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HOT BIKE

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**TESTS: YAMAHA IT400E,
KAWASAKI KZ 750,
MOTO MORINI
3½ SPORT, And
SUZUKI'S DIRT
SCAMP FUN BIKES**

MARCH 1978
VOLUME 2, NO. 3

\$1.25
U.K. 60p



**TRACK TESTING A FOUR-VALVE
JAWA SPEEDWAY BIKE
ALCOHOL For Racing Applications**

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Hot Bike March 1978 Volume 2, No. 3

Road Tests

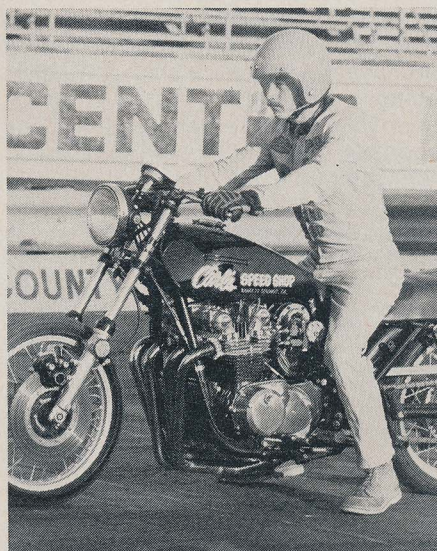
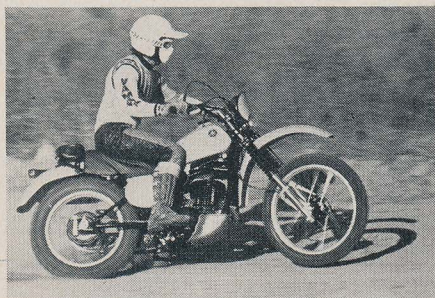
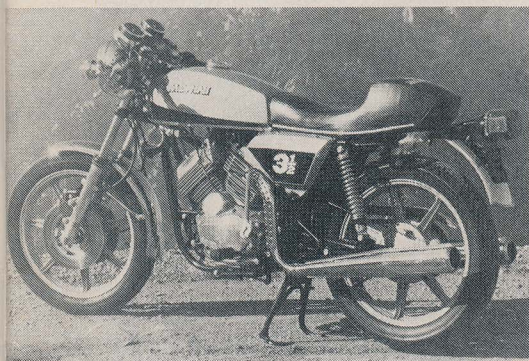
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On the Cover: Yamaha's IT400 was plenty of fun riding through the hills of Malibu. Extachrome by Mike Griffin. The Kawasaki KZ750 was photographed by Dain Gingerelli.

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Maybe Not a Front Line ISDT Medal Winner,
But For the No-So-Serious Enduro Rider, Quite a Bike

YAMAHA IT400E



photography: Mike Griffin and Dain Geringelli

Quality IT motorcycle design is a tough nut for any manufacturer to crack. Consider that the Europeans have been playing this game for over sixty years — and some still don't produce top notch equipment. So when Yamaha dropped their IT400C on the market in mid-76, many skeptical eyes were cast its way. How could Yamaha dare to unveil a motorcycle that took them only 90 days to create, from drawing board to dealer

showroom? Easy. They cheated. First of all, although the IT400 could be classified as a full-bore International Trials motorcycle, it is not intended to be. Not for a \$1549 price tag. And secondly, the IT400 is Yamaha's *first* attempt at this bike. Underneath the sky blue color is a skeleton of a motocross bike; the YZ400. Beginning to get the picture?

Yamaha really didn't want anything to do with the precious European mar-

ket of top notch IT specials. No, they were after the even more precious American market of off-road enthusiasts looking for the best all-around enduro bike they could find — at a nice price. So what if the bike really wasn't even capable of mustering up a tarnished bronze medal at the ISDT? So what if it did have some minor flaws due to the fact that the bike was bred from a motocross machine? So what? The important thing was, here was a



Life at the limit can be tough. In this case, too tough! The 400E model is a very refined edition of the initial IT400 line from Yamaha. Motorcycle is very straight-forward, and functional in design.



on all their customer racers; road racers, motorcrossers, and now enduro bikes. But like anything that requires plenty of attention, it all comes with time. The road racers have been going strong for over fifteen years. And the M-X customer racers have over five years information logged at Yamaha's R & D files. The enduro customer race program has but one and a half years feedback. What will eventually happen is they will make available some of the best enduro/IT equipment for any competitor; serious riders or guys like Joe very shortly.

The latest version of the IT400 is the E, or 1978 model. It still favors the same basic style as the first two models, but has some worthwhile changes that make it more refined for enduro riding. The new model features long travel leading-axle front forks, that work more in tune with the 7.28-inches of travel from the monoshock in the rear. The first IT had less front fork travel, thus overworking the front forks in fast and rough terrain. Again, the leading axle theory is derived from the motocross bike and permits a full 8.46 inches travel.

motorcycle that Joe Weekend Warrior could purchase, tote to the local enduro, saddle up, and finish thirty-third. And with no backtalk from the bike. Even if ol' Joe had one of those lightweight do-everything European mega buck ISDT bikes under his throttle hand, he would still place thirty-third. The point is, he only spent fifteen big bills for this bike, and he can have it serviced at the local Yamaha shop, or do it himself, and know that the parts will

be sitting on the other side of the counter whenever he needs them; not on the other side of the ocean on back order. And that, dear friends, is why Yamaha created the IT400C in 1976, so Joe and his friends could play enduro rider with very little hassle or expense.

This doesn't mean, however, that Yamaha isn't serious about this bike. On the contrary. They have constantly stayed in the forefront of technology

Our test bike was very controllable during this kind of riding. The rear end did have tendencies to hop over extremely harsh bumps or whoop-de-dooos, but on relatively smooth surfaces, the bike was totally under the rider's control. Fireroading with the IT is a blast. The bike shows tendencies of oversteer — having the rear end come about — and so the bike could be put into a slide with little effort. Then the motor could be pumped a bit, and the rider would find himself in a nice controlled powerslide through the corner. However, if a slight off-camber was encountered, the rider has to lightly stand up on the pegs, and try to keep the IT upright, without delivering all that power to the rear wheel. If he does, he can almost count on washing the rear tire to the downhill side of the corner. After that, it is only a matter of milliseconds before he and the ground become as one.

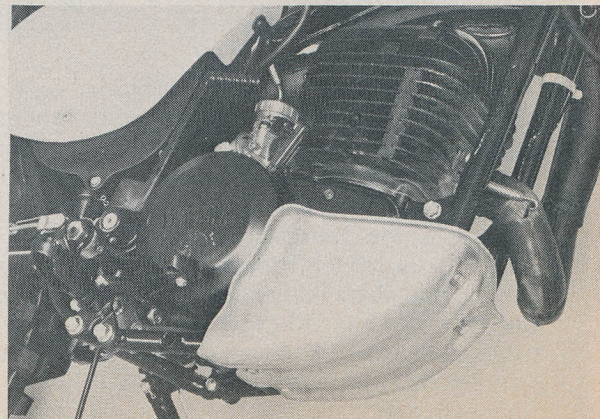
Punching the IT through tight wooded sections is easy. All the rider need do is stand up on the pegs to lower his center of gravity from the rather high (34.3 inches) seat. The 397cc motor provides plenty of torque for this kind of riding, so the rider can let the revs fall, and not worry about lugging the motor. When a rut or small obstacle is encountered, just blip the throttle, and sail over.

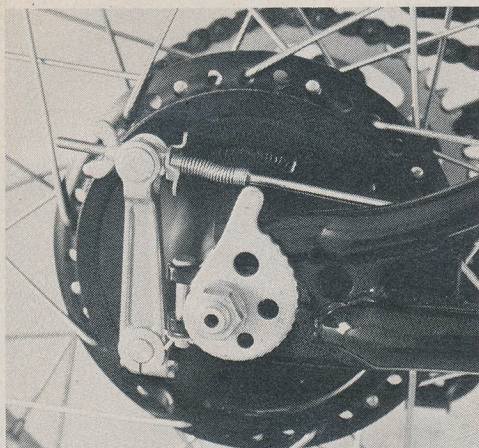
The latest IT version also sports a rerouted muffler, exiting on the left rather than the right side of the bike. The new silencer is a little shorter than the old style. The entire package is much more compact than the previous exhaust system, and, we were told by Yamaha, helps deliver just a little more bottom end as well.

Engine design is basically the same as on the C model. It is much the same lengthened connecting rod/piston design as on the YZ400. The new longer pistons, measuring 5mm longer than original YZ400 pistons, are claimed to have longer piston life, nice for a low buck enduro bike for the general masses. Horsepower rating is claimed by Yamaha at an even 40 bhp at 7000 rpm. Maximum torque is displayed at 6000 rpm, measuring 30.9 pounds per foot. Judging by seat of the pants feel, the horsepower figure is just about right on the mark. Torque seems to build up at rather low rpm, and continues to accumulate as the engine



An enormous skid plate protects the engine and the lower portions of the side cases from rocks and other unfriendly terrain enduro riders seem to come upon in their travels. The engine itself is very much like the YZ400 and powers the IT through the toughest country. All in all, we liked the bike, and would favor it for any off-road riding to be encountered.





revs rise. It is hard to note exactly where maximum torque is reached without a tachometer, but judging by the way the bike climbs some steep hills, we would have to pretty much agree with the 6000 rpm figure.

Although a large 38mm Mikuni carburetor is used, starting is rather easy. It would take generally one or two kicks to get the motor running; cold or hot. Compression ratio is 7.6:1. As with the

Enduro competition requires quick repair of any unforeseen maladies. This includes the rear tire in the event of a flat. The IT400E has quick-change axle locators to hasten this chore.



YZ motocrossers, the IT engine uses premix. Yamaha recommends 32:1 Yamahalube R. The CDI ignition is near fault-free, as our bike gave no problems here during our test, and we have had favorable comments from owners of YZ400's with similar ignitions.

The headlight and taillight are charged from the flywheel magneto, and so cannot be turned on unless the engine is running. The headlight has a high and low beam, and although not recommended for night riding, will suffice if the rider is caught out after dark. It is intended, however, to be used for foul weather when daylight conditions are not at their absolute best. The 400E does not have the headlight shield as on the C.

The IT400 transmission is a bit of a bogus part of the bike. It shares the same middle three gears as the YZ400, but first is substantially lower and fifth is a step higher. We would rather second also be moved just a little closer to first, so there is not this sudden loss of power shifting from first to second until the engine revs can catch up to where the rider anticipates. On a flat, smooth surface, the jump from fourth to fifth wasn't bad. But on a slight incline, the revs would again take a small dump, and the rider would have to twiddle his thumbs until power could be generated again.

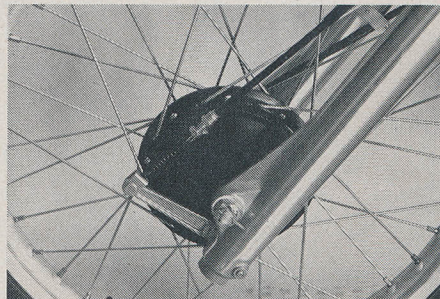
New for this year is the chain-adjusting cams, rather than the normal rear axle locators that take much time to align. The new adjuster cams allow rapid rear wheel alignment, an important aspect for the serious enduro rider who must make quick tire changes in the event of a flat. The front axle, too, has quick release tabs. Again, for those quick tire changes that keep enduro riders in the hunt after a slight misfortune of a flat tire.

While on the topic of flat tires, some enduro riders can't get accustomed to setting the bike on its side to change a flat. So Yamaha has made it easy for them. As an option, a centerstand can be ordered with the new IT400.

Yamaha has taken two steps to help maintain chain life for this bike. A spring-loaded chain tensioner, pressed against the bottom length of the chain helps maintain proper tension throughout the 7.28 inches of travel of the monoshock. A shield has been



YAMAHA IT400E



Long travel forks help to work more in unison with the monoshock. Early model IT had insufficient travel in forks, and bike handled terrible over woop-de-dooos and such.

positioned between the tire and the chain, to help prevent mud build up and to keep as much sand as possible from clogging the chain.

Mud-free serrated foot pegs are used, as well as a similar design to the rear brake pedal. The gear shift lever has the folding toe prong with return spring. If the bike is laid down, or

the shift lever happens to catch hold of an immovable obstacle, the spring will allow it to fold in. A nice feature, one we wouldn't mind seeing on other bikes, not just ITs.

If an IT owner is prone to falling down a lot, he needn't worry about replacing many parts, other than maybe hand levers and maybe handlebars. But the

fenders, both front and rear, are durable pieces of equipment. Matched sky blue to the gas tank, they are made of a durable polypropylene plastic. The front fender is wide, and catches most of the mud and rocks flung up at the engine. The rear fender also scoops down, and is a big improvement on earlier IT design.

Situated above the headlight is the speedometer, which now has central location. It takes its drive off the front hub, nothing fancy. Shielding the speedometer is a front number plate that bends if bumped (generally from a crash) as we found out the hard way.

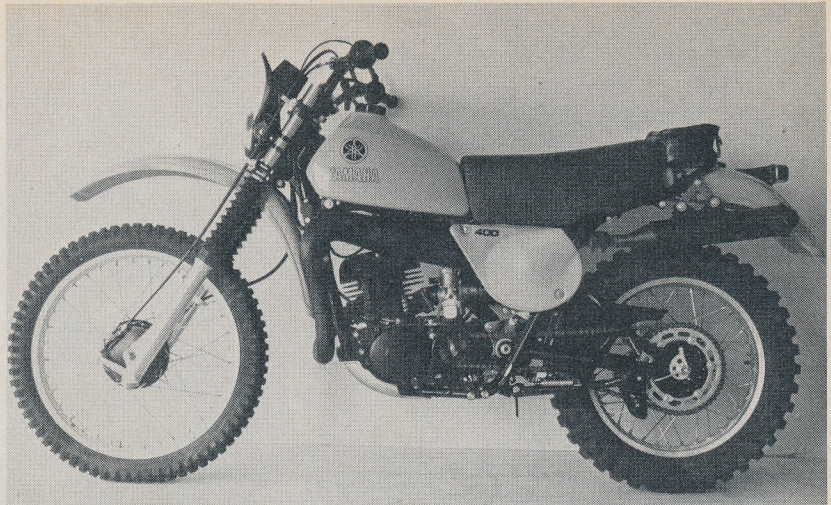
The seat received additional padding, and is more contoured to the rider's buttocks. As a result, the seat is also lower. Also lowered is the handlebar location. We didn't like this, especially during standup riding conditions. Our five-eight test riders even found it discomforting. We tried positioning the bars forward more, but this aggravated sitdown riding. Our recommendation is to change handlebars to something more comfortable to you. Especially if you plan to compete in enduro events on your IT. Rider comfort is one of the most important aspects to consider, don't sell it short.

Foot peg location seemed rather comfortable. We didn't note any drawbacks here. Gear shift and brake pedal were both easy to reach. The right side kick starter was easy to reach. The 34-plus inch high seat made it almost mandatory that the rider set the side stand down for kick starting, though.

Although the IT400 has a spacious 9.4 inches of ground clearance, Yamaha endowed it with one hefty skid plate under the engine. Made of thick plate aluminum, it shrouds portions of the engine cases on the side too. This is one nice looking skid plate, and should protect the engine's lower portions from many a mean rock or log.

Other conveniences include a typical motorcycle tool kit stuffed inside the fender mounted bag. There is room inside the bag for a spare spark plug, tire patch kit (or complete tube), and any other necessities an enduro rider might find comforting during a break down.

To show our confidence in the IT400E, we will be taking it down to the Baja California peninsula next month for a weekend folly at Mike's Sky Ranch. One of our editors has volunteered to join several other pleasure seeking motorcycle misfits for the 150 mile trip. We'll give you a complete rundown as to how the bike held up next issue.



Price, suggested retail	\$1549
Engine type	Two-stroke
Cylinder arrangement	Single
Displacement	397cc
Bore and stroke	85x70mm, 3.34x2.76 in.
Compression ratio	7.6:1
Type fuel recommended	Premium
Ignition	Capacitive discharge
Carburetion	(1) VM38SS Mikuni
Claimed horsepower	40 bhp @ 7000 rpm
Claimed torque	30.9 ft/lb @ 6000 rpm
Lubrication	Premix, 32:1 Yamalube R
Transmission	5 speed, constant mesh
Air filtration	Oiled foam
Fuel capacity	3.2 gal.
Gear ratios, overall: 1st	21.03
2nd	14.14
3rd	10.77
4th	8.29
5th	6.37
Front brake	Mechanical drum
Rear brake	Mechanical drum
Front tire	3.00-21
Rear tire	4.50-18
Wheelbase	56.3 in.
Seat height	34.3 in.
Ground clearance	9.4 in.
Weight	254 lb.
Instrumentation	Speedometer, odometer, trip meter

“Although a large 38mm Mikuni carburetor is used, starting is rather easy. It would take generally one or two kicks to get the motor running; cold or hot.”