

Cycle Test

YAMAHA DT250D

The DT Enduro fathered the off-road boom. The D-model is new but the concept is the same.

● RIDERS NOT CLOSE TO YAMAHA'S ENDURO BIKES WON'T NOTICE THE difference. But Yamcha buffs will feel the difference the first time they ride the new DT250D Enduro: it's significantly better than any of its nine predecessors. New cosmetics, paint and styling set the D-model apart from previous 250cc enduros—but these are not the new DT's most important features. More than ever before the Yamaha Enduro works in complete harmony with itself and the rider—on the street and on the trail.

It's difficult to believe that the DT250 Enduro is in its tenth consecutive season. It is not just a veteran, but a true classic in motorcycling, a status seldom awarded to dirt bikes. Generally, new dirt bikes become old play bikes before they have weathered



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YAMAHA DT250D

their first season. No segment of the sport moves with the technological speed and determination of the dirt bike world.

The DTs have not had it easy in a market where survival is often determined by the angle of a shock absorber, length of suspension travel or number of horses. The off-road boom created by the original DT-1 in 1967 has splintered into many factions, but Yamaha's 250 Enduro still retains the special niche it carved out a decade ago. It would take a publication the size of an encyclopedia to detail all the changes and improvements made to the ten DT Enduros. They number in the hundreds, possibly thousands. But the concept has not changed: the DT250D is a street-legal trail bike, just as it was in 1967. In the late Sixties special performance packages were offered for those who wanted more power and didn't care

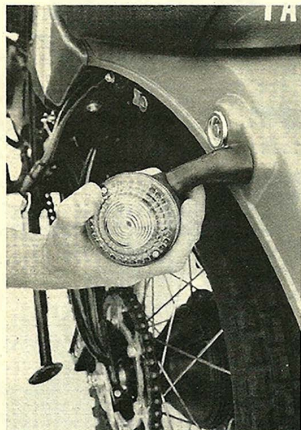
about street legality. (Genuine Yamaha Tuning) kits pumped power up from a claimed 22 bhp (stock) to 30. By installing a GYT cylinder, head, piston, carburetor and pipe, a rider could strip the street paraphernalia from the DT and go racing—and tens of thousands did.

While the GYT-kitted DTs were instant successes on race tracks, most Enduro owners used the bikes for their intended purpose: street commuting and weekend trail-riding. That is what the DT still does best. The new styling motif gives the Yamaha a custom look without impairing function. The gas tank holds the traditional 2½ gallons and the oil injector contains 1.2 quarts. Moderate riding gives the Enduro a fuel range of 75 miles; the oil won't require replenishment for 150 miles or more.

Yamaha has always made dirt bikes with high levels of rider comfort, and the DT250D improves on that reputation. The long saddle is thickly padded with foam

that is soft during initial compression but does not let the rider's cheeks find the metal seat base on long rides. Footpeg location and design prevent leg discomfort, and the pegs have excellent boot grip surfaces. The handgrips conform nicely to most palm sizes and the aluminum levers are laminated with a scratch-resistant plastic.

The compliant ride which the new monoshock DT delivers on all road or trail surfaces contributes further to rider comfort. The DT250D's rear suspension system is similar to those used on Yamaha's race bikes for the last three years. A single damper and spring assembly is fitted between the steering head and triangulated rear swinging arm. The monoshock damper is a sophisticated assembly that incorporates pressurized nitrogen gas, hydraulic damping fluid, a floating piston and special orifice discs. Its generous size and large gas/fluid capacity virtually eliminate heat-fading and assure the owner of



Late-type fork delivers posh ride. Complete instrumentation includes speedometer and tachometer.

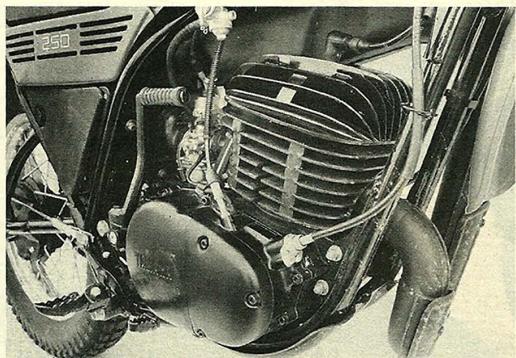


Pliable license plate holder mounts on plastic fender. Spark arrestor is standard. Saddle is comfy.

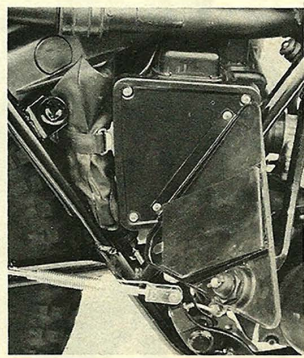


PHOTOGRAPHY: DAVE HOLEMAN

Rear turn signals mount on clever flexible stalks to keep them from snapping off in a light spill.

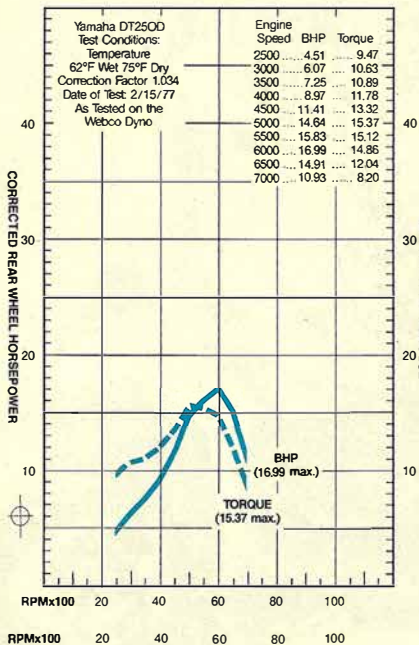


Engine castings are immaculate. Tachometer and oil injection cables exit from primary.



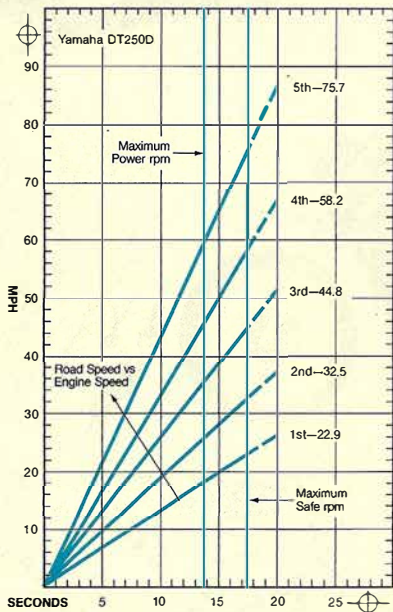
Hinged air cleaner and tool kit cover retains registration and has key lock. Side panel snaps on.





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- Price, suggested retail \$1089
- Tire, front 3.00-21 in. Dunlop Universal
- rear 4.00-18 in. Dunlop Universal
- Brake, front 160mm x 25mm
 (6.3 x 1.0 in.)
- rear 150mm x 25mm (5.9 x 1.0 in.)
- Brake swept area 38.3 sq. in.
- Engine type Reed valve, two-stroke single
- Bore and stroke 70 x 64mm (2.76 x 2.52 in.)
- Piston displacement 246cc (15 cu. in.)
- Compression ratio 6.7:1
- Carburetion 1 28mm Mikuni
- Air filtration Oiled foam
- Ignition Mitsubishi CDI
- BHP @ rpm 16.99 @ 6000
- Torque @ rpm 15.37 @ 5000
- Rake/Trail 30°/5.3 in.
- Mph/1000 rpm, top gear 10.8
- Fuel capacity 9 liters (2.4 gal.)
- Oil injection capacity 1.15 liters (1.2 qt.)
- Transmission oil capacity 1.2 liters (1.25 qt.)
- Electrical power Mitsubishi flywheel magneto
- Battery 6V-6AH
- Primary transmission Helical gear 65/23 (2.826)
- Secondary transmission Chain # 520 47/14 (3.357)
- Gear ratios, overall (1) 24.08 (2) 16.97 (3) 12.33
 (4) 9.49 (5) 7.29
- Wheelbase 142cm (56 in.)
- Seat height 86.4cm (34 in.)
- Ground clearance 26cm (10.25 in.)
- Curb weight 128.4kg (283 lbs.)
- Test weight 200.9kg (443 lbs)
- Instruments Speedometer w/ tripmeter, tachometer
- Average fuel consumption 31 mpg.



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YAMAHA DT250D

long service life. Its concealed location protects it from damage.

The new suspension units give the DT an increase in wheel travel of two inches over older models. The revamped fork is vastly improved in performance. Over the years Yamaha has changed, strengthened, lengthened, and re-shaped the DT's fork with every new model. This year's front fork is specially designed to mate perfectly with Yamaha's monoshock rear suspension. Careful co-ordination of the suspension's springing and damping rates has yielded the best handling DT of all. Spring rates of the monoshock and fork are soft, but they are given a substantial amount of pre-load. The supple ride does not result in a lot of sink when the rider swings aboard. On the street, the DT rides more like a posh BMW touring machine than a trail bike. It glides over cement ripples and asphalt potholes with a whoosh-whoosh rather than the slambang that a conventionally-suspended bike would deliver.

In the dirt, the DT is happy and comfortable on smooth roads, cobby Edison right-of-ways, bumpy trails and all but the most demanding enduro courses. The suspension soaks up small bumps, ditches and cross-grain with surprising

ease. The supple springing and damping control are ideally matched to the DT's weight. Over choppy terrain the rider feels the undulations as dull thuds through the handlebars; no bone-jarring percussions come through the Yamaha's suspension.

The new DT frame resembles the motocross chassis, but it is fitted with mounting brackets for electrical, oil injection, tool box and muffler attachments. Basic race bike geometry is incorporated in the Enduro which makes it steer and turn very well. The wheelbase is two inches longer than older models and the fork angle is slightly steeper. These two design changes give the bike sure-footed traction and precise steering. Cornering performance is limited only by the compromise block-pattern universal tires.

The weight of the new Yamaha, considering its street-legal trim, is quite acceptable. At 283 pounds the DT250D is 30 pounds lighter than its four-stroke counterpart and about 40 pounds heavier than the Yamaha motocrosser. Most of the DT's extra weight results from its street trim, like the tachometer and speedometer (with reset-to-zero tripmeter). Both instruments are acceptably accurate. Inside the tachometer head are warning lights for oil injector tank level, high beam, neutral and turn signals. For both on- and off-road usage the lights are sufficiently bright, and attached so they won't fatigue

their mounting brackets unless the bike is used exclusively for dirt riding.

The Enduro is stubborn about starting easily. When cold it will require two or more kicks to get the fire lighted; when warm it is unpredictable, coming to life anywhere between the first and sixth swipe. Commonly the engine spits back at partial crank and delivers a bothersome smack to the rider's boot. It isn't painful, just annoying. There is a minimal amount of running noise from the engine, but the exhaust system broadcasts a spattery and tiny sound. The exhaust design is not very efficient at eliminating two-stroke popping and banging.

Engine performance is, well, normal. Except for Can-Am's TNTs, street-legal trail bikes are not noted for producing a lot of power. The DT makes power like it was designed to—over a wide rpm range. With engine rpms just off idle, the DT250D will accelerate at an even and predictable pace. It does not have a sharp torque surge in the middle of the power range—it just pulls resolutely from 2500 to 6500 without hesitating or blubbering. In order to meet street requirements (including limiting operating noise levels) the overall gearing has been set high. On level pavement the DT will run 65 or 70 mph when necessary, but it's sensitive to inclines and head-winds. At legal speeds there is

(Continued on page 66)

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The DT's
heritage
and charm:
competence
on and off-road.



maintain a constant 55 mph.

The multi-plate, oil-bathed clutch is tough but a little grabby when the rider gets hurried. The DT's large gear designs require use of the clutch for all up and down shifts. Overall gearing for the street is spot-on; the engine would labor to pull a taller ratio. For extended off-road use, especially in steep, mountainous terrain, a one-tooth smaller countershaft sprocket would bring the gearing down and minimize clutch abuse.

Yamaha has gone to some lengths to redesign many features on the DT250D. Most of the changes have resulted in improvements in performance, function and serviceability. The replacement of metal fenders and side covers with plastic has eliminated rust and corrosion, while increasing the life span and reducing overall weight. The tool kit and washable foam air cleaner are located behind the right side panel. A key lock is included with this panel to keep your tools from getting ripped off. Behind the left side panel is the oil injector tank, which is hinged on its front side. This allows the plastic tank and filler cap to be swung out for easy, spill-free fill-ups.

The oil indicator warning light in the tachometer head comes on when the gearbox is in neutral and goes off when a gear is engaged. The light will stay on when the oil level in the tank is low. The locking-type gas cap has been replaced with a simple screw-on plastic object. The new-style tank makes use of a cap which is woefully small in diameter; it's difficult to see the gas level rising with a gas nozzle inserted.

The wheel assemblies use the same hubs and brakes as last year. The hubs are extraordinarily strong and the brakes work quite well for street riding. Late-type alloy rims and hefty spokes add to wheel strength. The rear wheel has been completely re-fabricated and uses snail-cam chain adjusters to eliminate many of the unnecessary and weighty pieces used on older DTs.

Rider conveniences include Mikuni's lever-type carburetor choke, which replaces the hard-to-grasp knurled rod. The carburetor body top is taller to allow for a longer, anodized aluminum slide and to better keep moisture and grit from the working internals. A single key works the ignition switch, the tool cover, helmet and fork locks. The battery is located behind the left side panel to allow quick visual inspection of the water level. Both hand lever assemblies are protected by removable rubber covers which keep mud and dirt from the cables. The rear turn signal lights are fitted to flexible stems to eliminate their snapping in an off-road spill.

The engine's peaceful performance places minimal demands on the chassis and suspension. We had to work the engine to its maximum to find the handling limits of the DT. When the throttle is

held to the stop on challenging dirt roads or tight trails the adhesion limit of the universal tires becomes evident. The block pattern tires are just fine at a moderate pace, but they lack the cornering and stopping traction an experienced dirt rider demands. For extensive off-road usage, knobby tires would greatly enhance the DT's prowess in the dirt.

Compared with lighter, faster, and more serious dirt bikes, the DT has a mushy ride. Extra weight, soft springs and short suspension travel cause the Enduro to use all the fork and monoshock movement under minimal demand. (Yamaha's motocrossers, for example, have 56mm more fork movement and 110mm additional rear wheel travel.) An experienced rider can take the DT over choppy or deeply undulating terrain and bottom the suspension without much effort. Pushing the Enduro to extremes will cause the bike to wallow and pitch as the fork and monoshock bottom alternately. The new DT was not intended or designed as a competition-level off roader—and it makes expert-level riders aware of its limitations quickly.

In the dirt, the brakes feel sensitive because they have a good deal of stopping force and the tires are (necessarily) skittery. On choppy downhill sections the back brake will cause the wheel to chatter and clang. We found that 24 psi air pressure worked best on the street, and 12 to 14 psi was the tip in the dirt. If the air pressure is not reduced for off-road riding, the rider will find the DT to be extremely slippery on hard surfaces and prone to bogging down in soft spots.

As a dual-purpose machine the DT's design and concept are guided rigidly by compromise. The 250 Enduro functions "nicely" on the street and "nicely" in the dirt, but it won't leave its rider with timeless memories from either environment. That's the point: in the DT's world, average is optimum. And after a decade of service and countless redesigns and details, the DT continues to illustrate the fact that Yamaha has a finer appreciation of this very real, and very important, world than any other manufacturer. Ten years after the DT-1 popularized the dual-purpose idea, Yamaha's 250 Enduro is where it was at the very beginning: at the top of the street/trail class. ©

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