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SPY PHOTOS: FIRST LOOK AT '83 HONDAS

DIRT BIKE

**KTM 504 EXCLUSIVE:
FIRST FULL-RACE FOUR-STROKE
REVENGE OF THE
BLACKWATER 100**

SEPTEMBER 1982
• \$1.75 UK95p



FIRST TESTS:
• '83 KTM 125
• '83 HUSKY 500CR

**HONDA CR480R:
NEW KING OF
THE OPEN CLASS**



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ISSN 0364-1546

DIRT BIKE



KTM 504 FOUR-STROKE



HUSKY 500CR



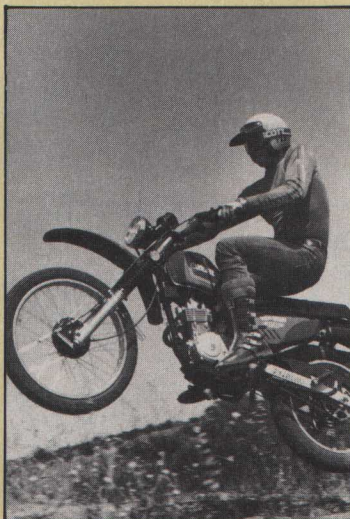
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HONDA CR480R



MAICO FOUR-STROKE



SUZUKI SP125

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ON THE COVER: *DB* test rider Steve Schmitz attempts to twist the Honda CR480 into a knot during a shooting session. He never fell while we had the cameras on him, although he's resting up and should be out within a week or two. Photo by The Hunk, separation by Valley Film.

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1983 KTM 504 — EXCLUSIVE!

THE RIGHT STUFF!

A no-holds-barred four-stroke

By the Staff of Dirt Bike

How would you like to be able to decide what goes on a production bike? Before the bike itself goes into production? What if you were given a choice of what kind of suspension to run? Here are some forks . . . pick the one you like the best. What do you think of those brakes? Stronger? Softer? Just make a decision and it sticks.

Neat dreams, huh?

Take that dream a step further. Let's say the bike is to be a four-stroke. A modern thumper with a reliable engine, wrapped in a lightweight chromoly chassis. You get to ride the pre-production bike and put in your two cents' worth.

Well, that's basically what the staff of *Dirt Bike* was able to do with the new



A sanitary Brembo disc brake is attached to the finest set of Marzocchi forks we've ever used.



Rod Bush stuffs the 504 into a Dunes berm.

KTM 504. Rod Bush met the first KTM in the States at the port of Los Angeles and hand-carried it through customs. After setting up and checking out the bike, he met us at the famed and well-lit *DB* garages, and under the glare of a 25-watt anti-bug light bulb, we examined the newest wonder from Austria.

As was expected, the powerplant in this latest four-stroke is a Rotax engine, similar to the one in the Can-Am Sonic. The Sonic has 494cc's of displacement, while the KTM has 504cc's. Rather than getting out the boring bar, KTM got the increase in size by altering the stroke. This means that, should the rider choose to do so, he could vastly increase the displacement of the KTM. The mind reels when considering this!

Other than a 0.6mm difference in stroke, the two motors are almost identical. Obvious external differences are the exhaust systems and choice of carbs (Mikuni for the Can-Am and Bing for the KTM). Internally, the engine design is the same. Gearbox ratios are identical, as are all mechanical bits and pieces, except for the lack of counterbalancing system in the KTM. One odd note: The Can-Am runs a 15/48 countershaft/rear sprocket combination. The KTM runs 17/52. Optional gearing on the KTM includes a 15 and a 19 countershaft. The 15 is virtually unusable; low gear with the 17-tooth item will take the rider anywhere. The 19 might be worth considering, as the engine is strong enough to pull taller gearing without breathing hard.

1983 KTM 504

504 vs. 494: WHAT'S THE DIFFERENCE?

Actually, when you take the Can-Am and the KTM and run them side by side through the gears, the difference in power is not great. The KTM is a bit faster, mostly because it doesn't have a counterbalancer and revs out quicker. As of this writing, we know the KTM will come with a counterbalancer. The balancer makes for a smoother power delivery and less vibration, but the reduction in weight makes for a much quicker response. From corner to corner, the KTM will eat up any other stock four-stroke around . . . and most of the modified ones, too.

A trailrider will prefer the kind of power the Can-Am delivers, while the more aggressive rider will like the snappier punch of the KTM. (You might wonder just why the KTM does not come with a full race engine. It's simply a matter of cost and marketing hassles.)

The KTM will come in two versions for the States. One will have lights and shorter suspension and the other will be stripped and have the longer legs you see here. Eastern riders have demanded bikes with lower saddle heights for their deep woods riding needs. Western riders, with their wide-open spaces and higher speeds, *must* have long travel. The more the better. Also, it's logistically difficult to market two variations of the same engine.

This makes sense when you think about it. Consider for a moment the cost behind building a serious four-stroke. You can plan on dumping a good five grand into any worthwhile project. Of this total amount, only a few hundred is spent on hopping up the engine. Most of the money goes for a high-zoot chassis and suspension components. With the KTM, you already have the important goodies. It's up to you if you want a fire-breather

engine. And, no doubt, before this ink is dry, people like the White Bros. and HPF will have whipsong motors out and running.

CHOICES

First Rod gave us the KTM with the "short" suspension on it. Forks were standard 40mm Marzocchi units with 10½ inches of travel. The chores at the rear end were handled by a White Power shock having slightly under 11 inches of travel.

While the bike handled well, there was a certain amount of harshness felt when landing from sky-shot jumps and when pounding into bumpy corners. On smooth turns, the bike could be pitched sideways like a flattacker. Very impressive.

Still, we wanted more. Rod dug into his giant box of goodies and proceeded to spend the better part of a day switching forks and shocks. What we ended up with, we feel, was the optimum all-around suspension for the 504.

A brand-new, never-before-released pair of Marzocchi forks was installed, giving just under 12 inches of travel. These aluminum-legged, 42mm units were by far the best Zokes we have ever tested. Their action was comparable to a set of 43mm Yamaha forks, with an even more supple action over the stutter bumps. Truly an amazing set of boingers!

At the rear we settled on a Fox Twin Clicker. This unit, 5mm longer than the White Power shock, gave us a superb ride under all conditions. We've said it before . . . if you can't get a Fox Twin Clicker to work, then you're doing something wrong and shouldn't be allowed to handle anything sharper than a Twinky. Travel on the rear now matched the front: 300mm, or 11.81 inches. Enough.

With the new legs, front and rear, we took the Katoom out and worked it until the oil was frothing. And, we're happy to report, it was a thoroughly splendid bike! With those new Zokes up front and the

Fox at the rear, the bike was balanced, plush and taut enough to hit any bump on the track at full-tilt racing speeds. In fact, Rod Bush put in some laps on the track and caught and *passed* one of the hot local 250 pros on a 250 YZ. Smoked him, he did!

WHAT YOU GET FOR WHAT YOU PAY

You get a whole lot more than just a Rotax engine strapped into a trick frame. You get a complete, polished package. Everything fits and looks right. The Katoom 504 looks like . . . well, a KTM. It has the stark white plastic and the red/orange frame that makes the KTMs stand out like a signal flare in a sea of yellow machines.

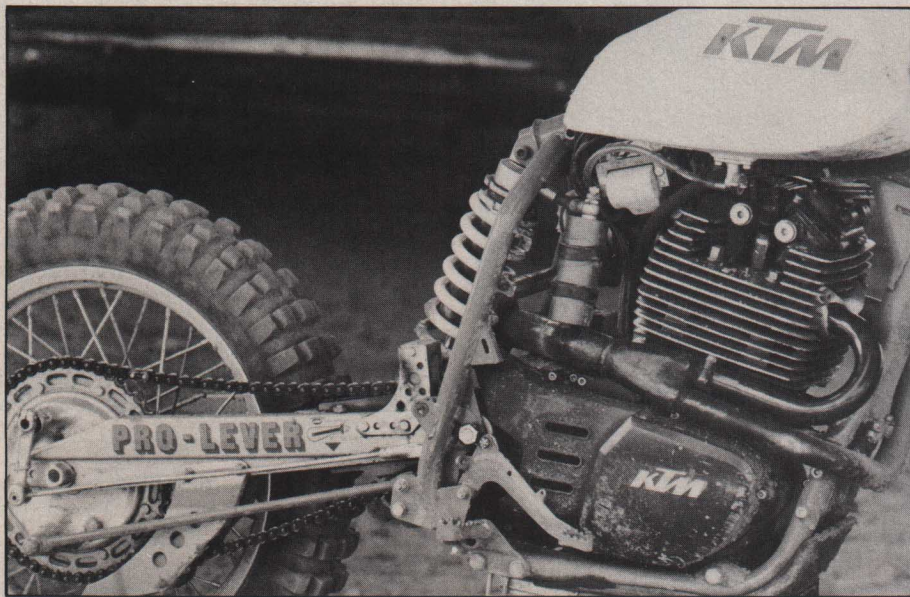
Wonder of wonders, up front between the fork legs is a disc brake! And it's a phenomenal stopper, too. The tidy Brembo unit is hydraulically actuated and has a smooth, sure feel to it.

All of the plastic is straight off the MXers, with the appropriate slim contours. One thing that *is not* off the MXers is the saddle. Unlike the rock-hard seat of a typical KTM, the perch on the 504 is just about perfect: slightly firm, yet comfortable.

Fenders and side panels are all slick and contribute much to the handsome looks of the machine. Frame tubing is something called "chromoly 25." Bush was very vague about this, but emphatically stated that the steel was tougher than kryptonite and lighter than a bagful of moonbeams.

Nicely shaped bars make for a comfortable feel; the area at the knees is slim and trim, letting the rider move around the KTM easily. Just about the only thing that sticks out a bit is the shift lever, which can be nudged out of gear, without realizing it, by the inside of your boot.

The 504 is a handsome bike and makes every other stock four-stroke on the market look as if they were designed by a



Like other KTMs, the entire rear subsection of the 504 can be removed for servicing.



With smooth power and a great chassis, the 504 was a confidence-inspiring slider.

Low-end power is good. Change that to *impressive*. It pulls harder and earlier than any other production four-stroke. It also has more mid-range and revs out further. There you have it . . . across the board, more of everything, everywhere. In stock trim, the KTM 504 runs about as strong as an XR500 with an accessory pipe and carb. It won't pull a 250 MXer through the gears but will almost stay right on its tail. And, on a hard-packed, no-traction course, the 504 will give a good two-stroke fits.

ODDS AND ENDS

You'll find the wheelbase on the KTM is about a half inch shorter than that of the Sonic. You'll also find that the Katoom weighs about 20 pounds less than anything in its class. The incredibly accurate *DB* scales (accurate to plus or minus .000000082 ferts per snert) show that the KTM weighs 270.4 pounds, full of oil, no gas. A \$5000 special can be made to weigh in at 250 or so. Ten pounds could be removed from the KTM without too much trouble, so you can see that the factory put a lot of effort into this bike.

A steering-head angle of 27.5 degrees makes for sharp turning. You can feel some of the "high up" weight when stuffing the bike into a tight turn, but you soon get used to this and learn to ignore it. Amazingly, at high speeds in the whoops, the Katoom tracks as straight as the proverbial bullet. Just gas it and hang on; the bike seems to steer itself. We feel that with a kick-butt motor, the KTM just

might be a super Baja and cross-country bike.

For those who care, the actual *dry* weight of the KTM (no gas or oil) is 260.5 pounds, only 14.5 pounds more than the 495 KTM two-stroke.

A very quiet silencer exits the left side of the frame. The final pipe section leading up to the silencer appears to be an afterthought—the tubing is not very smooth and changes sizes as easily as a bending soda straw. The aftermarket people will have a field day.

K&N supplies one of its excellent fabric filters and, unlike the Sonic, this one is easy to get to. A splash shield rides over the top of the airbox to keep water out. On the right side of the airbox is a molded-in space for tools and a battery, for a future street-legal version.

poodle. It is the way a real motorcycle *should* look. Not weird and bulbous, but sleek and taut . . . purposeful. A complete, together package.

HOW'S IT RUN?

Like we said, a bit stronger and peppier than a Can-Am. If you haven't had a chance to sling a leg over a Can-Am, perhaps you can't relate to this. Through the gears, the KTM will pull a Honda XR500 by a half-dozen lengths, with complete ease. Only the Sonic and the Yamaha XT550 will stay close to the KTM. (See *Dirt Bike's Super Summer Shootout Special* for a full-blown four-stroke shootout.)

We found that the KTM would not start as easily as the Sonic. Our thoughts are that the Bing carb has a pilot circuit that's inferior to the one on the Mikuni. In fact, if we owned the KTM (a distinct possibility!), a Mikuni would find its way on so suddenly it would frighten the cat.

It takes a good while to warm up the Katoom, which is a good sign. When the going gets hot, you'll appreciate this cooling trait. There's an occasional hesitation at very low revs when the throttle is yanked open. This dissipates as the engine gets hotter. When it's fully steaming, the stumble is rare, but still there. Again, we feel the Bing is to blame.



With 300mm of travel front and rear, the KTM soaked up landings without a whimper.

1983 KTM 504

Metzeler tires can be found front and rear and no doubt contribute their share to the overall good handling. Norwegian aluminum rims and trouble-free spokes complete the wheels.

One note: The rear brake was strong; perhaps too strong. Bush Telexed the factory and advised them to shorten the rear brake lever by 16mm.

We started experiencing some heavy

vibration near the end of our first riding session. A quick check showed that both of the stamped aluminum head steadies were snapped cleanly. Rod fabricated some new steadies out of strap steel and we experienced no further problems. Again, the factory was Telexed about this small problem area.

We noted a very stiff throttle action. A few coils cut off the slide spring cured this. Good Magura controls were at both ends of the bars.

An aluminum swingarm does the job at

the rear. It features the same clean welds found on the MXers.

A super strong front hub hooks to the front disc brake. Only one problem might exist: How can a speedo be hooked up to this wheel for enduro addicts? Of course, it's possible that the enduro version might come with a more conventional KTM front wheel, in which case this whole last sentence is next to useless.

A 2.4-gallon gas tank will give the rider about a 65-mile range before he's sucking wind. KTM offers an optional 3.4-gallon



A bit faster than a stock Can-Am Sonic, the KTM has enough power to turn good lap times. When breathed on, it should give some big two-strokes fits.

KTM 504

ENGINE TYPE . . . 4-stroke single, SOHC, 4 valves
BORE AND STROKE . . . 89mm x 81mm
DISPLACEMENT . . . 504cc
HORSEPOWER/RPM: 41hp/7000 rpm, at crank
FRAME, TYPE . . . Single downtube, split cradle
FRAME, MATERIAL . . . Heat-treated chromoly 25 tubing

WHEELBASE . . . 58 in.
GROUND CLEARANCE . . . 13.25 in.
SEAT HEIGHT . . . 36.8 in.
STEERING HEAD ANGLE (RAKE) . . . 27.5°
TRAIL . . . 125mm
WEIGHT, WITH 1 GALLON GAS . . . 276.5 lbs.
WEIGHT, DRY (NO OIL OR GAS) . . . 260.5 lbs.
FUEL TANK MATERIAL . . . Plastic
FUEL TANK CAPACITY . . . 2.4 gal.
 (optional 3.4 gal. tank)

LUBRICATION . . . Dry sump, oil in frame
ENGINE OIL CAPACITY . . . 3 L.
REC'D ENGINE OIL . . . SAE 20W50
FORK OIL, REC'D WEIGHT . . . 10 wt.
FORK OIL, REC'D CAPACITY/LEVEL . . . 6 in.
 f/top, no air

GASOLINE, REC'D TYPE/OCTANE LEVEL . . . Premium, 92+ octane
CLUTCH TYPE . . . Multi-plate, wet
TRANSMISSION TYPE: Constant mesh, 5-speed
GEARBOX RATIOS:

1 . . . 2.909 (32/11)
 2 . . . 2.000 (24/12)
 3 . . . 1.400 (21/15)
 4 . . . 1.118 (19/17)
 5 . . . 0.913 (21/23)

GEARING, FRONT/REAR . . . 17/52
 (optional c/s, 15 or 19 t)

PRIMARY KICK SYSTEM? . . . Yes
CHAIN, SIZE AND TYPE . . . 520 Regina
EXHAUST SYSTEM . . . Through frame, left side
SILENCER/SPARK ARRESTER . . . Silencer only
MUFFLING QUALITY/SOUND LEVEL . . . Very quiet

IGNITION TYPE . . . Nippondenso CDI
REC'D SPARK PLUG . . . NGK D8ES-L
SPARK PLUG GAP . . . 0.028 in.
CARBURETION . . . 36mm Bing
JETTING:

PILOT JET (LOW SPEED) . . . 45
JET NEEDLE . . . 4K2
NEEDLE JET . . . 272
SLIDE NO. (CUTAWAY) . . . 210
MAIN JET . . . 138

AIR FILTRATION . . . K&N gauze type
FILTER OIL, REC'D . . . Kal-Gard gauze filter oil
FRONT SUSPENSION, TYPE . . . 42mm Marzocchi, air/oil telescopic

FRONT SUSPENSION, TRAVEL . . . 11.8 in.
FRONT SUSPENSION, SPECIAL FEATURES . . . Air caps

REAR SUSPENSION . . . Aluminum swingarm, Pro-Lever, Fox shock
REAR SUSPENSION, TRAVEL . . . 11.8 in.
REAR SUSPENSION, SPECIAL FEATURES . . . Twin Clicker

WHEELS, TYPE AND RIM MATERIAL: Aluminum alloy, Norwegian
TIRE, FRONT, SIZE AND TYPE . . . 3.00-21 Metzeler 4-ply
TIRE, REAR, SIZE AND TYPE . . . 4.50-18 Metzeler 4-ply

REC'D PRESSURE, FRONT/REAR . . . 10-14 psi
BRAKES, FRONT, TYPE . . . Brembo disc, hydraulic

BRAKES, REAR, TYPE . . . Twin shoe, conventional drum

COUNTRY OF ORIGIN . . . Lorain, Ohio via Austria

INTENDED USE OF BIKE . . . Off-road, enduro, racing

RETAIL PRICE, APPROX. . . . \$3095

DISTRIBUTOR:
 KTM America, Incorporated
 East: 1906 Broadway
 Lorain, Ohio 44052; (216) 244-2726
 West: 65 "I" Hamilton
 Novato, California 94947; (415) 883-8045

PARTS PRICES, HIGH WEAR ITEMS: . . . N/A at press time

OVERALL RATINGS, VARIOUS CATEGORIES, KEEPING INTENDED USE OF MACHINE IN MIND:

HANDLING, CORNERING . . . 95
HANDLING, HIGH SPEED STABILITY . . . 97
SUSPENSION, FRONT . . . 97
SUSPENSION, REAR . . . 98
POWER . . . 92
COST . . . 88
ATTENTION TO DETAIL . . . 90
EFFECTIVENESS, STONE STOCK . . . 94
NOVICE LEVEL CAPABILITY . . . 96
INTERMEDIATE LEVEL CAPABILITY . . . 94
EXPERT LEVEL CAPABILITY . . . 92

tank, which bolts right in place. This should give the rider close to 100 miles of trailriding range, and maybe even more with a Mikuni carb.

Top-quality Regina Extra chain (520) completes a package of premium goodies. Even the grips aren't bad.

WELL THEN???

The bottom line is this: The KTM 504 is the most complete, most serious, best four-stroke ever built. Only the Can-Am Sonic comes close, and it's more trail oriented. The Katoom is one step away from being a full-blast racer.

One last thing. The suggested retail of the bike is \$3095, only 100 bucks more than the Sonic. When all the things are evaluated, the KTM 504 is the bargain of the decade. You could not build a bike this good for 3000 bucks if someone gave you the engine.

The Can-Am was the start of the four-stroke revolution, by virtue of using the fabulous Rotax engine. The KTM completes the overthrow. There simply is no reason to consider any other big four-stroke, unless price is holding you back. And, if that's the problem, you might as well buy an old 305 Honda Hawk and save your money for a KTM.

Finally a company has had the nerve to quit offering the four-stroke enthusiast leftover parts. The KTM 504 is state of the art and only needs minor engine hop-up parts to make it ferocious enough for big-time four-stroke championship-level racing. We've been talking about the future for some time now. With the 504 KTM, it just arrived. □