

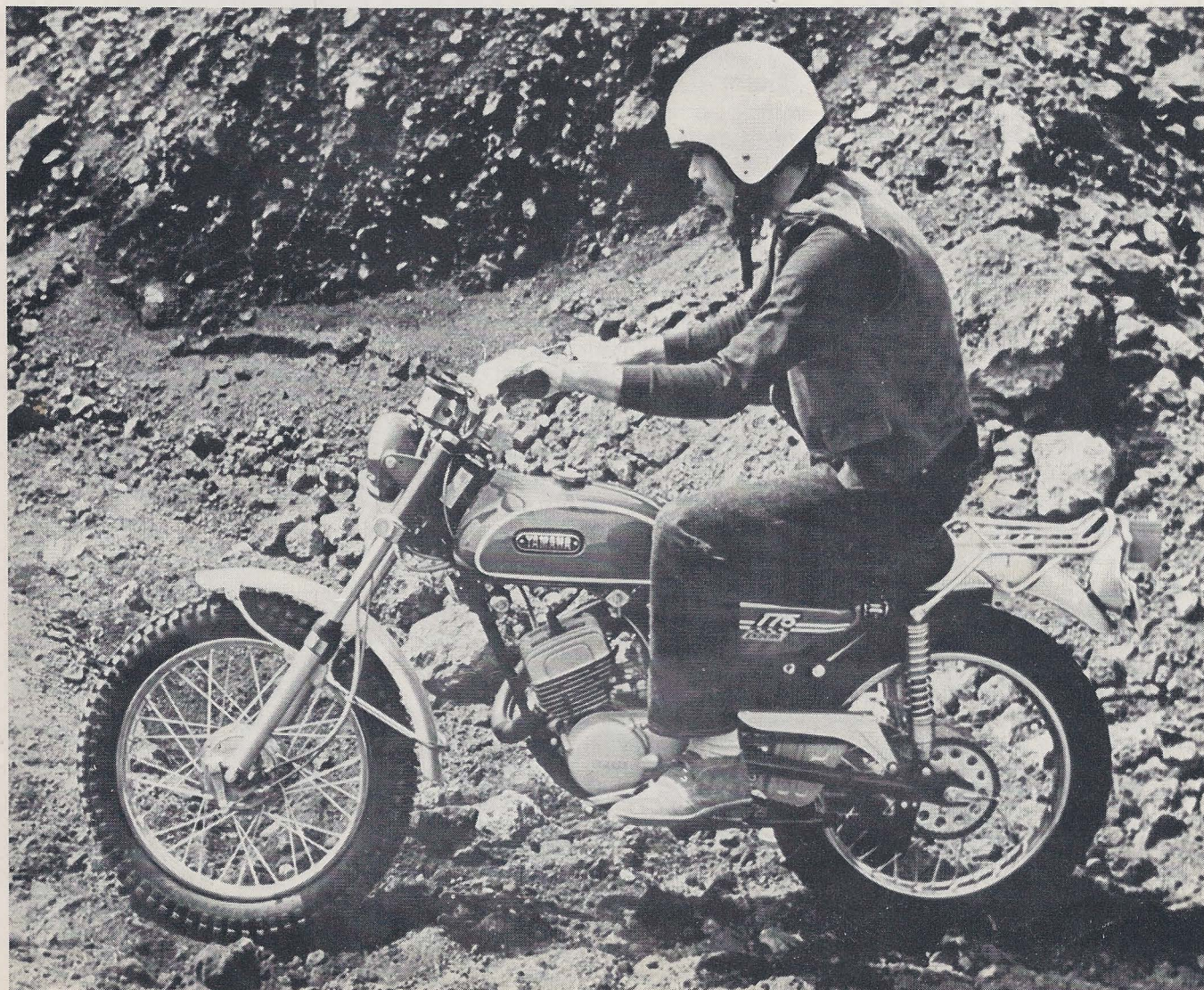
THE PERFECT IN-BETWEENER -THE 175 ENDURO

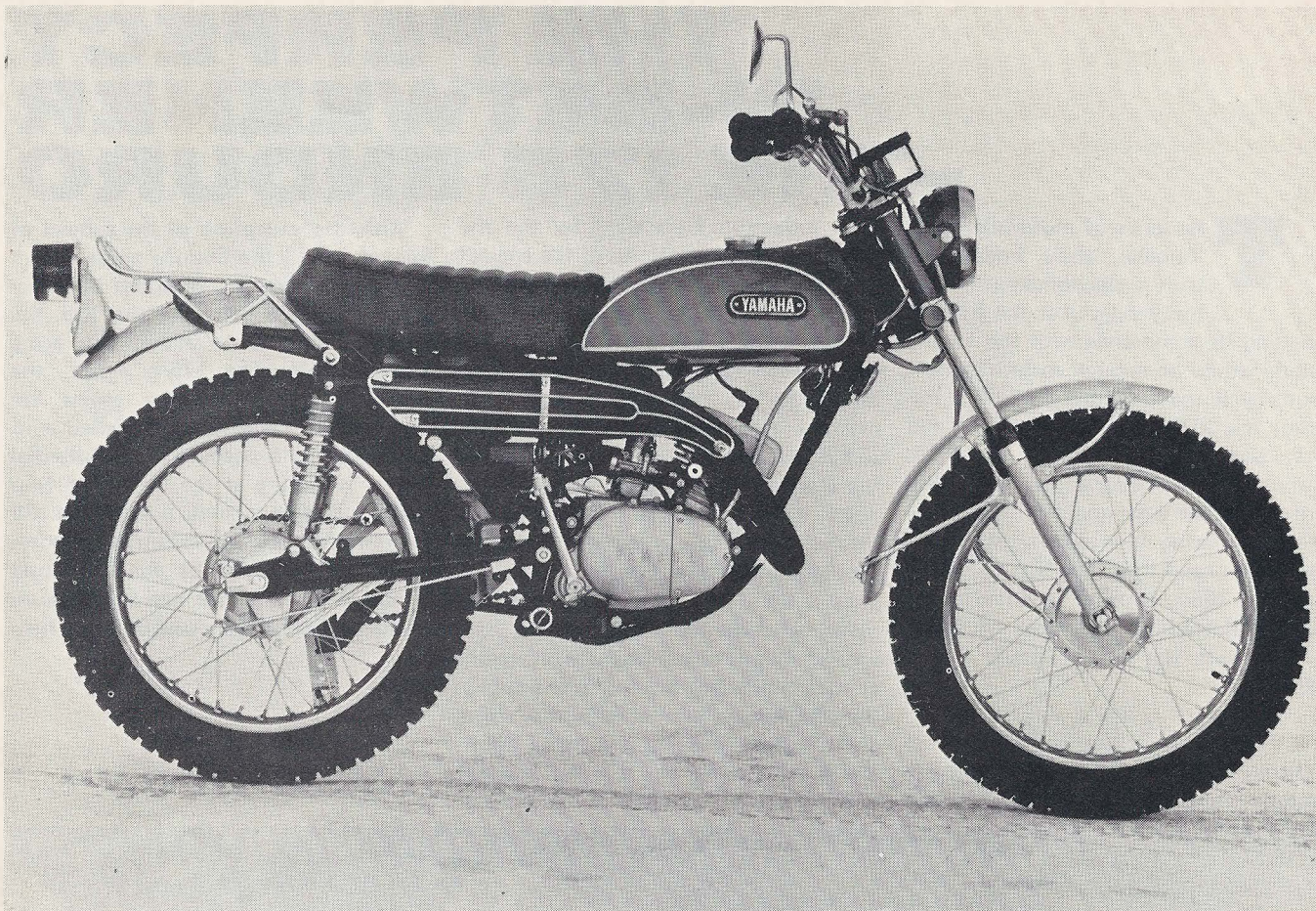
The series of motorbikes that Yamaha labels Enduros is truly a phenomenon in motorcycling. Just the Enduro line and its acceptance with the buying public would be enough to satisfy most motorcycle manufacturers. The first Enduro, the 250cc DT-1 started a trend that was quickly followed by other manufacturers. Yamaha just as quickly broadened the basic appeal of the machine by offering it in several other displacement capacities. The first to appear was the 125cc 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 machine 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). GYT 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 racers, 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 machines 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 small 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 real motocross 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.

The balance of power is right on the mark which makes riding fun and easy.

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 because it makes it unnecessary to buzz the engine unmercifully. 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 motorbike; we were in about 1½ 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 "fighting weight" for a 250cc motocross 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

15.6 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.

Positive lubrication assures that critical wear areas are under no strain.

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

Five-speed gearbox and easy clutch make riding a real joy.

Speaking of exhaust pipes, the system on the CT-1B is carried high on the right side of the machine, and it is tucked 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 arrester. 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 a richening device which is needed 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 wet.

Power is transmitted from the crankshaft to the wet multi-disc clutch by helical gears. The gearbox is a five-speed constant mesh device with a ratio for just about every sort of situation you can come upon in cow trailing. The ratios are nicely 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 kick-starting system as used in the Yamaha is particularly attractive when trailriding. 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 boot the kickstarter. If you have ever stalled a bike on the side of a hill, you can imagine how handy this feature is.

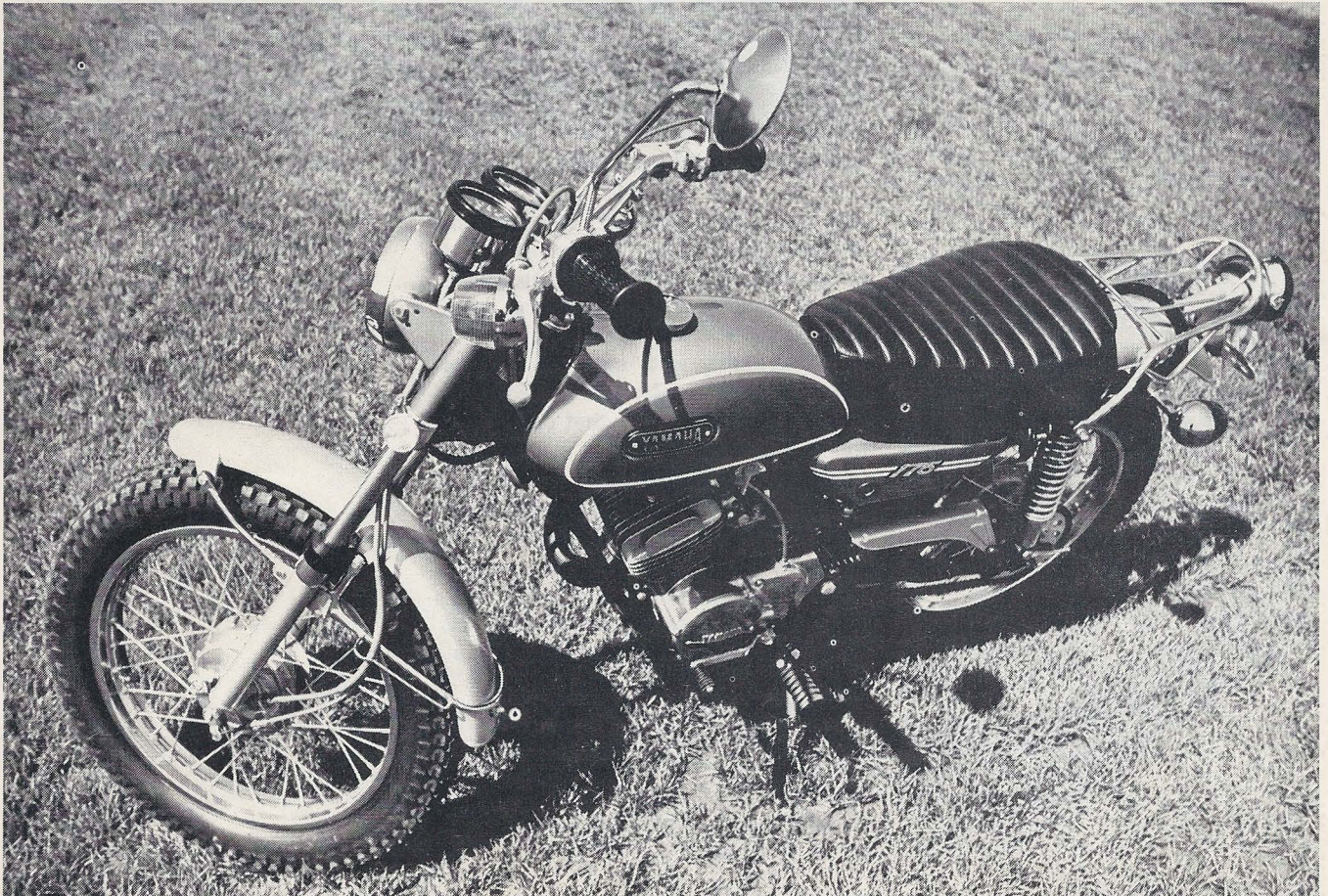
Engine finishing is as nice as you'll find

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 smoothly contoured, 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.

Rider comfort, always a problem for trailbikes is a plus for the 175.

One of the more important requisites of a true trail bike is rider comfort. After a day on the trails, 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 CT-1B resemble those used on other machines in Yamaha's Enduro line. The fork legs are secured by pinch bolts at the triple clamp, and cap nuts at the fork crown. Between the crown and the triple clamp,



Styling follows Yamaha Enduro lines and the 175 is the perfect "first" dual-purpose bike.

the legs are covered with metal shrouds that provide the tabs on which the headlight is hung. Below the triple clamp the legs are exposed and rubber caps on the sliders keep them wiped clean. These caps also keep moisture and dirt from entering the damping portion of the forks. A pair of five-way adjustable shock absorbers furnish suspension at the rear of the motorbike. Plastic cylinders carried inside the springs keep dirt from reaching the damping rod. The exposed chrome plated springs add to the overall racy appearance of the machine.

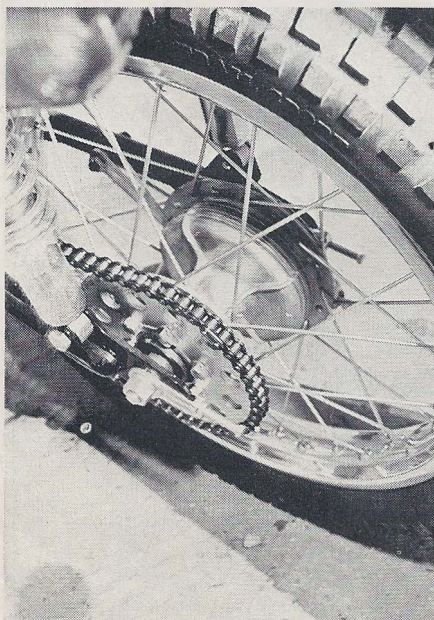
There is no need to rhapsodize over the manner in which the Yamaha suspension functions; suffice to say that it works as intended. We don't mean to say that the suspension on the CT-1B is perfect; hit a large enough pot hole with sufficient speed, and you're sure to get one helluva whang at the handlebars. Of course, the same thing can be said about any form of suspension ever created.

Classic double loop cradle designed frame.

Constructed of tubular steel, the frame on the Yamaha 175 is a classic double loop cradle device. Most of the strength of the unit is furnished by the large diameter backbone tube connecting the steering head with the nose of the subframe loop. A pair of smaller diameter downtubes descend from the steering head and pass under and cradle the power plant. A substantial bash plate protects the underside of the engine and aids in keeping the cradling members parallel. The swinging arm is a



The right side exhaust, although mounted high, is completely out of harm's way.



The light alloy rear hub.

robust device constructed of medium diameter tubular stock. The pivot points are set outboard of the frame members, and a very sturdy cross brace lends added rigidity to the arm.

Substantial gussets are used in areas where additional strength is required. The glossy black paint that covers the frame is well applied, and most of the welds are nicely finished. To a person familiar with out and out racing machinery, the frame on the Yamaha CT-1B would appear to be heavier than necessary. In our opinion, this is a situation where weight equals strength, and we prefer the strength along with the reliability it offers.

Reliability is the sort of thing that creates confidence. To really enjoy a trail machine you've got to have confidence in it, confidence that the bike will bring you back. The CT-1B instills that sort of confidence.

Reprinted from
"Modern Cycle"

