Light, quick handling, and a high revver

In last month's *Popular Cycling*, we tested Yamaha's YZ 250. This machine was the first actual works motorcycle offered as a production unit to the general public. This month, Yamaha again pulls a rabbit from out of the proverbial hat, and introduces the YZ 125. Now, not only can Dad go out and purchase a machine like the factory guys ride, but junior can accompany Dad out to the bike shop and pick up a works bike of his own.

As we're sure you've noticed, we've tested three of Japan's newest and most interesting motocrossers this month. The Suzuki TM 125, a bargain that will be tough to beat, the Honda 125 Elsinore, a machine that will be tough to beat, and now the Yamaha. Of course you wonder how it stacks up against these two other rockets. Is it as fast as the Honda? And is it as light? Does it handle as well? Is it going to cost as little as the Suzuki?

We raced them, the YZ and the Elsinore. The Yamaha is every ounce as quick, but not an ounce quicker. The Honda will pull it at top end thanks to the extra ratio in the transmission. Both bikes have identical top speeds in fifth gear, but when the Elsinore hooks sixth, adios! The fact that both bikes are equally quick may be confusing if you have already taken a peek at the dyno charts. The Yamaha delivers 14.3 hp at 10,000 rpm. But that isn't the whole story. Our chart only goes to 10 grand. We raced the engine up to 11,000 rpm where it put 15.2 hp to the ground (readings courtesy of Patraco's roller dyno). That's nearly four horses more than the nearest 125 recently tested. Why then, isn't it quicker? The answer lies in two factors. First is the suspension. The shock absorbers, Yamaha Thermal Flow units, appear to have been pirated straight off a DT-3 MX. Their dampening properties are good, but the springs are just too tight. The rear end hops under acceleration which limits the amount of time the tire spends on the ground, transmitting power. Secondly, when it is on the ground, the 3.50 Yokohama knobby does a poor job of putting the horses down. It slips and

The 125 looks identical to the YZ 250. In fact, many people thought it was a 250.

TOP RIGHT— The smallish yet attractive fuel tank holds a mere 1.4 gallons of pre-mix.

These Yamaha forks really work! The brake is great and the rims are strong as well. Fender is plastic.

Yamaha Thermal Flow shock absorbers were too stiff but displayed tremendous promise. The magnesium rear brake is ultra sensitive. Yokohama tire looks half worn when new.

slides with reckless abandon. Surprisingly though, it is very stable and predictable when leaned over through a turn.

The power comes from a seven port, reed valve, aluminum cylinder, coupled to a close ratio five-speed transmission. The power is not at all like you'd expect. Pipey, yes, but not explosive. Low end torque, although poor, will still pull strongly. The reed valves are the reason. They do not allow the back pressure, which builds during low rpm piston strokes, to blow mixture out the carburetor on the downward stroke. This means that crankcase pressure is higher, port directed scavenging more efficient, and combustion more complete.

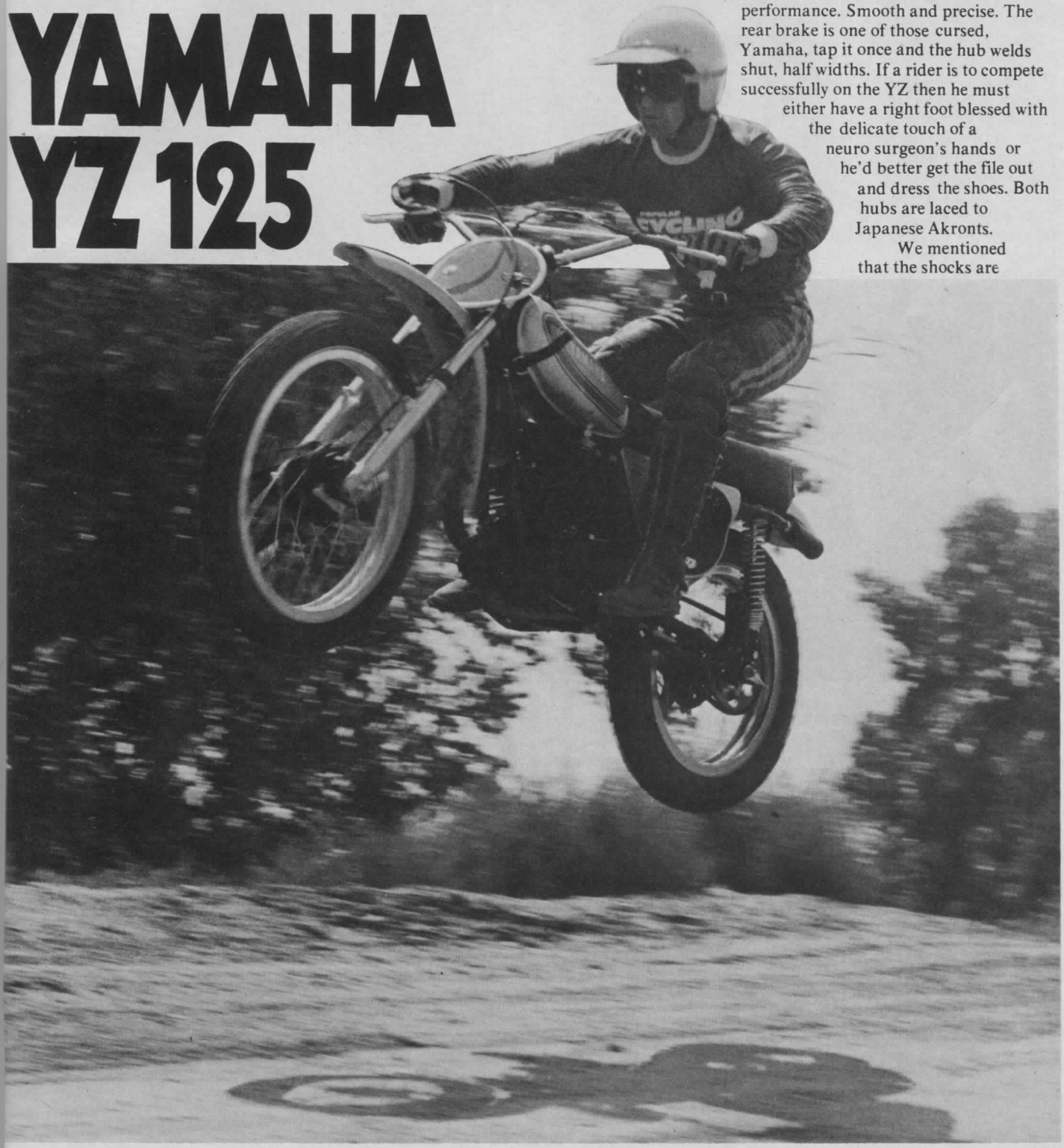
The transmission was a slight disappointment. It rarely missed a shift, but that was mainly because it didn't want to shift. If you found yourself in a situation where access to the clutch lever was not possible, you had to roll the throttle almost completely off before the next gear could be engaged. In the heat of competition, this could be very detrimental. If you could reach the clutch, then the bike shifted as well as any. As usual, downshifts were never any problem.

The YZ is light. As light as it can legally get according to the FIM. We weighed it in at 180 lb. with no gas. If the oil were removed from the forks, shocks, and the transmission, it would be at the 176 lb. limit.

The hubs are one of the things that keep the weight down. They are made of magnesium. The front binder is a full width unit which is very similar to the AT-3 MX brake both in size and performance. Smooth and precise. The rear brake is one of those cursed, Yamaha, tap it once and the hub welds shut, half widths. If a rider is to compete successfully on the YZ then he must either have a right foot blessed with the delicate touch of a neuro surgeon's hands or he'd better get the file out and dress the shoes. Both hubs are laced to Japanese Akronts.

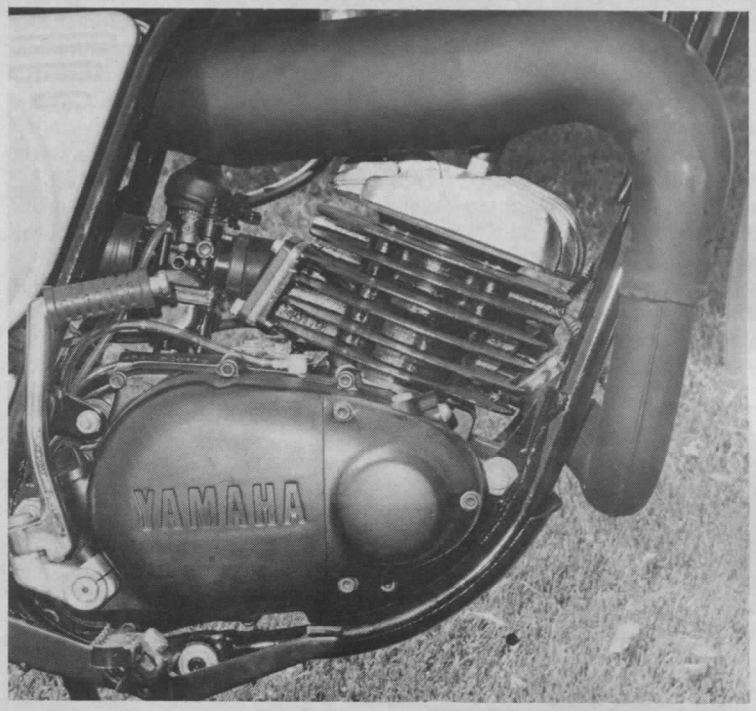
We mentioned that the shocks are

YAMAHA YZ 125

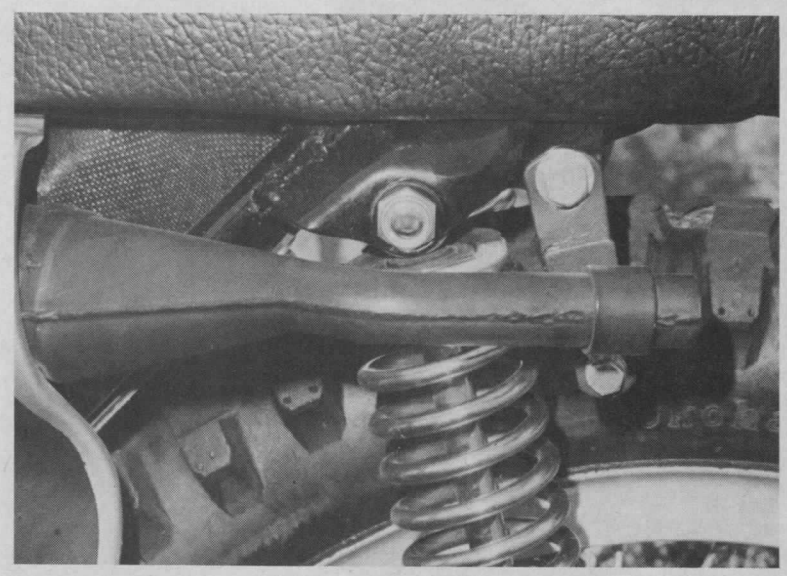


stiff, but the front forks are exactly the opposite. Appearance dictates that they came directly off an AT-3 MX. The internals are different though because these forks work well. They do not bottom, but they are soft. Since the dampening is excellent, all that is needed to rectify the problem is a stiffer set of springs.

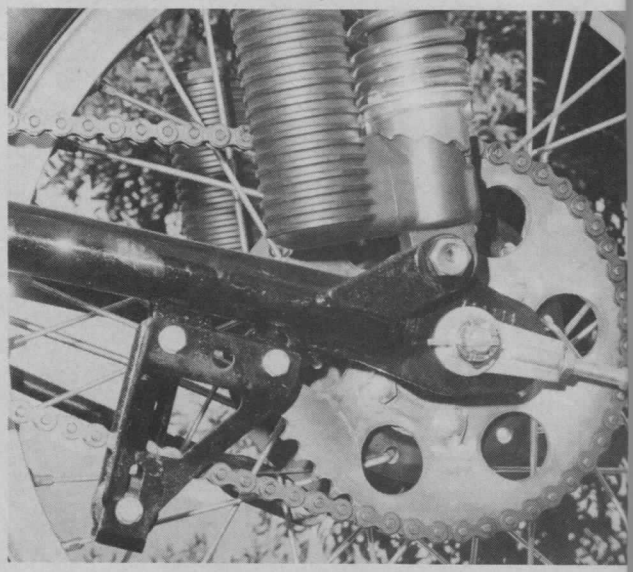
The slim, mild steel chassis sports a 53-in. wheelbase, which feels about two inches shorter. This sensation is caused by the manner in which the YZ corners. With other machines you drive into a corner, gas it as you execute your change of direction, and motor away. With the YZ you go *in and out*, just about as quickly as you can say those three words. Pulling power out of a corner is second to none. Again, the tire seems to offer more traction when the bike is leaned over than when upright. The tighter and twistier a track is, the more the YZ likes it. In this way it is much like the Suzuki, although the YZ rider need not hold his breath in fearful dread when entering a heavily potholed turn. Smooth it isn't, but it won't pitch you off.



Reed valve engine does nothing sudden. The power though, peaks at an incredible 11,000 rpm.



Exhaust tip exits by the left shock absorber. Unfortunately, our test bike did not come equipped with a silencer.

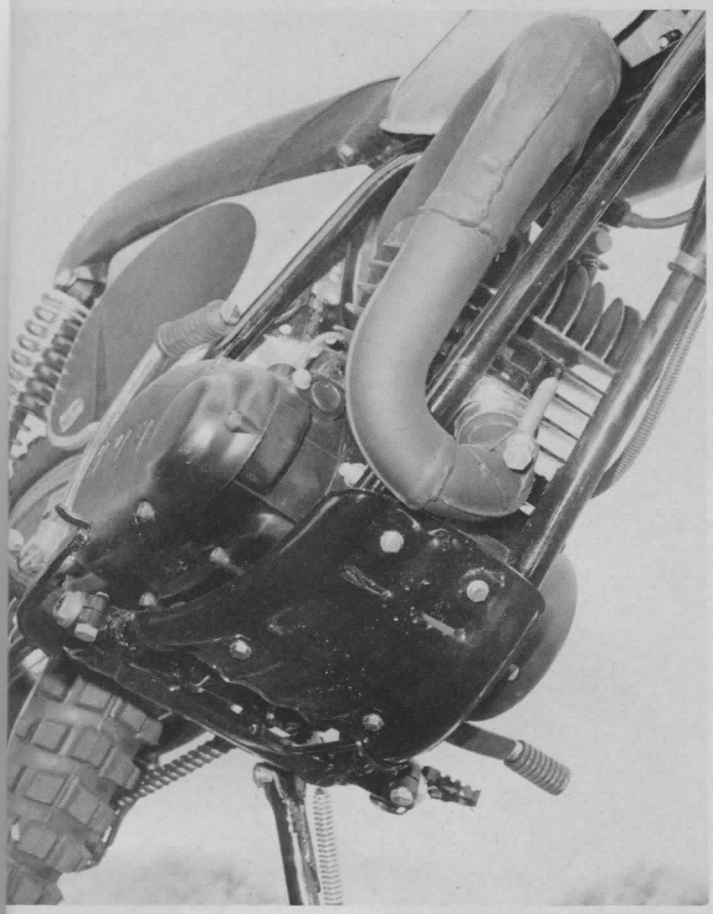


ABOVE RIGHT— Chain guide, alloy sprocket, and notched chain adjusters are an exemplification of Yamaha fine touches.

All the controls on the YZ are right where they belong. There are a few modifications or adjustments a taller rider might wish to make. One of these is lengthening the shift lever. Shifting throw is short and the lever gets in the way of a big size boot. This can cause accidental downshifts. Not the most desirable trait when leaping full throttle off a suicidal jump. Most people will throw the hard handlebar grips away and replace them with softer Doherty types. Levers are the "bend before they break" kind and come equipped with their grit blocking rubber boots. Footpegs are great. Serration keeps boots from slipping off in the wet. The pegs fold to deter injury in case of a fall and are also spring loaded.

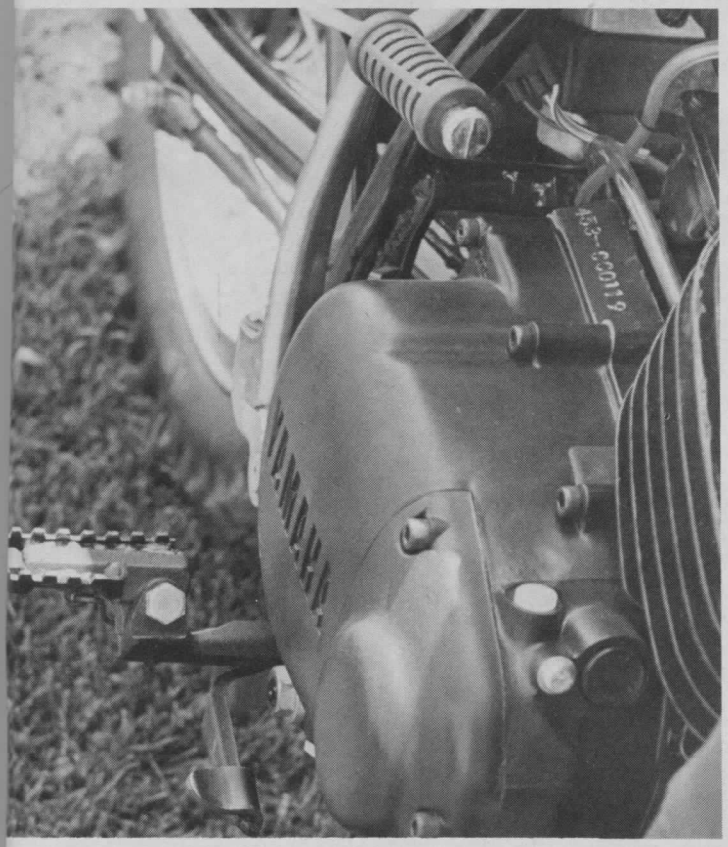
For finishing touches, Yamaha has equipped the YZ with an extra comfortable seat, an up pipe routed through the frame and away from the rider's leg like their bigger motocrossers, and a small bash plate. What Yamaha forgot to do was attach a muffler to the pipe, and use a narrower right side case, contoured to the internals like the YZ 250. The 125 does not have an autolube system, so all the factory did was plug up the holes and stick the standard bulbous AT-3 side case on. Come on guys, this is supposed to be a works bike.

The Yamaha YZ 125 is a very light, comfortable motorcycle which is at least as fast as any other 125 and handles very well despite so-so suspension. The bike is really good, and borders on being an excellent purchase. What Yamaha decides to charge for the YZ in the end will be the deciding factor.



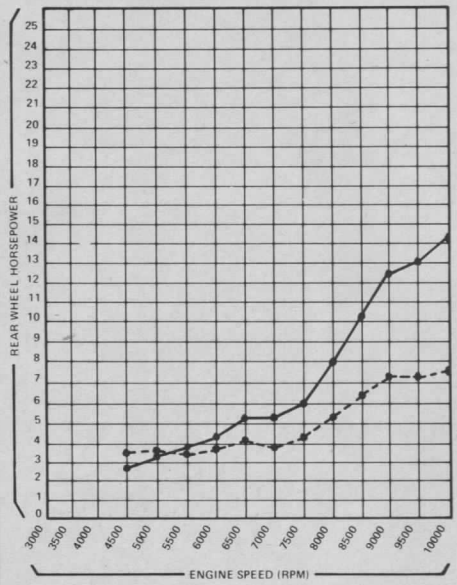
Diminutive skid plate will do little to protect the outer cases from damage. Exhaust pipe is routed through the frame.

Footpegs are excellent and kickstarter tucks in out of the way. The YZ should have a contoured side case instead of the standard one.



YAMAHA YZ 125

DYNAMOMETER TEST REPORT



TORQUE	
10000	7.5
9500	7.2
9000	7.2
8500	6.4
8000	5.3
7500	4.2
7000	3.9
6500	3.8
6000	3.7
5500	3.4
5000	3.5
4500	
4000	
3500	
3000	
2500	
2000	

TORQUE _ _ _ _ _

HORSEPOWER _____

SPECIFICATIONS

PRICE

Suggested retail . . . . . N/A

ENGINE

Engine type . . . . . two-stroke, piston-port, single-cyl.
Horsepower/rpm . . . . . N/A
Torque/rpm 11.9/9500
Bore and stroke
in. . . . . 2.205 x 1.969
mm . . . . . 56 x 50
Displacement
cu. in. 7.5
cc 123
Compression ratio 8.0:1
Carburetion . . . . . 28mm Mikuni
Ignition . . . . . CDI

TRANSMISSION

Speeds . . . . . five
Primary drive . . . gear, straight-cut
Clutch type . . . . . wet, multi-disc
Final drive . . . . . chain, 1/2 x 5/16

CHASSIS

Length, overall, in. 79.3
Wheelbase, in. 53.0
Ground clearance, in. 10.2
Weight, overall, lb. 180
Frame type . . . . . double cradle
Tire size
front . . . . . 3.00—21
rear . . . . . 3.50—18