YAMAHA DT3 ENDURO

Totally Reliable Transportation . . . On Or Off The Road

■ YAMAHA'S DT3 Enduro is truly an incredible motorcycle. Here's a bike that has changed very little, yet has remained a top seller for the past five years. That's right. For Five Years.

Perhaps the reason Yamaha has enjoyed such a long run with its 250 Enduro is that it was first...the first Japanese, that is, to build a machine designed specifically for the American dirt rider.

The original, of course, was the DT1, and it simply outpaced the competition in 1968. For one thing, it was a rangy motorcycle, something a tall American could sprawl out on. Front forks were exceptional. The engine was unsurpassed for smooth power delivery. And, there was a five-speed transmission.

For 1973, the same characteristics remain, only now they must be viewed as both essential and commonplace. Industry has finally caught up.

Cycle World Road Test

Consequently, Yamaha has had to modify its makeup approach somewhat. It no longer bills it as a do everything off-roader. Now, Yamaha's talking reliable dual-purpose machine, and that's exactly what the DT3 is.

Reliability it has inspirades. The DT3 is the kind of bike you can pour gasoline in and then ride for hours without fouling a plug or losing any nuts or bolts. It's really foolproof.

Heart of the system is a single-cylinder two-stroke that currently produces 24 bhp. Both barrel and head are aluminum alloy with adequate cooling fin area as long as the engine remains stock.

The barrel, with pressed-in iron liner, is currently of seven-port design with a reed valve block bolted into the intake tract. The reed valve allows delivery of additional fuel and air through a specially windowed, two-ring piston and prevents backing up of the fuel charge into the intake tract when the crankcase is pressurized. The result is a slight increase in performance without sacrificing economy or tractability.

Needle bearings are used on both ends of the connecting rod and the crankshaft rides on ball bearings, as is the case in most Japanese two-strokes.

Power is taken from the right side of the crank and is delivered to a wet, multi-disc clutch via helical cut gears. The transmission is still five-speed, with both excellent gear spacing and primary kick starting.

Unfortunately, this excellent power unit is housed in a frame that has received little, if any, attention over the years. For sedate riding, or in woods where rough speed is impractical, the stock component is adequate. High speed handling, however, is still a problem. Excessive ground clearance is the culprit. You just can't have ultimate control over whoop-de-doos with a high center of gravity.

Until Yamaha sees fit to update the chassis itself, the only solution is to lower the engine. Several accessory firms make lowering kits at reasonable prices. Some will even do the work, but usually request the bare frame.

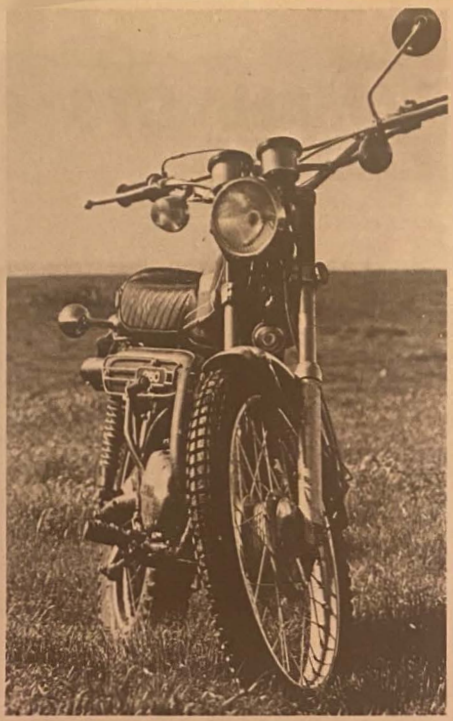
Suspension has received considerably more thought. Front fork damping and spring rate are excellent. Even though they are on the soft side of the scale, topping or bottoming never occurs.

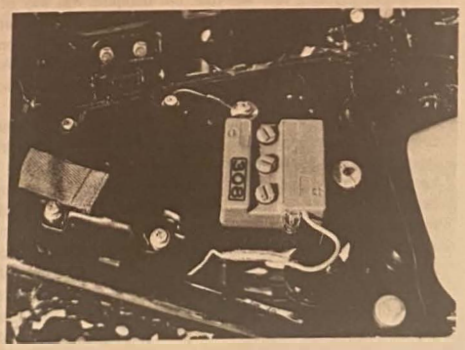
The forks don't leak, either—even after repeated abuse. This is no doubt due to the use of aluminum dust seal covers over the actual seal, instead of simply relying on the seal alone.

Rear shocks are not nearly as good as the forks, but they are a lot closer to being ideal than the original components. On the originals, spring rate was fine, but damping was way off. At that time, Japanese engineers insisted on 50 percent compression and 50 percent rebound damping. Heavy compression damping prevented the shocks from absorbing impacts quickly enough. Consequently, the rear of the bike was thrown into the air.

On the DT3, shock action has been improved by lessening compression damping. And when cold, the units work surprisingly well. Now, all the engineers have to do is find a way to keep damping consistent. If the DT3 is ridden hard, enough heat is generated in the shocks to thin the oil, thereby reducing damping. Rear wheel hop then occurs.

In addition to these suspension modifications (introduced in 1972) the DT3 has benefited from the substitution of a 21-in. front wheel in place of the original 19 incher. Going to a larger diameter wheel has improved steering precision immeasurably. Now riders can select a path through rocks without





fear of sliding into ruts or other trail pitfalls.

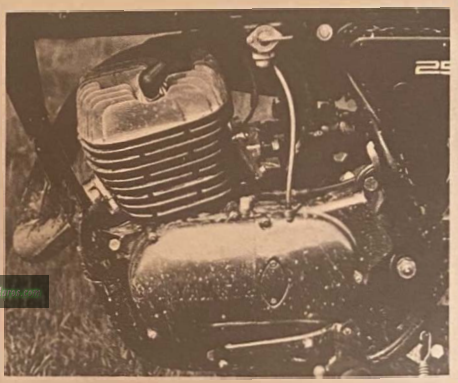
The 3.00-21 in. trials tire, however, is a bit narrow for really rough going. In mud, the narrow tire causes the front end to plow. In sand washes, the tire tracks in ruts and is reluctant to carve its way out. Substitution of a knobby, preferably a 3.50-21, should cure all of these problems.

A 4.00-18 comes standard on the rear. While this trials pattern tire is an excellent choice for all-round riding, those spending most of their time on trails will probably change to a knobby. Keep in mind, however, that knobbies are not ideal for all types of terrain. If you spend a good deal of time on paved roads, avoid them.

As far as handling and performance changes go, that's about it. But there have been several detail modifications worthy of comment.

The most beneficial of these is a new air cleaner element design. The inner surface of the element is still wet, polyurethane foam, but the outer portion is now covered with a porous fuzzy material. This fuzz provides more surface area, which lessens the chance of clogging and helps shed water before it saturates the inner foam area.

The new element is housed in a compact still air box



located under the seat. Air is drawn in toward the back and four easily removed screws allow the top to be taken off for servicing of the element.

Remaining modifications are concerned with stricter licensing standards. Turn signals continue to be standard and last year, battery capacity was increased to 3 amp/hour to drive them. While on the subject of turn signals, it must be noted that the rear units will be damaged beyond repair almost every time the bike is laid down off-road. Fortunately, their removal and reinstallation is a snap.

In addition, there are amber side reflectors on the forks, and additional rear facing red reflectors mounted to the taillight bracket. Taken in total, this assortment of required paraphernalia accounts for approximately 35 lb. of excess weight. There is simply no way to be completely legal and light at the same time.

Because of these added legal requirements, and because of Yamaha's reluctance to redesign the frame, the DT3 comes across quite differently than that original "do everything" machine.

Instead of being part racer, the DT3 offers totally reliable off-road transportation. It's ideal for traveling to some far-off ridge...just to see what's on the other side.

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SPECIFICATIONS

List price	$859
Suspension, front	telescopic fork
Suspension, rear	swinging arm
Tire, front	3.25-21
Tire, rear	4.00-18
Brake, front, diameter x width, in.	5.9 x 1.0
Brake, rear, diameter x width, in.	5.9 x 1.0
Total brake swept area, sq. in.	37.0
Brake loading, lb./sq. in. (160-lb. rider)	11.5
Engine, type	two-stroke Single
Bore x stroke, in., mm	2.76 x 2.52, 70 x 64
Piston displacement, cu. in., cc	15.01, 246
Compression ratio	6.8:1 (corrected)
Claimed bhp @ rpm	24 @ 7000
Claimed torque @ rpm, lb.-ft.	17.76 @ 6000
Carburetion	VM26SH Mikuni
Ignition	flywheel magneto
Oil system	oil injection
Oil capacity, pt.	3.5
Fuel capacity, U.S. gal.	2.5
Recommended fuel	premium
Starting system	kick, folding crank
Lighting system	6V alternator
Air filtration	wet, polyurethane foam
Clutch	multi-disc, wet
Primary drive	helical gear
Final drive	single-row chain
Gear ratios, overall:1	
5th	7.44
4th	9.72
3rd	12.68
2nd	17.39
1st	24.63
Wheelbase, in.	51.5
Seat height, in.	32.3
Seat width, in.	10.5
Handlebar width, in.	31.0
Footpeg height, in.	11.75
Ground clearance, in.	10.0
Curb weight (w/half-tank fuel), lb.	270
Weight bias, front/rear, percent	44.5, 55.5
Test weight (fuel and rider), lb.	430

TEST CONDITIONS

Air temperature, degrees F	59
Humidity, percent	71
Barometric pressure, in. hg.	29.69
Altitude above mean sea level, ft.	1632
Wind velocity, mph	5-7
Strip alignment, relative wind:	

PERFORMANCE

Top speed (actual @ 7760 rpm), mph	76
Computed top speed in gears (@ 7500 rpm), mph:	
5th	73
4th	58
3rd	42
2nd	33
1st	24
Mph/1000 rpm, top gear	9.8
Engine revolutions/mile, top gear	5860
Piston speed (@ 7500 rpm), ft./min.	3155
Lb./hp (160-lb. rider)	17.9
Speedometer error:	
50 mph indicated, actually	50
60 mph indicated, actually	59
70 mph indicated, actually	67
Braking distance:	
from 30 mph, ft.	38
from 60 mph, ft.	129
Acceleration, zero to:	
30 mph, sec.	3.7
40 mph, sec.	5.0
50 mph, sec.	7.0
60 mph, sec.	10.1
70 mph, sec.	17.5
Standing one-eighth mile, sec.	10.21
terminal speed, mph	60.18
Standing one-quarter mile, sec.	17.78
terminal speed, mph	71.00