

**MODERN  
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# CYCLE

**CHOPPING AN XL FRAME**

**HODAKA SUPER RAT TEST**

**THE MINT 400**

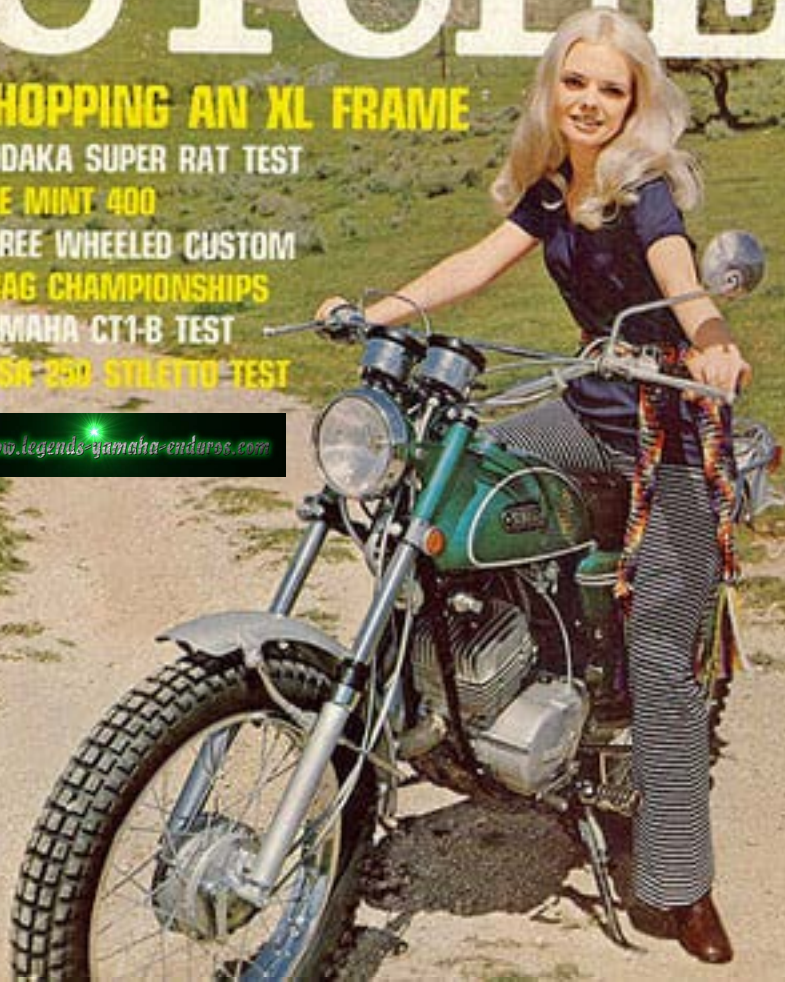
**THREE WHEELED CUSTOM**

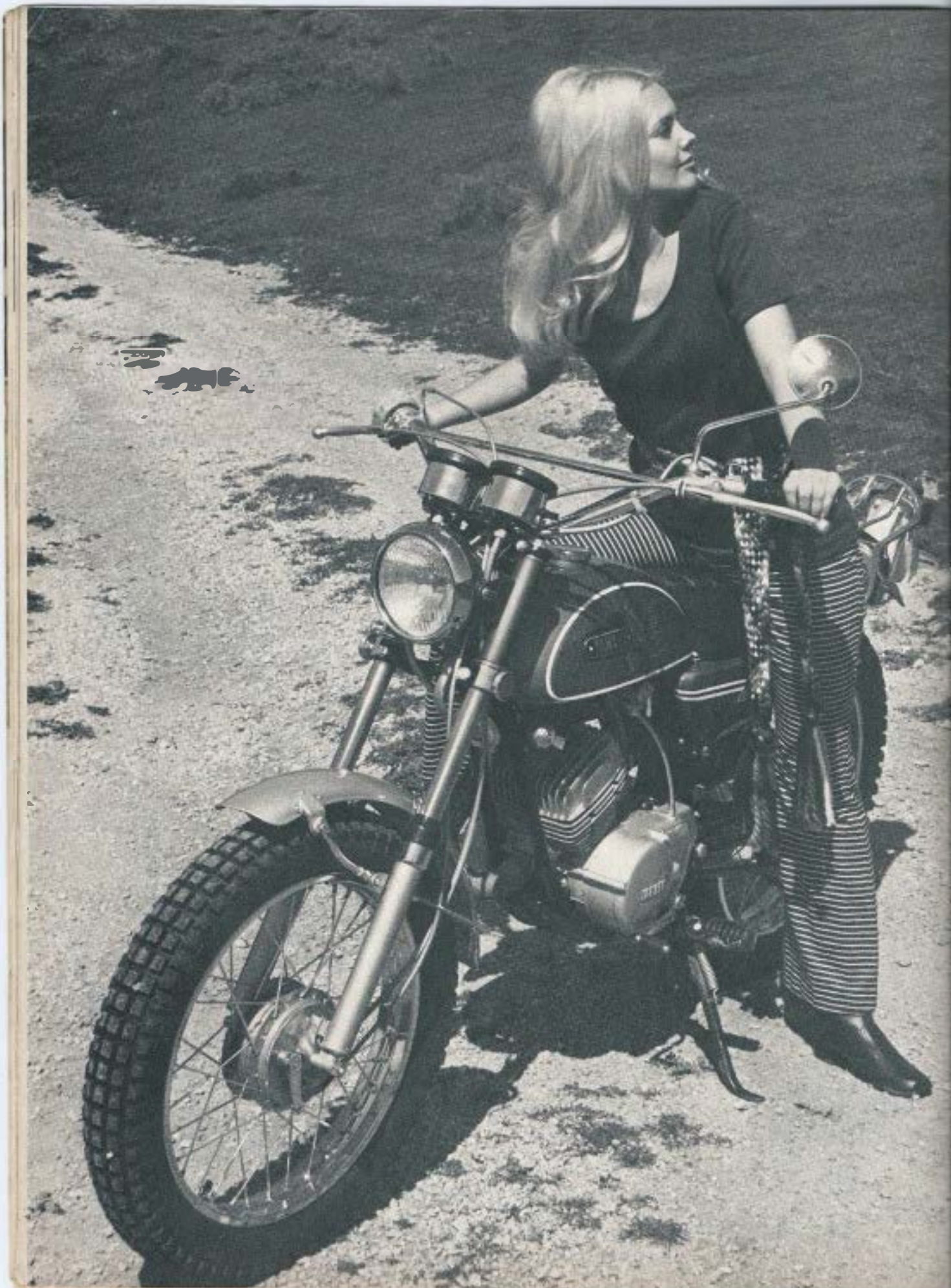
**DRAG CHAMPIONSHIPS**

**YAMAHA CT1-B TEST**

**DSSR 250 STILETTO TEST**

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The series of motorcycles that Yamaha labels Enduros is truly a phenomenon in motorcycleing. Just the Enduro line and its acceptance with the buying public would be enough to satisfy most motorcycle manufacturers. The first Enduro, the 250cc AT-1 started a trend that was quickly followed by other manufacturers, Yamaha just as quickly broadened the basic aspect of the machine by offering it in several other displacement capacities. The first to appear was the 125cc AT-1. The AT-1 proved to be every bit as successful as its 250cc brother; it in turn has been followed by machines of 90cc, 175cc, and the just released 360cc RT-1.

All machines in the Enduro line are basically the same. The power is provided by a single cylinder two-stroke engine with induction controlled by the rise and fall of the piston. All of the engines are very clean in appearance, and all have proven to be very willing work horses. Were it not for the different color schemes, it would be almost impossible to tell one displacement ma-

chine from another. All are stylish and in the short time of their existence the Enduros have become almost "classics." Originally, the Enduros were offered as dual purpose machines (though more for the dirt than the street). GYI kits were available for the owner who wanted to turn his machine into an all out racer. Now, two versions of each model are offered to the public; the one known as the Enduro is still a dual purpose machine, the other identified by the letters MX is an out and out racing bike.

With the exception of the subject of this report, all the Enduro models from Yamaha adhere to accepted displacement categories. The 90, the 125, the 250, and the 360 are all common racing displacements. The 175cc model, the CT-1B is something else again. We assume that Yamaha, not satisfied with just filling the needs of the potential racer, is aiming at the trail rider who wants something a little better. The 175 Enduro certainly falls into this category. The CT-1B is one of the best trail con-

ditions we have ever had the pleasure of riding. Perhaps it is best to pause here and give our definition of a trail bike. We feel that a trail bike should be able to carry the rider and a total amount of gear for great distances with complete reliability. The machine should be fast, but not necessarily "quick." At least not quick in the way in which a city road cross racer is quick. Suspension should do the required job of absorbing most of the jolts, and the steering should be forgiving without being sloppy. Probably most important, a good trail bike should be comfortable. It's no fun heading up into the mountains or out into the woods on a machine that is slowly beating you to death.

A good trail bike should also have enough power to get the job done. Too much power is undesirable, and not enough will find a rider in situations where he is forced to get off and push; a happy medium is what is needed. The choice of gearing is also important. A wide ratio box is desirable, mainly be-

# THE YAMAHA CT-1 B ENDURO

## FOR THE MAN WHO WANTS SOMETHING IN BETWEEN



## A MODERN CYCLE ROADTEST



The rear suspension units are three-way adjustable, allowing the rider to adjust the springing to suit varying loads. While not ideal for off road use, the universal tread patterned tire is a good compromise cover.



Front suspension on the CT-1B is quite good. Both brakes are sealed to keep out dust and water.

## YAMAHA CT-1B



The Yamaha expansion chamber type exhaust system does an excellent job of muffling the note of the single cylinder engine. The exhaust system comes with a built in spark arrester that is approved by the U.S. Forestry Service.



Excellent instrumentation on the CT-1B is evident in this photograph. Gas tank tapers back to give the rider a good grip with his knees.

cause it makes it unnecessary to buzz the engine unnecessarily. We didn't spend a lot of time on the CT-1B, but the time we did was put to good use. We found that the 175 Yamaha met almost all of our requirements.

As a matter of fact, the only time the CT-1B let us down was when we dropped it into deep water while crossing a river. Water ingested through the air cleaner system, reached the combustion chamber, and naturally extinguished the fire. In this sort of situation we can't think of any motorcycle that would have continued to function, and even under these extreme conditions the Yamaha impressed us with the ease with which we were able to get it running again. Another thing that impressed us at the time was the fact that the Yamaha brakes are indeed waterproof as claimed. The only other time the Yamaha ceased to perform was when we attempted to run through heavy snow. Again, we were in a situation where we could hardly blame our lack of progress on the motorcycle; we were in about 1 1/2 feet of snow, and short of spiked tires, there was just no way of traction.

Loaded with fuel and oil, the Yamaha CT-1B tips the scales at very close to 230 pounds. Since this is a good "trimming weight" for a 250cc dual cross racer, you might assume that the CT-1B is a bit overweight. It's important here to bring things back into focus and remember that the 175 Yamaha is not a racer—it's a trail bike! The two cycle, 5 port, single cylinder engine produces 18.6 hp at 7,000 rpm, compression ratio is 6.8:1 and power is transferred from the engine to the rear wheel by means of a 5 speed gearbox. The bore of the engine is 66 mm, and the stroke is 50 mm, giving a total capacity of 171 cc. Much of the breadth of the power band can be attributed to the 5 porting in the cylinder. This Yamaha development is also responsible for higher power output and improved engine efficiency.

Premixing fuel is an accepted fact of life with racing two-strokes. For the trail bike enthusiast, where convenience is more important than weight saving, the Yamaha Autolube injection system is the ideal solution to lubrication. With the Autolube injection system, the oil is carried in a separate tank on the left side of the machine while straight gasoline is poured into the gas tank. A compact precision built oil pump carried on the right side of the crankcase, automatically meters lubricant to the engine. The quantity of oil supplied varies according to engine speed and load. The regulation is controlled by both the revolutions of the engine and the throttle setting. Some of the advantages of the Autolube system are reduced oil consumption, greatly reduced carbon



The single cylinder Yomaha engine develops 15.6 hp at 7,000 rpm. The five-speed gearbox gives

a ratio capable of dealing with just about any kind of terrain.

built up, and also reduced emission from the exhaust pipe. No longer is the two-stroke, at least in case of Yamaha, identified by a white plume of smoke emanating from the tip of the exhaust pipe.

Speaking of exhaust pipes. The system on the CT-1B is carried high on the right side of the machine, and it is kicked in well out of the way of the rider. A sturdy chrome plated wire shield keeps the rider's leg from coming in contact with the hot metal of the exhaust pipe. Particularly attractive to the trail rider is the fact that the exhaust system on the Yamaha incorporates a U. S. Forestry approved spark arrestor. A 24 mm VM carburetor is stock equipment on the 175 Yamaha.

Connected by means of a rubber collar to the air cleaner, the carburetor is fitted with an enriching device which is fitted only when first starting the machine. Once the engine is warmed up, the bike will usually start on the first kick. The foam rubber element carried in the airbox does a good job of filtering out impurities, but at least in our experience proves to be a bit of a bear to dry out once it is wetted.

Power is transmitted from the crankshaft to the wet multi-disc clutch by means of gears. The gearbox is a five-speed constant mesh device with a ratio for just about every sort of situation you can come up in cow trailing. The ratios are wisely spaced with low gear being something of a stump puller.

The shifting lever is mounted on the left side of the machine, and the pattern is: one down for low, then up for the remainder of the speeds. The CT-1B gearbox is very smooth in operation, and lever movement is no greater than it need be. While always handy the primary kickstarting system as used in the Yamaha is particularly attractive when trail riding. With the primary kick system, it is not necessary to return to neutral before starting the machine. You simply pull in the clutch lever and beat the kickstarter. If you have ever stalled a bike on the side of a hill you can imagine how handy this feature is.

From the styling standpoint, the Yamaha engine is about as attractive a two-stroke device as you are likely to find. The case covers are smooth, unadorned, the finning on the head and barrel is generous and nicely finished, and no unsightly bulges or protrusions add to the width of the unit. The 175 power plant is also attractive in the way in which it performs. The engine starts easily, doesn't make a whole lot of noise, and it seems willing to attempt anything you ask of it. During the time we had the machine in our possession, we submitted it to some pretty brutal treatment, yet with the exception of the river crossing incident, the bike never let us down.

One of the most important requirements of a trail bike is rider comfort. After a day on the trail, you expect to be weary, but it is no fun to be dead beat from fighting a machine that is just downright uncomfortable. Comfort, at least on a motorbike, comes from several related things. The construction of the seat, the relationship between seat, handlebars, and footpegs, and the way the machine is suspended all bear on rider comfort. Quite naturally, the suspension components used on the  
(Text continued on page 38)

Make	YAMAHA	Starting System	KICK, FOLDING CRANK
Model	CT-1B	Gear Ratios	1st: 3.182; 2nd: 2.000; 3rd: 1.268; 4th: 1.000; 5th: 0.800
Engine Type	SINGLE CYLINDER, TWO CYCLE	Top Speed	63.71 MPH
Bore	66mm	Tire Size	FRONT: 3.25 x 18; REAR: 3.50 x 18
Stroke	50mm	Suspension	FRONT: TELESCOPIC FORK; REAR: SWINGING ARM
Displacement	171cc	Frame Type	TUBULAR STEEL, DOUBLE LOOP
Compression Ratio	6.8:1	Weight	213 POUNDS
B.H.P. at R.P.M.	15.6 AT 7,000 RPM	Wheelbase	50.6 INCHES
Carburetor	VM (24mm)	Ground Clearance	9.1 INCHES
Ignition	BATTERY & COIL	Peg Height	10.5 INCHES
Fuel Capacity	1.9 GALLONS	Seat Height	30 INCHES
Lubricating System	AUTOLUBE (Injection)		
Clutch Type	WET, MULTI-DISC		
Final Drive	CHAIN		