 Pirelli	4.50 x 18 Metzeler	4.50 x 18 Metzeler
Suspension type and travel:						
Front	Showa, 305mm (12.0 in.)	KYB, 300mm (11.8 in.)	KYB, 300mm (11.8 in.)	Husky, 300mm (11.8 in.)	White Power, 300mm (11.8 in.)	Maico, 43mm, 310mm (12.2 in.)
Rear	Showa, 315mm (12.4 in.)	KYB Monocross 320mm (12.6 in.)	Full-Floater, 322mm (12.7 in.)	Husky ITC, 345mm (13.5 in.)	White Power, 330mm (13.0 in.)	Ohlins, 325mm (12.8 in.)
Intended use	Motocross	Motocross	Motocross	Motocross	Motocross	Motocross
Country of origin	Japan	Japan	Japan	Sweden	Austria	Germany
Retail price, approx.	\$2598	\$2599	\$2499	\$2945	\$2895	\$2795
Distributor:	Honda Motor Corp. 100 W. Alondra Blvd. Gardena, CA 90247	Yamaha Motor Corp. 6555 Katella Ave. Cypress, CA 90630	U.S. Suzuki Motor Corp. 3251 E. Imperial Hwy. Brea, CA 92621	Husqvarna Motor Corp. 4925 Mercury St. San Diego, CA 92111	KTM America 1906 Broadway Lorain, OH 44052	M-Star Motorcycles 740 E. Santa Maria St. Santa Paula, CA 93060

SUSPENSION

With the possible exception of the Suzuki, none of the bikes have what can be considered excellent suspension. They tease you, some with a dynamite set of forks and a less-than-decent rear end, or with a good-working tail section mated to a hopeless set of front boingers. The RM has what we'd call the best overall suspension package. Up front, the KYB forks are a little harsh (compared with the RM250) but on the average get the job done quite well. Rearward, the Full Floater is by far the best of the bunch. Still, the spring is too soft (although an optional heavy spring is available) and the shock wears quickly.

Less-than-thrilling forks on the YZ and an acceptable, fully adjustable Monocross rear end finish behind the RM. Like the Suzuki, the YZ demands stiffer fork springs and a heavier rear spring for most riders. Had the M-Star seen fit to equip its bike with a sound rear assembly, it would

have probably topped the RM's finish. Excellent forks are matched to a real headache in the backyard. Like the '83 Maico, the M-Star's rear tire bottoms on the fender, leaving a black patch of rubber on the fender and eventually breaking the fender off entirely. Not good.

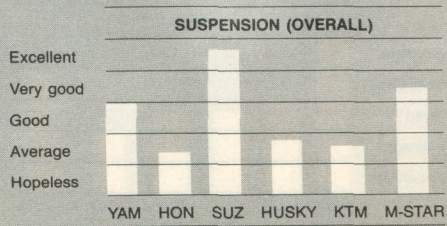
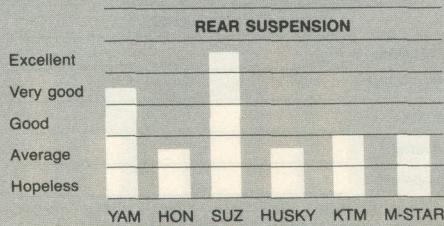
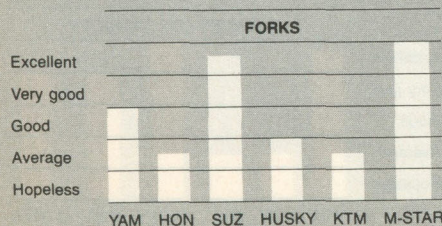
Husky's 40mm forks aren't bad but need considerable dialing in with oil levels and sometimes spring preload. Our seals wept on delivery, and Experts complained they were too mushy. The ITC dual-shock system worked fine in the desert or for trailriding, but it isn't close on a motocross track. Little or no rebound damping makes for the pogo-stick effect. This is not good and can even be painful.

Those trick White Power forks on the KTM are super adjustable, sturdy and light but come set up completely wrong. They're harsh through the first half of the travel and hurt your wrists on the ripple bumps.



The rear White Power-based unit takes the big bumps fine but needs some work on the choppy stutter-bump sections. The shock can be dialed in, but on a \$2900 dollar scooter, this shouldn't be necessary.

Right behind the KTM comes the Honda. They have yet to get the Showa forks close to workable, and the rear shock is undersprung, and fades and wears out quicker than the rear tire. A serious rider *must* invest in an Ohlins or White Power shock, as well as find a cure for the mediocre fork action.





GENERAL RIDING/TRAIL ABILITY

This is a strange category for big-bore motocrossers, but not all of these bikes see only a motocross track. A large percentage are trail ridden or desert bound, and a great many find their way into hare scrambles and enduros. Rating them meant woods testing, desert slamming and your basic weekend trail rides. A hyper, explosive, arm-ripping bomb doesn't fit the bill here; rather, a smooth, torquey, stable machine that plonks takes the top billing.

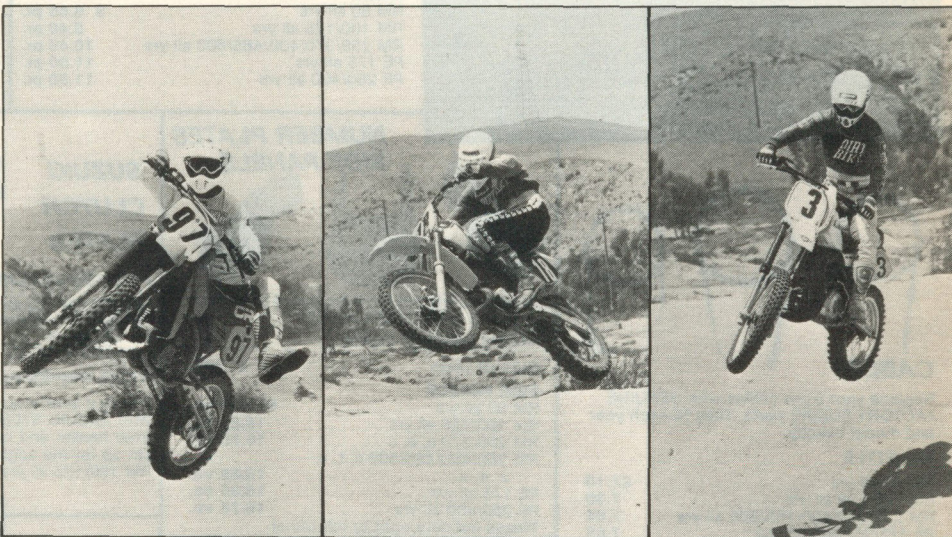
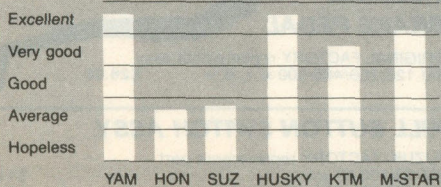
Actually, there's a tie for overall winner. The six-speed super-stable Husky and the YZ490 top the charts. Husky's 500 (with six speeds) has the most versatile engine of the bunch. First gear is low enough to trail ride, and sixth will catapult you to over 90 mph. Stable high-speed manners make it a perfect dez sled, and more than a few are ridden in hare scrambles and enduros with excellent results. The comfort of the Yamaha, coupled with a torque-o-matic engine, excellent turning and nice high-speed habits, makes it easier to ride than the Husky, but the four-speed tranny holds it back. Still, there's enough motor to get the job done quite nicely.

A five-speed trans on the M-Star is a plus, as is the nice overall performance of the engine. A skyscraper saddle height knocks it down a slot for the general riding category.

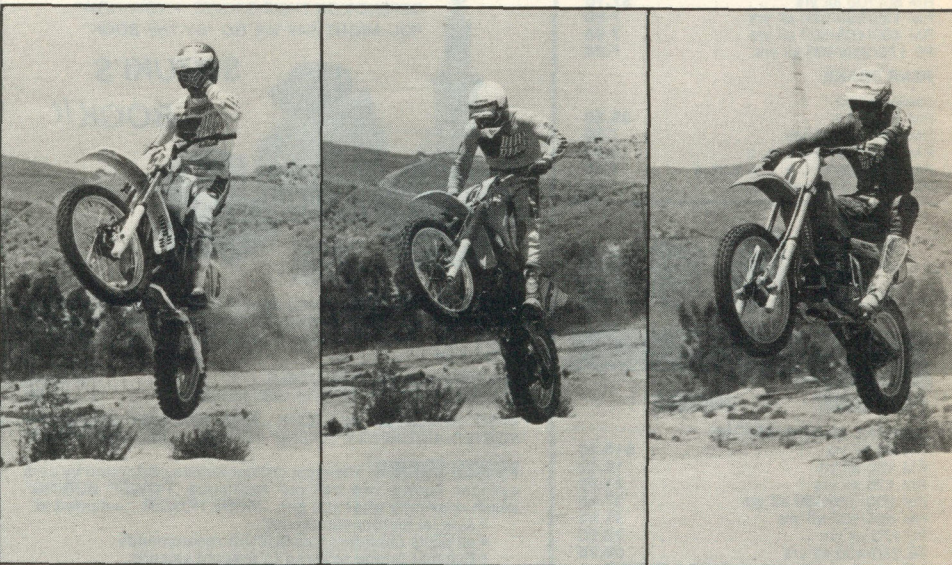
We'd consider the KTM an excellent GP bike; it can be geared to the moon and pull it easily. Slower speeds are a bit gnarly, as is the suspension, or lack of suppleness. In the woods, the 495 is a handful.

Filling out the bottom positions are the Honda and Suzuki. We give the Honda the nod simply because of the five-speed trans and the available power. It's not comfortable power, as the uneven bursts are awesome and rather frightening. Suzuki's problem goes even further, with only four speeds and not enough juice to pull down low. Trailriding the RM is an exercise in futility, the end result being a stalled engine and no play left in the clutch after a day's ride. One more gear and a pound of power is the only answer.

GENERAL RIDING/TRAIL ABILITY



Air time on the Honda showed off its quick catlike abilities. It turns, pivots and accelerates like an animal, yet lacks the suspension to make it a winner. The YZ is the lightest bike, has a strong motor and all-around good track-side habits. In the air, the YZ proved stable and easy to handle. At higher speeds, the KTM feels right at home. You can gear for monster speeds, and the engine will pull it.



Of all the bikes, the Husky is the stablest at higher speeds and makes for a great dez sled. Big-time vibration and less-than-tolerant MX suspension keep it from being a threat on a motocross course. In the power department the RM is soft. The suspension is excellent and it feels lighter than its 237 pounds. Although the German M-Star hasn't received any major updates, it's still a hot-dogger on a motocross track. Had they done something about the existing flaws in the rear suspension, it would have been tough to top.

THE FINAL COUNTDOWN—RATING THE BIG GUNS

All of these bikes were built as motocrossers and were meant to be raced as such. Here's the straight skinny on their motocrossing ability.

First place goes to the Yamaha. Good power, mated to a well-spaced four-speed

trans, gets top points in the power department. Slide that workable motor into an excellent-handling chassis and you've got a bike that does everything well.

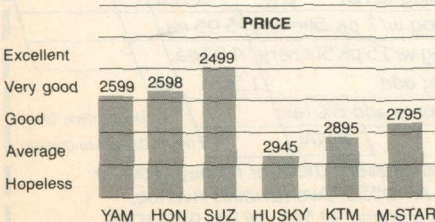
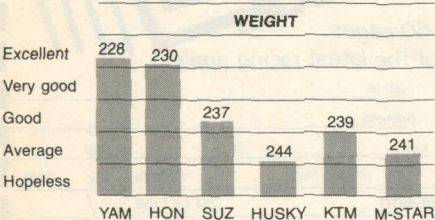
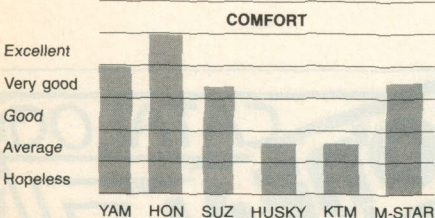
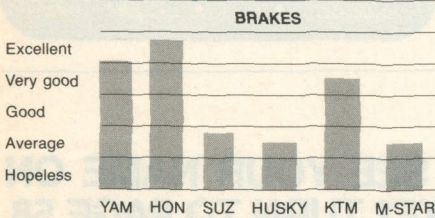
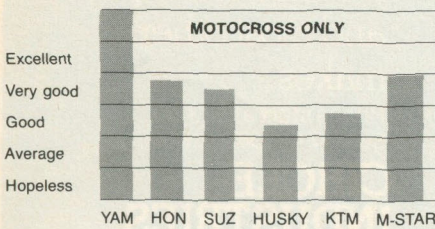
Second slot goes to the M-Star. It's sad that the Germans simply repackaged a one-year-old scooter, but even so, the M-Star is
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500 SHOOTOUT
(continued from page 49)

a threat. Great forks, a typically strong engine and hang-dog detailing were pieced to dated hardware and a not-so-swell rear end. As far as handling, the M-Star delivers on-ly smiles.

In third position is the Honda. They took a perfectly workable 480, trashed it, and brought out an entirely new bike that's not as good as the year-old model. Yet, on a motocross track the hard-hitting CR can win races.

The bottom three MX-only ratings go to the Suzuki, KTM, and Husky. With more motor and less weight, the RM could be a threat. As it is, it's a good bike for the novice rider, but completely minor league for everyone else. Both the KTM and the Husky are sluggish on a motocross track, lack the quick-handling abilities of the others, and are too tall, too long, and more at home in the open spaces. □



MISTER KNOW-IT-ALL
(continued from page 12)

arrester to fit the stock Honda silencer?
My girlfriend will be riding my ancient (1980) Kawasaki KDX175. What carburetor modifications do you recommend for it?

William A. Turner
Long Beach, MS

The so-called two head gasket cure was a fiasco. The only way to shape up the CR500 is with a Klemm modified head (See "CR500 Salvage," DB Aug. '84).

At the altitude at which you'll be riding, the stock Keihin is hopeless, because it has a fixed needle jet that cannot be replaced. You must go to an accessory carb. Answer makes a nice aluminum unit for your exhaust.

As for that rat-bag bike your girlfriend will be using: Why don't you just get her a nice new bike, cheapo?

KX KLANKING

Dear Mr. Know-It-All,

I am the proud owner of a 1984 Kawasaki 80. My question is, how can I stiffen the front forks? There is a black strip under my fender from bottoming (I weigh 127 pounds). If there is no way to do this, could you please tell me where I could get a stiffer set of forks?

Lance Keller
Denver, CO

Why you are proud of a wretched little minibike is utterly beyond me; however, it's probably all you have, so I'll help. Raise the oil level in the fork tubes to 5½ inches from the top (with the springs out and the forks collapsed) and use ten-weight oil. If this doesn't stop the bottoming, you can go to the next heavier fork spring, which should be available from your Kawasaki dealer. By the way, at 127 pounds you are too heavy to ride a KX80. Been hitting the burger stands in Denver, Porky?

IN THE BEGINNING...

Dear Mr. Know-It-All,

Today, while flipping through an older issue of *Dirt Bike*, I started to wonder, when did the first *Dirt Bike* magazine come out?

So, if you would, please answer my letter by telling me when the first issue appeared on the magazine stands and what was inside it?

Jeff Kapsalis
Shelburne, VT

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