

INSTANT ZAP FOR 125 HONDA'S

DIRT BIKE

JUNE 1981 • \$1.50 UK65P

123.75 MPH
KTM 495

SUZUKI
RM250
HI-FLYING
FLOATER

HOW TO
DIAL IN
YOUR
FORKS



MUD RIDING TIPS & TRICKS
YAMAHA IT250: WHITE KNIGHT

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KTM 495 MOTOCROSS

123.75 MPH...ON DIRT!

Flat out, tucked in and flailing

What gave us the idea for this test was an old guy in a gas station. We had a bike in the back of the vomit-colored *Dirt Bike* Toyota pickup truck when we pulled in for gas. After putting five gallons of hi-test in a can and adding some oil, we fished in our wallets for the ransom. The conversation went like this:

"Whatzat? Some kind of race bike like a hillclimber?"

"It's actually a motocrosser. You know, for racing off-road."

"Oh. Well, what'll she do?"

"The way it sits, it'd probably top out right at 78 to 80 miles per hour."

"Hells fire! Is *that* all? Shoot, my old Ford pickup truck in the back can do better 'n that, and it's got three hunnert thousand miles on it."

"Actually, a motocross bike doesn't need to go much faster than that. I *could* gear it up more, but..."

"Don't seem like much of a real racer to me. Speed is speed and 78 per ain't much speed in my book. Now back when I was a kid, I had me a Harley that'd go so fast that..."

We drove off, more than a bit embarrassed.

When you think about it, 78 does not sound like a great deal of speed. Sure, we all know how pumps and jumps can magnify speed and you can feel like you're doing a million on a little third-gear short straight.

This got us to thinking. We'd heard about those Baja bikes hitting 115 or more, while some experts have flatly stated that no production motocross dirt bike will run over a hundred per, even with the tallest possible gearing to be had.

Well sir, the arrival of a 495 KTM and a genuine maniac Six Days rider appeared to us to be the perfect combination. Rod Bush is the Service Manager of KTM, U.S.A., and has a pretty good track record to back him up. Three golds, a silver and a bronze. He's also the eleventh-ranked enduro



Here's what it looks like at nearly 124 miles per hour in the dirt.

up the new KTM. The tallest gearing possible was to be used. A 16-tooth countershaft sprocket was delayed from Austria, so we had to go with a 15-fang version. Internal changes were needed to make up for this. A 20-tooth fifth gear from a 390 enduro bike was slipped in. Primary drive was 31/79.

The gearing at the rear was limited to 48 teeth. Not enough for what we had in mind. A YZ250G rear wheel was found to be a virtual slip-fit, just by making some simple spacers. This let us drop to a 44-tooth rear sprocket, which is just about worth one more tooth on the countershaft.

To play it safe, we also installed a gigantic 150.80 x 18 Metzeler, two-ply, nylon tire. This massive tire is almost 29 inches tall and noticeably dwarfs a 4.50 x 18 Metz. A larger tire is much like gearing a bike up.

Rod felt that he could get some extra rpm out of the engine by changing the timing. The deck height was changed to 1.4mm, from a normal height of .8 to .9mm. Intake and exhaust mani-

Carburetion was left standard. Ron ran premium gas with a 50:1 Duralube mix. Klotz Octane Booster was added to get rid of any possible detonation at the high engine speeds we'd be running at.

After the bike was thoroughly checked out and broken in, we headed out for famed El Mirage dry lake, home of many high-speed crazies. The lake was in reasonable condition, with a bit of mud and water at the edges. We had enough room for our needs.

Two markers were set up and Rod took some initial passes. We checked all three stop watches and double-checked the distances. Our first dozen passes had us in the 108- to 110-mph range. Rod leaned out the main jet in the 40mm Bing carb and slipped into a set of Danaise road racing leathers and a full coverage helmet with a shield. He also felt he could get a greater speed with more distance available before the traps.

Because of the limitations of the wet part of the lake, Rod had to try to get the bike up to a high speed on a

KTM 495 MOTOCROSS

smooth lake bed.

It worked! On his next pass Rod went over 120 mph! More runs and a semi lay-down position got the speed even higher. Our best run of the day was 123.7 miles per hour! Astounding! We felt that even more speed potential was there if we'd have more room and taller gearing.

So, what's the point of all this?

Basically, we wanted to deal in absolutes. The 495 KTM is representative of a new generation of super bikes. The 490 Maico spearheaded the effort and other manufacturers are girding their industrial loins for the battle to come.

In a very dramatic way, a top-speed run is the ultimate dyno. Just how much does it have? What *will* she do? Make the motor try to punch a hole in the wind. Slap enough gears on it to force the engine to grunt, moan and

shudder as hard as it can.

What'll she do... indeed.

Back to the test

Once we got all the high-speed stuff out of our system, it was time to test the KTM as a genuine, functional monster bike. A glance intimidates. The 495 is long and tall. The cold, white color is broken up with just enough touches of red and blue to make it look like a weapon, rather than a motorcycle.

It's an angular beast. Just about the only things on the KTM that are round are the wheels. The rest of the bike appears to have been designed by an engineer addicted to a straight-edge ruler.

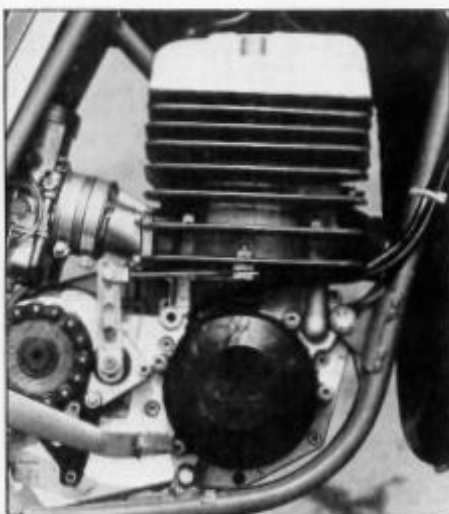
From the shift side, the KTM engine appears normal. From the brake side, it's positively mammoth. Fins extend out well past the cases. The unpainted aluminum barrel and polished magnesium cases accentuate the angu-

lar lines. If looks determined usage, the KTM495 would go around with a machine gun mounted on the bars.

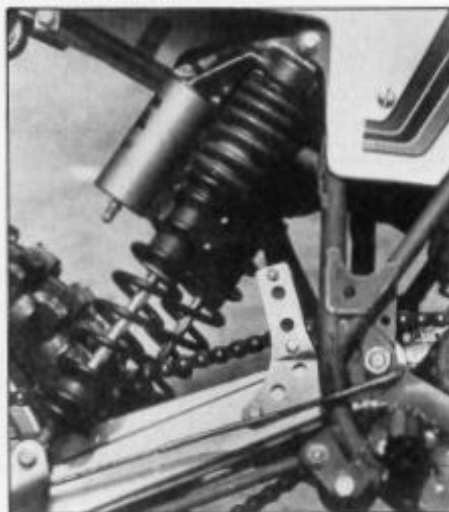
Tippy toes time

Sling a leg over the 495. Or, at least, try to. With an incredible 38.7-inch saddle height, the KTM has the distinction of being the tallest bike we've ever tested. Webb thought this was great; but then, he's six foot three inches, or so. Riders in the five-foot nine-inch range will need a milk crate. Once on the bike, the suspension settles a bit, making the ground barely in reach for a five-foot eleven-inch rider.

You won't find any sag in the saddle. In fact, it appears to be made of plywood. That sucker is hard! It's also slippery. Sort of feels like someone put some Armor-All on it at the factory. On the plus side, the foam never sags and the saddle retains its shape. Long-time KTM riders say they like the firm



Truly massive engine has wide-spaced fins, magnesium cases and a piston the size of a trash can.



Super Ohlins shocks came standard on the 495. Spring rates were spot on for the average 150-pound rider.

feel. Long-time KTM riders have also been known to howl at the moon on occasion.

Once under way...

Fire it up, if you will. When cold, tickle the button on the Bing carb until gas slobbers over the cases (tsk, tsk), then, more often than not, one kick will get things stirred up. You'll hear surprisingly little mechanical clatter from the huge engine, even when cold. KTMs are made well and tolerances are on the tight side. Very little noise comes out of the exhaust, too. Especially for an open bike. Some of the "Penton" heritage about making quiet bikes still lingers.

A new kickstarter tucks in a lot better than previous efforts. You can start the KTM in gear, but there's usually a hint of clutch drag that makes starting in neutral easier.

Ahhh, yes. Neutral. Catch it if you can. Hard to find the little bugger. Impossible, with the engine running. It's easier to locate neutral going down from second, than up from low.

When the engine is warmed up, stuff it into gear (no graunching sound) and feed the clutch out. The 495 will lunge forward if you're not smooth with the clutch. You can feel the incredible power right away. Low gear, with stock gearing, is next to useless. Second-gear starts are child's play, and third-gear starts are reasonable.

A few trips through the gears and some fun playing with the throttle shows you that most of the power delivery is at midrange and up. This is not to say that the 495 doesn't have plenty of low-end punch. It has plenty. But we're bound to make a thumbnail comparison to the 490 Maico. The 490 has more right off the very bottom of the rpm range, and has a thunderous midrange, but flattens out earlier than the KTM.

The delivery of the KTM is softer at lower revs, very strong early in the mid-range and absolutely violent in the upper midrange to peak revs. You can still short-shift the 495 like any good Open Class bike, but if you want to rip the socks off the bike next to you, snap open the throttle at right around 4000 rpm and hang on for dear life.

From here to there

You say that motocross racing is nothing more than a short series of drag races from Point A to Point B?



KTM495MC

Name and model	KTM495MC
Engine type	Single-cylinder, two-stroke piston port
Bore and stroke	92.25mm x 74mm
Displacement	494.35cc
Horsepower	N/A
Carburetion	40mm Bing power jet
Factory recommended jetting:	
Main jet	145
Power jet	140
Needle jet	286
Jet needle	6L2
Pilot jet	50
Slide number	220
Recommended gasoline	Premium 92-plus octane
Fuel tank capacity	2.8 gallons (standard) optional, 2.2, 3.5 gallons
Fuel tank material	Plastic
Lubrication	Oil in gas, pre-mix, 50:1 ratio
Recommended oil	Duralube
Oil capacity, trans.	1.5 quarts
Air filtration	Oiled foam in still air box
Clutch type	Wet, multi-plate
Transmission	Five-speed, constant mesh
Gearbox ratios:	
1	14:35
2	15:24
3	18:21
4	20:19
5	27:21
Gearing, front/rear	14/48
Ignition	Motoplat, pointless
Primary kick system?	Yes
Recommended spark plug	Bosch W340S25
Silencer/spark arrestor/	
Quality	Silencer only, fairly quiet
Exhaust system	Up-pipe, left side
Frame, type	Double downtube, full cradle
Wheelbase	59.75 inches

Ground clearance	14.25
Seat height	38 inches
Steering head angle	28 degrees
Trail	4.96 inches
Weight with one gallon gas	244 pounds (234 dry)

Rim material Aluminum alloy

Tire size and type:

Front	3.00 x 21 Metzeler knobby
Rear	4.50 x 18 Metzeler knobby

Suspension, type and travel:

Front	Marzocchi telescopes, 300mm travel (12 inches)
Rear	Ohlins piggybacks, 320mm travel (12.8 inches)

Intended use Motocross, off-road racing

Country of origin Austria (Which is somewhat east of Lorain, Ohio)

Retail price, approx. \$2690

Distributors:

KTM America, Inc.
1906 Broadway
Lorain, Ohio 44052

Parts prices, high-wear items:

Piston assembly, complete	\$123.90
Rings only	14.43
Cylinder	Liner only—94.50
Shift lever	18.28
Brake pedal	9.26
Front sprocket	\$14.43

Overall rating, 0 to 100, various categories, keeping intended use of machine in mind:

Handling	92
Suspension	Front-93, rear-97
Power	99.9
Cost	84
Attention to detail	95



KTM 495

It was easy to bust the rear end loose on the 495 KTM with little more than a twitch of the throttle hand.

ping for ice. The KTM belongs to an elite group of two bikes that will go from Point A to Point B much faster than the rider is ready for. You literally aim the front wheel in the desired direction and pull the trigger. Things happen quickly. First-time riders will overshoot corners grossly. Unwanted wheelies happen with regularity.

But one thing is undeniable. The rush is there. The red-eyed, nostril-

distended, white-knuckled, puckered-butt rush is *there!* As you click through the gears, the landscape whistles by at an alarming rate. By the time fifth is engaged, you know that you're over your head. However, you'll do it again and again. Such is the nature of super bike addiction.

Handles

Because there's only one other machine in the super bike class, we must

compare certain traits in the KTM to the Maico. The taller KTM does not turn as sharply as a Maico, but has greater high-speed stability. Part of this must be attributed to the tall stature, combined with a longish wheelbase. Take a Maico and a KTM through a sand wash in fifth gear, side by side, and the KTM rider can relax more. The bike tracks like an arrow. The Maico will hunt and shake a bit.

Take the same two bikes and ride on a hard-packed track with tight turns. The Maico will carve a line under the KTM. Once dialed in, the KTM responds well. It's just that it takes a bit more muscle to snub it around than the big "M."

You might say that the KTM steers more with the rear wheel than the Maico. One must consider the Maico as a front wheel steering bike. With the 495, throttle and body movement are important and have more effect on directional changes, rather than merely sawing at the bars.

Suspension, front and rear

A pair of Ohlins shocks do the work

KTM 495

at the rear. They're nestled in a beautiful aluminum swingarm. Action on our test bike was beyond reproach. We were never even tempted to mess with the preload. That's a nice feeling ... just jump on a bike and ride it—as is. Actual travel is 12.8 inches, which is just about the limit of current technology.

Up front, you'll find a set of bright orange, Marzocchi, 38mm forks. We expected only average performance from these units, but, as the commercial goes, we are surprised! These ain't no downstream forks. Travel runs at 12.0 inches, even.

We felt that the forks sagged a bit; we were tempted to add air caps to help firm things up, but instead we added about two ounces of oil to each leg. This firmed up the mid and late part of the stroke, but kept things soft and smooth on the first part. Marzocchi engineers are convinced that forks needing a heavy air assist are flawed. Right now, most of the factory bikes are not running air, so their thoughts are right in line.

Every once in a while, we'd hit a square-edged bump and a shudder would send a message to our wrists. Over normal ruts, bumps and whoopers, the Zokes worked well. Using a set of 43mm Yamaha forks as a "10," we'd have to rate the Marzochis as a solid eight-plus. Some flex was experienced when the front end was dancing over rain ruts, but nothing alarming.

Count on the sacking out after a while. Some will do it after four to five hours of operation; others after 20 or so hours. Don't bother replacing them with another set of Marzocchi springs. Investigate some Yamaha springs with a similar rate. We'll check into this and try to get some part numbers to you in the near future.

This and that

Clutch pull is on the stiff side. A Terry cable will help a bit. Clutch adjustment is critical. Sufficient free-play is essential to the plates staying alive.

Brakes are excellent at both ends. Both drums and shoes are arced in at the factory. While not as powerful as Japanese brakes, the KTM stoppers are more predictable and easier to use.

Wheels are primo; Sun rims; good hubs; reasonable spokes. Keep an eye on the spokes during the first 10 hours of riding, then forget about them, ex-



Tell? Don't ask. Here's Rod Bush right before his series of high-speed runs. Rod is the service manager of KTM U.S.A. and a three-time gold medal winner in the ISDT.

cept for regular maintenance.

Metzeler tires come stock on the KTM. Ours had a nylon, 21, two-ply up front and a rayon four-ply at the rear. Both are superb tires, with the nylon tires being a bit lighter.

By the way, we ran Metzeler for the high-speed run, with 28 psi in each wheel. The Metzeler folks told us that they've run a knobby at 130 mph on a test drum for 20 minutes with a 760-pound load before they had a knob chunk off. Impressive.

We didn't care for the brake cable guide and installed a Pro Clamp up front for safety.

All plastic is well-made, with the number plate/rear fender combo being particularly nice. No sense in covering up shocks and things with side plates.

A 40mm Bing carb with a Powerjet is stock on the 495. While ours worked reasonably well, it was still far too sensitive to temperature changes to leave us happy. Jet a big Bing right in the morning, and by eleven o'clock, it's blubbering down low and detonating at midrange. No thanks. We'd prefer

(continued on page 68)

to see something else more sophisticated on the KTM—like a brick with a hole drilled in it. Oh yes. We plan to try a Mikuni on the big 495 in the very near future. Keep posted on that.

The stock tank is 2.8 gallons, with an optional 2.2- and 3.5-gallon tank available. This means you can have some serious range on your KTM, should you need it.

A KTM gas cap will fit on a Maico tank. Oddly, a Maico cap will often require a set of channel locks to get it off. Same with the KTM. Hmmm.

New cases on the 495 shave about 10 pounds off of last year's engine. It's a tidy lower end, well protected by the frame rails, with nothing hanging out to catch a stray rock.

Bars are a bit high and take some getting used to. There are two sets of risers under the bar clamps. This strikes us as a weak setup, but we never tweaked it, in spite of a few simple low sides.

Shifting proved to be smooth, almost effortless. Just slap at the folding tip and ignore the throttle. Very much improved over the performance of the 420 KTM.

A large muffler hangs off the rear of the pipe, stabilized by a bar attached to the frame. There must be a better way to mount this unit. The pipe itself could use better mounting brackets. It's hung the same way the 250 is, and we experienced cracks on the hangers after a period of time with the smaller bike. We can expect no less on the killer bike.

A sensibly-designed and well-tucked in kickstand is mounted on the aluminum swingarm. Normally, we yank them off most bikes. We left ours on the KTM.

A well-protected air filter is housed in a large, easy-to-reach box. The saddle must be removed to gain access.

Should I, or shouldn't I?

Hey, you only live once. But some folks keep asking us the unavoidable question: 490 or 495? Which way to go?

If it were us, we'd have one of each in the garage, because both of them are so far ahead of the rest of the scampering big bike field. But, here's the bottom line. If you just want to race motocross and the occasional GP, then the Maico is probably the bike for you. If you like to use your big bike for motocross, enduros and cross-country, then the KTM is the big bike

plate and a speedo, the KTM is enduro and trail-ready. The Maico still owns the corners, but the KTM is more stable at warp speeds. In a drag race, through the gears, both bikes come out dead even. They cost the same and both machines have enough steam to scare you silly. Which one you end up with just might depend on how much you can brow-beat your local dealer.

Is that all there is, my friend?

Have we just written off all of the rest of the Open Class bikes in one fell swoop? Is a 420, or a 465 just not in the hunt?

Well now, they are...against each other. But folks, we're talking *super bike* here. Every other Open bike around is putting out around 41 to 42 horsepower to the rear wheel. Both the Maico and the KTM are putting out right around 50. They, effectively, are in their own class.



Which brings us to the logical conclusion...

Wouldn't it be great to get all of the Open Class bikes made and then take them all out to El Mirage dry lake on the same day and see who comes out on top? We plan to do just that. Not right this minute, but soon. Keep your eye on future issues of *Dirt Bike*. Or just hang around El Mirage every day for the next few months.

Right now, the magic number is 123.7 miles per hour. Who can beat or even match that number? For now,