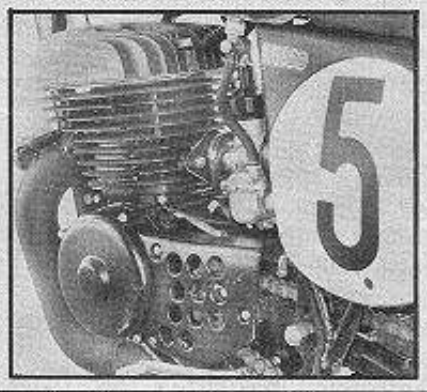
RACE TEST

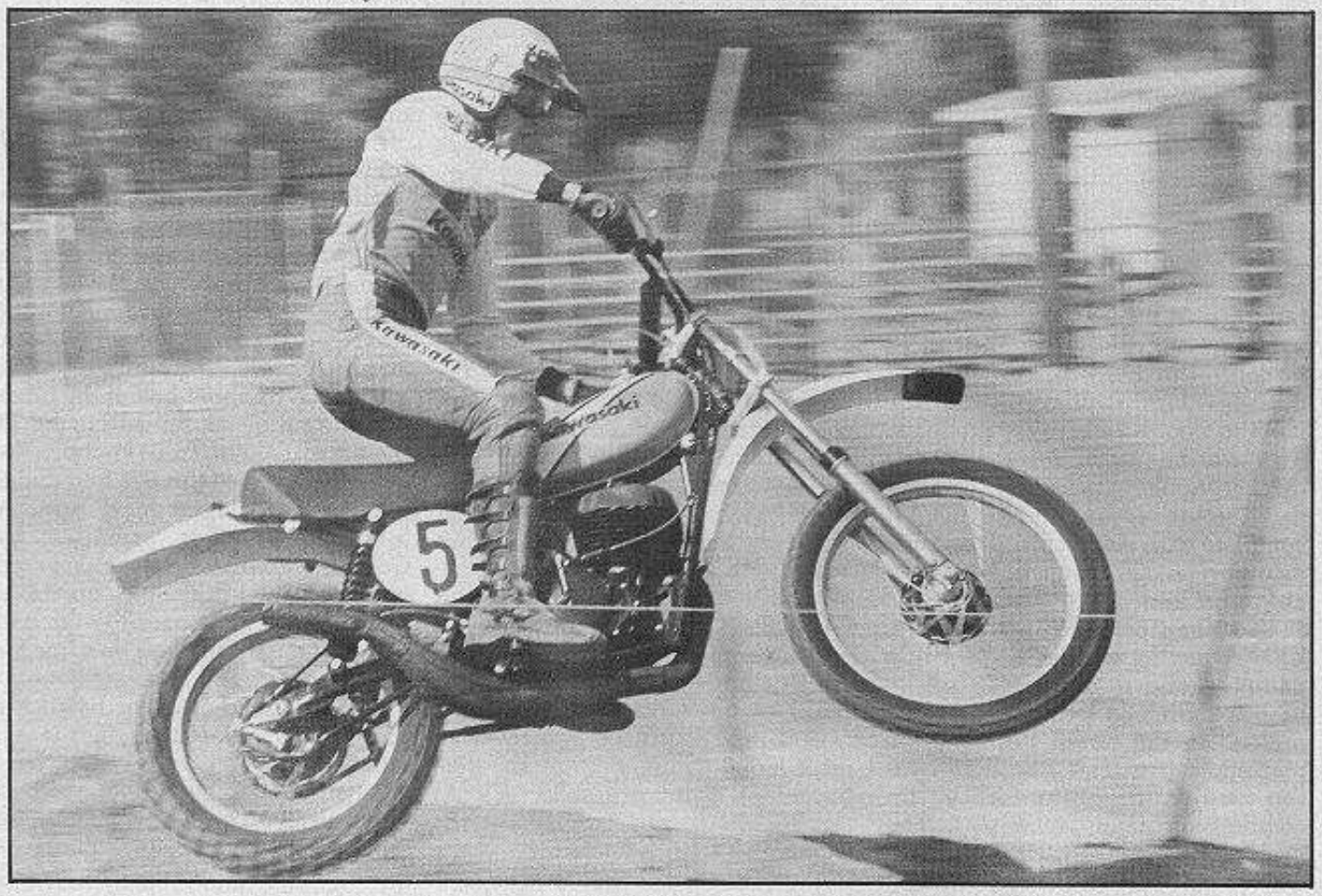
KAWASAKI KX400

Dyn-o-mite engine in a not so dyn-o-mite chassis; it builds you up just to let you down

Rear shocks feel very stiff and the swingarm flexes. Steel chain guide isn't as good as the plastic one they had last year.



The 401cc Kawasaki engine is the best Open class mill we've tested.



Photos by Dick Miller, Paul Boudreau and Gunnar Lindstrom

The first thing you do after riding the new KX400 Kawasaki is try to make it work better. This is a vastly improved machine over last year's KX450. Because the 450 really didn't do anything right, you had the tendency to want to forget about it and go on to something more fun. The KX400, on the other hand, does a few things well enough to suck you into wanting it to work better. The trouble is, the KX400 is building you up only to let you down.

When moving to Open class machinery, the prospective buyer usually has one thing on his brain: power. There's nothing quite like the feel of 40 or so horses kicking you in the butt when you turn up the wick. Open class competition on the sportsperson level chucks many of the subtleties of the lightweight classes and reduces the battle down to war on the straights and survival in the turns. The KX400 meets you at that level perfectly.

If it's power you're looking for, it's power you get with the KX. To our way of thinking, Open machines come in three flavors: the zappy, high-revving 360s that come on like 250s and are tuned for the more professional among us; the "thundering herd" variety, usually a 400 or 450 that produces fierce quantities of horsepower at your beck and call anywhere in the range of a four-speed gearbox; and finally the radical 400s that rev like the 360s but dump out power like the thundering herds. The KX400 falls in this last category. Its 401cc powerplant produces the finest and most usable delivery of any Open bike we've tested. From idle to its 8000 rpm redline, the KX engine is all racer. First gear is almost totally discarded for competition. Second gear starts, if properly executed, will put you in front of any pack in existence.

Taken at face value, it looks as though Kawasaki learned from their errors of last year. The old 450 produced power like an ocean liner but you had to shift it like crazy to get up speed. The trouble with that engine was it went for torque in all departments. Kawasaki engineers bored it big, ran mild ports through a long pipe and then bolted a millstone on the crank for flywheel. The result was tractor torque, but just when you wanted it to come on, it trailed off like a stoned pothead trying to order a pizza.

This year's 400 engine does it right. They finally got the idea that a motor with that much displacement is going to deliver torque no matter how you arrange it. So they laid it out radical with a little more excitement in the ports, a short pipe and a fairly heavy flywheel to smooth everything out and put it all together. The result is what Suzuki 400 owners always wanted but never got: a powerband that comes on like a Saturn V rocket but won't send you through the snow fence every time you gassit.

It's too bad we can't say the same about the chassis. You get the distinct feeling on the KX400 that you're on some sort of an amusement park ride with a thrill at every turn. The forks jolt your arms when you run over terrain with anything more than two bumps on it. The front end bucks up and down like a speed boat, a sure indication that the forks just aren't working. The rear end, in spite of its forward mounted gas/oil shocks, feels stiff and transmits every impact right to the footpegs. If you hit a pothole or an abrupt ledge in the track, the rear wheel instantly takes evasive maneuvers to the left or right. When you're going over rough ground at speed, you get the impression that you are not in control of the bike and that your body is at the complete mercy of this mindless machine, a distracting situation at best.

The troubles with the forks are many. First, both compression and rebound pressures are too high. This

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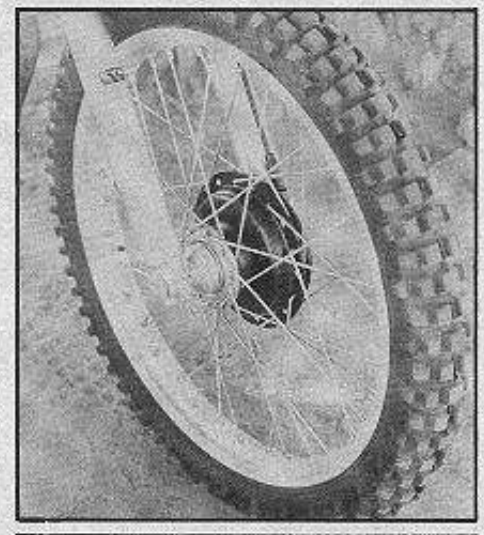
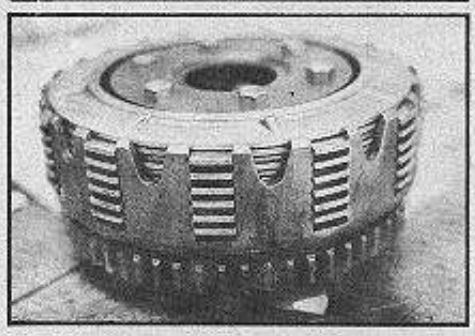
condition makes the suspension slow to respond to a series of high-speed bumps. We drilled out the bottom holes in the damping rods slightly in an effort to increase the flow in this area. Another problem is that there is no hole at the top of the damping rod to relieve oil pressure from the middle chamber during compression. This causes the fork to "hydraulic lock," or stop moving halfway up the stroke. We drilled a tiny hole about an inch from the bottom of the piston. The last problem we dealt with was the fork springs. The stock spring is rated around 20 pounds for the first four inches and then climbs to around 29 pounds for the last three inches. This is too much, too early. The final gain shouldn't happen till around the last inch or two. On top of that, the spring is a production item off last year's KX250 and is about two inches too short for the new seven-inch forks. To make up the difference Kawasaki put in a spacer to preload the spring, but that still isn't enough to keep the 240-pound bike at the top of its travel. The result is that the forks work around the mid-point in the travel, right where that 29-pound gain is happening. We installed another half-inch of preload spacers and got a much softer ride because the suspension stroke was now using the lighter end of the spring. Unfortunately all this preload caused the spring to bottom before the end of the fork travel.

The total result of the modifications was a fair amount of improvement. The forks got so they were using most of the travel and the bumps didn't jolt your arms nearly as much. Our riders felt a little more in control of the bike. We worked out this fork engineering in the laboratory of Number One Products. To make life easier for the KX400 owner, Number One will be offering a "Trickit" fork improver kit complete with a new spring that will incorporate the changes mentioned above for under $20.

The rear shocks are another story. They're gas/oil Kyabas with pre-set damping and a progressive spring with five preload settings. With the preload in the softest position, the rear end felt stiff — like there was too much damping both on compression and rebound. The problem alleviated itself somewhat when we preloaded the fork springs, which transferred a little of the action to the rear, but the feeling persisted. Test riders using this type of shock have reported that they loosen up a little after a few hours, but this was not the case with ours. If the shocks don't feel right to you, adjustable units such as Boge Mulhollands or Konis are needed.

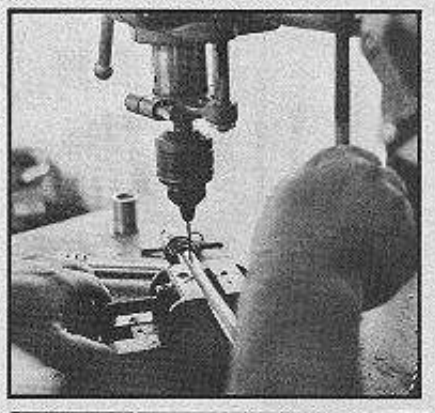
There is noticeable play in the axle bearings.

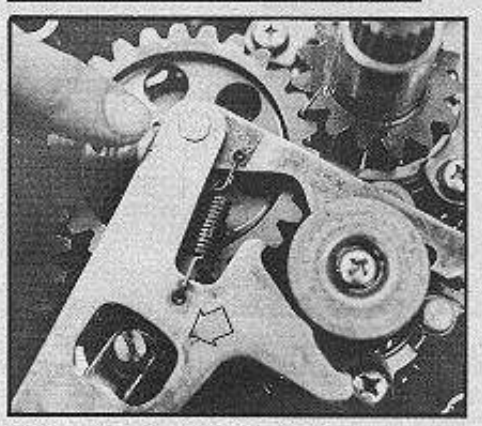




Clutch comes off in one piece. Neat, eh?

A few well-placed holes made the forks work much better.





Shift ratchet arm hits back of clutch. Stopper pin (arrow) should be kept tight.

All the suspension tuning in the world isn't going to cure the Kawasaki's basic chassis problem: poor materials and loose tolerances. The frame and swingarm flex noticeably, but worse than that the wheel bearings and axles fit together so loosely that you can grasp either wheel with your hands and feel the play by jiggling them back and forth. The result on the track is that you never quite feel that the wheels are touching the ground, but rather riding on a field of BB's.

Turning the KX400 also revealed more handling ills. Because the bike has a high center of gravity, it's (A) fun to smash into berms and (B) frightening to try to steer around the inside of a turn. When you lean it over, the high center of gravity shifts much of the weight to the inside and off the front wheel. Since the forward momentum (which is considerable on the KX400) remains the same, the front wheel tends to skid when the turning pressure is applied. This is called plowing, or pushing, or just plain wiping out the front end. It makes for sore elbows and hurt pride.

You can fix about half of the bike's pushing problems by getting rid of the flimsy Dunlop front knobby. We actually observed this tire fold under while negotiating a hard turn. A 3.00x21 Metzeler provided by Cooper Motors brought marked improvement, but only up to a point. Cracking it over too far will still send the front wheel on a line for the fence.

Almost, but not quite balancing the KX400's handling ills is an otherwise neat bike. Everything feels good and falls to hand, foot and bun quite nicely. The seat and tank are slender and comfortable. Plastic is first-rate. The footpegs, levers, throttle and even the grips are

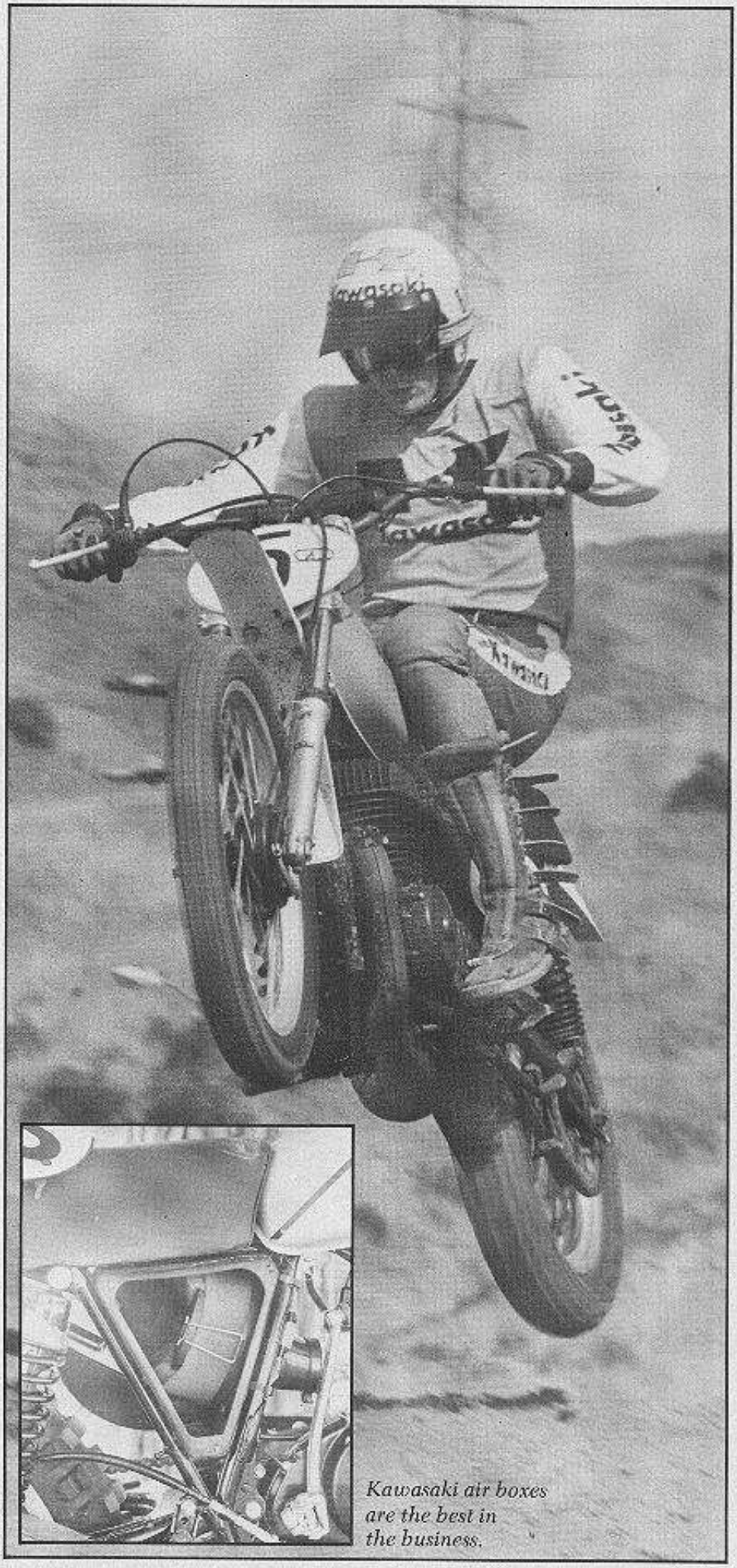
excellent. D.I.D rims and chain are top-quality.

The engine comes apart with a few rudimentary tools and is a breeze to work on. For instance, the clutch comes off in one piece so you don't have to mess with a bunch of plates, springs and screws. The air box and filter arrangement is still the absolute best in the business. The brakes work great. The engine starts every time with one gentle kick. The paint looks pretty and the welds are neat. Even the shift lever is trick. It has a knurled end just like on the factory race bikes.

A few boo-boos show up here and there. Last year's neat plastic chain guide which would never bend to knock the chain off has been replaced by a steel one that can be bashed and send the chain to parts unknown. The handlebars bend like a soda straw the first time you whomp them. We were told to check the exhaust pipe flange screws once in a while because they tend to loosen, but the engine would have to be removed to get a tool on the bottom screw.

The shifter shaft has enough sideplay to make one of the ratchet arms touch the back of the clutch basket when you up-shift. This causes the arm to bang into the arm stopper pin hard enough to loosen the pin, which will eventually hang up the ratchet arm and put you in a false neutral. This usually happens just as you're shutting down for a turn with a 40-foot drop into a drainage ditch on the other side of the berm. It would be a good idea to put some locking compound on the stopper pin locknut. This advice comes to you direct from the drainage ditch.

The KX400 is a typical Kawasaki racing package: dyn-o-mite engine in a not so dyn-o-mite chassis. In a race you'll probably get the holeshot and lead the first few laps, but eventually you'll settle down to medium speed to avoid symptoms of coronary arrest. If you're the type who wants a bike for tootin' around in the boonies and dragging to the races every now and then, and you aren't too particular about handling, the KX400 is right up your rooster tail. The power trip alone will give you the gigglies. But if you're the type who demands ultimate performance from a motocross bike, it would be to your advantage if you shopped elsewhere.



Kawasaki air boxes are the best in the business.

KAWASAKI KX400

SPECIFICATIONS

Make	Kawasaki
Model	KX400
Country of Manufacture	Japan
Suggested retail price	$1385

ENGINE

Type	Two-stroke sgl., piston port
Bore & Stroke	82mm x 76mm
Displacement	401cc
Compression Ratio	6.5:1
Cylinder	Iron sleeve, 5-port
Carburetion	36mm Mikuni
Ignition	Electronic CDI
Lubrication	Pre-mix
Air Filter	Foam

TRANSMISSION

Type	Five-speed
Ratios	2.50, 1.77, 1.40, 1.19, 1.06
Primary	Gear, wet clutch
Ratio	2.52
Drive Chain	D.I.D TM525

SUSPENSION

Front	Hydraulic sliders
Rear	Gas/oil shocks, forward mount
Travel:	
Front	7¼ inches
Rear	7 inches

DIMENSIONS

Wheelbase	56.5 inches
Ground Clearance	9 inches
Seat Height	33 inches
Track Weight	237 pounds
Weight Bias	44% front, 56% rear

CAPACITIES

Fuel	2.2 gallons
Transmission	950cc
Forks	228cc