

Tests: Kawasaki GPz1100, KX500,
Yamaha Virago 500 and IT490

Quarter-mile speed secrets

CYCLE WORLD

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Kawasaki GPz1100
A ride on the wild side



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COVER

*The Kawasaki GPz1100
Photographed by Steve Kimball*

***It looks like last
year's factory racer,
but something got lost
in the translation.***



Kawasaki is famous for many things but building open class motocross bikes isn't one of them. The big green machines somehow haven't been a match for the others in the class, in fact the 1981 models were so far behind the factory took model year 1982 off: no production bikes, instead they built a prototype with all new everything and ran it in national races.

The bike was light, handled well and made lots of power. Rider Goat Breker won a National on it and when Kawasaki said the winning bike was the basis for the 1983 production KX500 we figured okay, this time they've got it right.

The 1983 KX500 appears to be an exact copy of the factory racer. The engine is completely new and modern, witness the compact cases that look borrowed from the KX250. Every ounce of excess weight has been eliminated, while inside there's a five-speed gearbox and a large clutch. The countershaft sprocket has been moved back, closer to the swing arm pivot and the swing arm pivot bolt also secures the rear of the engine to the frame. The cylinder finning is massive at the top, tapering at the bottom and the bore uses Kawasaki's electrofusion coating. The head has long radial fins. A single spark plug fires the fuel (Breker's bike had a dual plug head). The kick start lever is placed high on the right side. The shift lever is a steel strap that winds around under the drive chain much like past open Kawasaki engines. The tip folds but moving the lever to a higher position on its spline will let the lever rub against the chain. This

KAWASAKI KX500



was a bad point on past 420cc engines and for some reason it has been retained on this one. A 38mm Mikuni carb furnishes gas through a small six-petal reed.

Previous big Kawasaki motocross bikes have had frames adapted to the Uni-Trak single rear shock. The new machine gets a new frame, this time designed from the beginning to work with Uni-Trak. It has good, big tubes and has been carefully triangulated at the steering head and swing arm pivot. Steering head angle is 29°, a tiny bit more rake than most dirt bikes have these days but as we'll see, it works.

The shock linkage has been revised (again, and you can say that about nearly all single shock systems) to work with the frame. The shock is nearly vertical. Its bottom bolts to the lower rear of the frame and the top goes on the front of a steel rocker, which in turn pivots on a shaft across the frame. The rear of the rocker goes to an aluminum strut—one arm instead of the wishbone used on previous models—and the strut attaches to the swing arm, between the pivot and the front of the rear tire. The lengths and angles of all these pieces are chosen, again like most current single shock systems, to provide a rising rate suspension. The swing arm is aluminum, of course, and it has plenty of gussets and nicely applied welds.

A large-bodied KYB shock is standard. It has a finned aluminum reservoir mounted on the right-center of the bike. Adjustments are limited to spring preload and rebound damping. The rebound damping knob has four positions clearly marked. Getting to the rebound damping knob isn't as easy as it is on other bikes. The right side plastic cover has to be removed with a screwdriver and a rubber cover over the adjuster wheel pried

up. Even then, a screwdriver needs to be used to reach deep into the cavity to turn the wheel. Adjusting the spring preload is even more difficult; the owner's manual suggests removing the shock from the bike and placing it in a bench vise, not the hot tip if it needs to be changed for a different track or between motos, unless, of course, you have a fully equipped box van like the factory racers. For ordinary racers it's a major hassle. Trying to adjust the spring in the bike without removing the shock is nearly impossible, too. The adjuster wheels are on the bottom of the shock, buried in the middle of the swing arm's massive gusseting. There simply isn't an easy way to do it.

The KYB forks sport 43mm stanchion tubes and triple clamps with double-bolt clamps. Big and basic, as front end tuning is limited to varying air pressure, oil level and oil weight.

Front brake is a large hydraulic disc, the coming thing. The front hub is a spool type because the brake rotor, naturally, is outboard of the spokes. The spokes bend radically as they exit the hub but perhaps because they're large, they gave us no trouble. Our bike had Dunlop tires front and back.

Some of the aluminum parts, the swing arm and the wheel rims, for instance, are gold anodized while others, like the brake static arm, the silencer, rear brake pedal, chain guide sides, head stay and shock reservoir, are left their natural color.

The pipe is designed so the headpipe doesn't extend too low. The silencer has an extruded top that doubles as a mounting bracket. Two attachment points are used and the unit didn't break off as some past ones have. The beautiful aluminum housing has a removable front so an owner can replace the fiberglass packing when it gets too loud. It's a nice unit.

Plastic parts are that bright Kawasaki green some riders like, some hate. The rear fender has the side numbers built in and it gives the bike a different look. We've seen a lot of broken rear fenders on Kawasaki MXers but had no problem with ours.

The KX500 has an in-between seating height, not too high, not too low. The bars are the right shape and the levers are good.

Like most big bore motocrossers, the KX500 is a bear to start. It usually takes lots of kicks and it hurts the bottom of your foot when the lever reaches the bottom of its arc. Our last open-class motocrosser from Kawasaki (a 420) went through kick start levers like popcorn. The lever would twist after a few kicks and the starter's foot would slip. The '83 KX500 didn't give problems that soon but it too began to twist after we'd used the bike seven or eight times.

Once running, the KX vibrates a lot. Putting the engine in gear lessens the vibration but it's still extreme by modern standards.

The first ride disappointed our testers; the bike didn't make much power. After a few break-in miles we ran a drag race against a new YZ250 and the YZ won. Not by much, but it still pulled the 500. Adding fuel to the flame, the suspension was rough and bounced the riders around. Even before that, at the first turn our man got his heart puckered as he applied the front brake and the KX stood on its nose. The back brake, meanwhile, took extra effort before it could be felt at all.

We checked with the factory reps and learned some interesting things. First, the too-stiff suspension wasn't production. The U.S. reps had installed softer, yes softer, springs than the home office had specified. Next, they'd rejetted the carb, going richer all the way up and down the scale. Third, the spark timing had been retarded 2 mm after the marks on the engine.

Why all this? Not to fool the magazines. Not at all. Loyalty kept our sources from telling too much but our guess is that the guys who worked on the prototype KX500 sent in all the data and the message got scrambled. The design team delivered a full-race engine, tuned and timed to work well on the edge, with racing fuel and daily attention to detail. Factories can race like that but customers can't. Even with octane booster stirred into the weak tea available at the corner station, the KX500 pinged and it wouldn't have lasted any time at all with the lean jets and the timing originally specified. (The timing change is mentioned in an update added to the manual, so we're sure no subterfuge is involved here.)

Things got better with time and miles. Given some practice our riders learned to use the front brake with caution. Adding

half an inch of oil to the fork tubes reduced dive under braking, so that problem was less of a problem, even though the brake never did work as well as Honda's disc or the Yamaha or Suzuki double-shoe drums.

When the engine was broken in, it gained power and even began to feel like an open class bike, with a big push out of turns, surplus power to get the front end up across obstacles and so forth. We still needed octane booster, though the engine still pinged under load and the KX never did have the muscle its rivals offer. A demanding enduro engine, maybe, a competitive racer, no. The gearbox works well, by the way, and the ratios are suited to the engine's power delivery.

As the miles piled up we began to realize why the factory delivered the bike with the stiff springs: the harshness, stiff ride and bumpy behavior were there at first because the rear shock linkage uses a combination of bearings and bushings and the bushings are tight as they come from the factory. With 300 mi. on the KX, the optional soft springs that we felt were too stiff began to feel . . . too soft. Better leave the stock springs in and live with them until the suspension parts break in. But even working properly the Kawasaki's suspension doesn't come close to matching the competition. The bike sometimes kicks and side hops. And its lack of adjustable compression damping means you can't do a whole lot about it. We changed the shock's rebound damper adjustment, preferring the third position. Most riders thought the shock needed different compression damping as well. Changing it requires disassembly.

The big KX is an agile bike in turns. It carves its way through with no shake or tendency to climb the berm. It also has good manners off jumps but the back bottoms after landing. The bike is narrow in the middle and it's easy to move about on.

Some of this easy handling comes from the light weight. At 231 lb. with a half-tank of premix, this is the lightest open class motocrosser tested this year. A Honda CR480 weighs 236, a Maico 250 motocrosser weighs 229 lb.

What that light weight doesn't do is make up for lack of power. As it comes from the factory, the KX500 can't keep up with Yamaha and Honda and Suzuki open-class motocrossers. It just doesn't have the beans. It doesn't matter who's riding it.

Instead, the Kawasaki makes a better play bike. The five-speed transmission, the mildly tuned motor, light weight, good handling and comfy seat are fine when playing around at moderate speeds in open terrain or gravel pits. A novice rider will find the KX500 an easy open class bike to ride.

It just isn't capable of winning pro races. Maybe next year. ☐



KYB forks have 43mm stanchion tubes. Disc front brake is grabby but strong.

KAWASAKI KX500

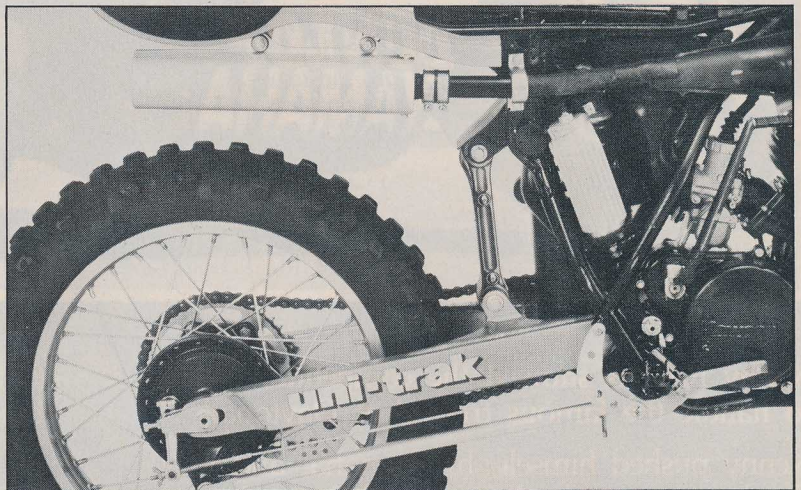
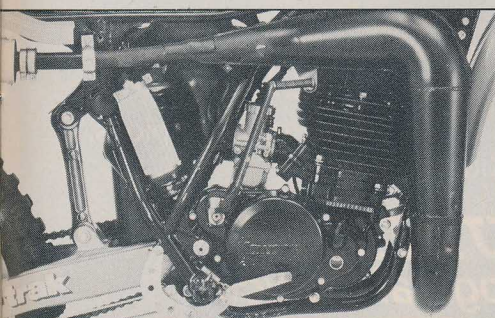
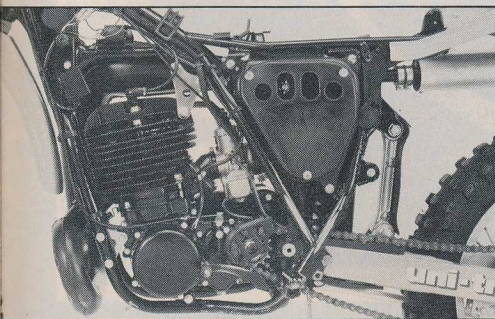
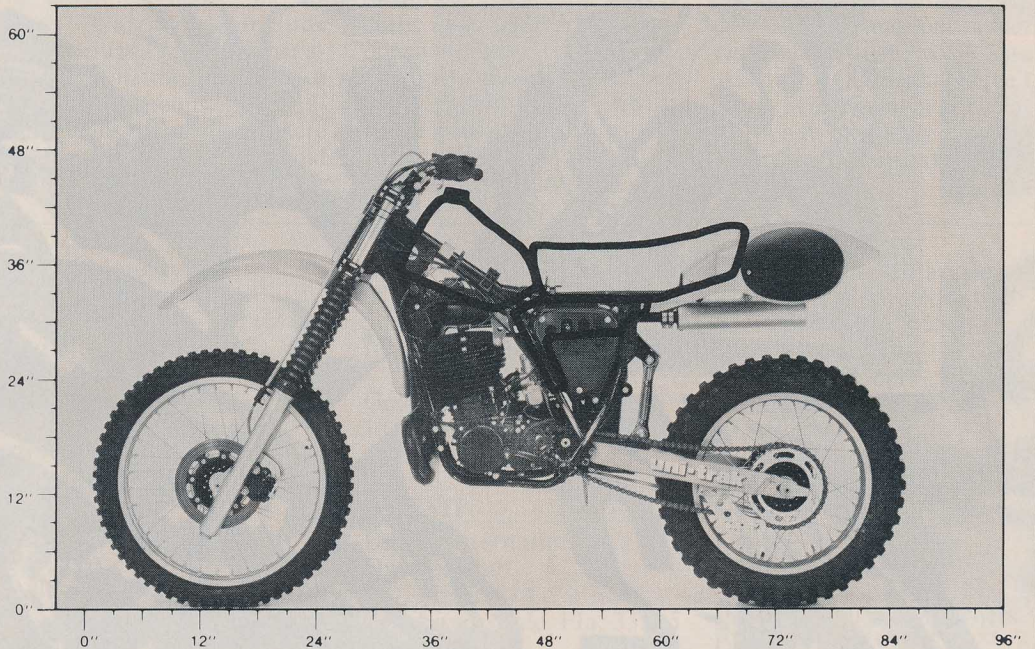
SPECIFICATIONS

List price \$2399
 Front wheel travel . . 11.8 in.
 Fork stanchion
 tube diameter 43mm
 Rear wheel travel . . 12.0 in.
 Front tire 3.00-21
 Dunlop K490
 Rear tire 5.10-18
 Dunlop K490
 Engine . . two-stroke Single
 Bore x stroke . . 86 x 86mm
 Piston displacement . 499cc
 Compression ratio . . 7.0:1
 Claimed power na
 Claimed torque na
 Carburetion . . 38mm Mikuni
 Ignition CDI
 Lubrication system . . premix
 Primary
 drive straight-cut gear
 Gear ratios, overall:1
 5th 6.51
 4th 7.87
 3rd 9.72
 2nd 11.97
 1st 16.46
 Oil capacity 1.9 pt.
 Fuel capacity 2.4 gal.
 Fuel tank material . . . plastic
 Swing arm
 material aluminum
 Starter primary kick
 Air filtration oiled foam

Frame material chrome-moly steel
 Wheelbase 59.6 in.
 Seat height 37.5 in.
 Seat width 5.9 in.
 Seat length 22.0 in.
 Seat front to steering
 stem center 12.5 in.
 Handlebar width . . . 32.8 in.
 Footpeg height 16.6 in.

Footpeg to
 seat top 21.3 in.
 Footpeg to shift
 lever center 6.0 in.
 Footpeg to brake
 pedal center 5.0 in.
 Swing arm length . . 23.4 in.
 Swing arm pivot
 to drive sprocket
 center 2.5 in.

Gas tank filler
 hole size 1.6 in.
 Ground clearance . . 12.8 in.
 Fork rake angle 29°
 Trail 4.8 in.
 Test weight w/
 half tank fuel 231 lb.
 Weight bias, front/
 rear percent . . 48.5/51.5



New 499cc engine has a five-speed transmission hidden in its tiny cases.

Aluminum swing arm, static arm, brake pedal, shock reservoir, rocker, rebuildable strut and silencer are quality parts.