

DIRT RIDER

MARCH 1976

PDC \$1.25



**SPECIAL
SIX DAYS
ISSUE**
**Malcolm Smith
on Safari**



HOTCHA
—Another verge
of control color
**MOTOCROSS
POSTER
INSIDE**

**Bike of
the year?
Yamaha
TT 500**

**Three
Trans-AMAs
wired on
the circuit**

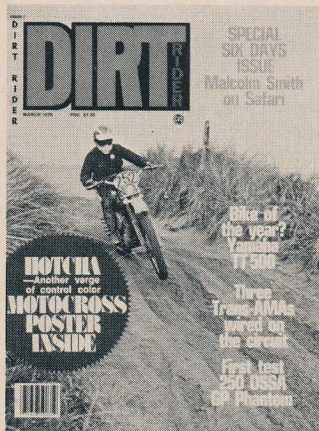
**First test
250 OSSA
GP Phantom**



DIRT RIDER

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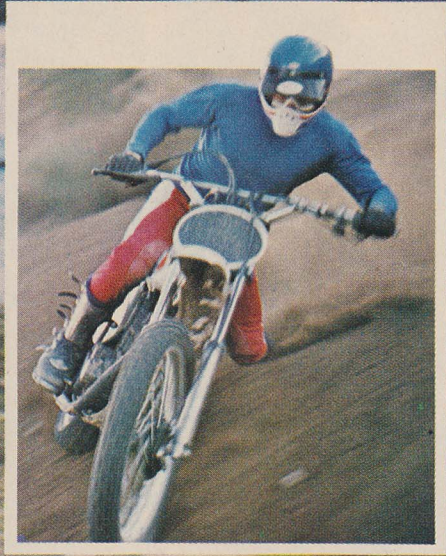
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TEST:

Yamaha TT 500



Behold our nomination for dirt bike of the year.

Of all the concepts one would never expect Yamaha engineers to attempt, development of a 500cc, long-stroke, four-cycle, single cylinder dirt bike should top the list. In imitating a technical approach which withered away into receivership in the hands of the industry experts, the English, Yamaha has created a reverse anachronism—they've taken a chunk of the past and put it into the future.

Normally technology does not serve well the past, it feeds off the unexpected future. But there comes a time, 1976 for instance, when the future has all the earmarks of bankruptcy. By 1980 motorcycles won't bare too much resemblance to the present example of the species. And if you consider that, technologically, Japanese motorcycles have been mere examples of designed technical marketability, you begin to understand. The last Japanese motorcycles to be built primarily for effect rather than affect were built before 1965.

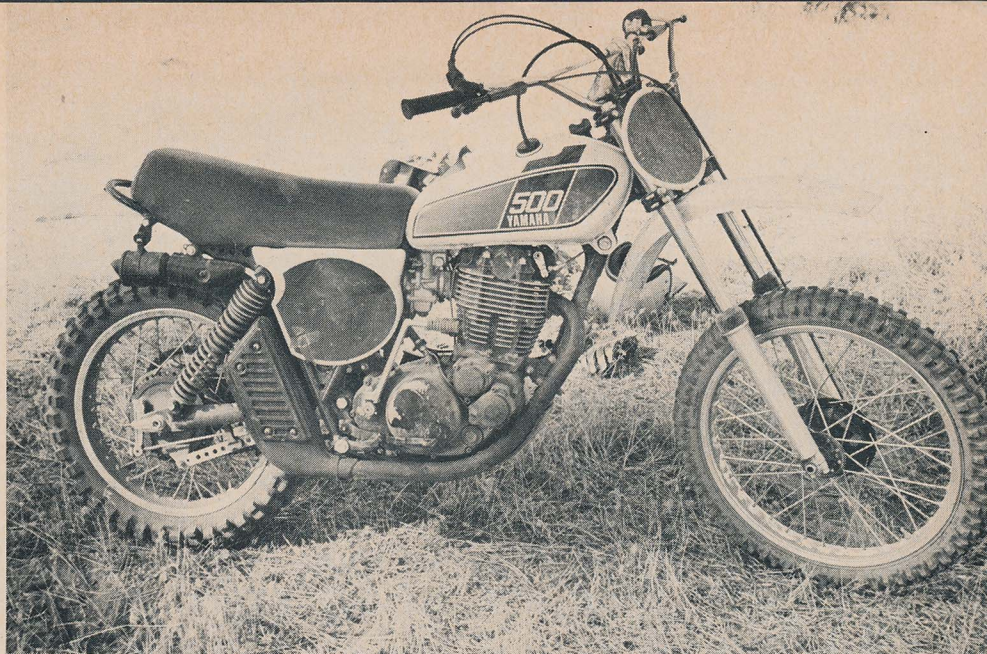
From the date of the announcement of the TT 500 the nature of dirt motorcycles is bound to begin progressive change. Perhaps the dirt bikes of the 1980s won't be much like the TT 500, but they will be much less like the Monoshock 400. For that we can all be very glad. It means that our hobby might survive. It means that for the first time Japanese technology is serving us rather than milking us.

Given the fact that Yamaha has done this—that is, they have built their version of a very old concept, the 500cc four-cycle, long-stroke, single cylinder dirt bike—there is another surprise in store. Perhaps the only thing that should surprise the public more than Yamaha's decision to build the TT 500 at all is that they did an exceptionally good job of it. Of all the concepts one would normally expect Yamaha engineers to fumble, a Japanese BSA 500 should top the list. But they didn't.

In performance as much as concept we can again be very surprised and thankful toward Yamaha. They have given us a competent four-stroke 500 single, an area which had been the sole domain of CCM for the last few years. And for half the money.

What does the TT 500 do? Well, it accelerates, stops, turns, starts and is fun to ride. And according to our panel of roughly a dozen guest testers it does all those things as well as most 500 class production motocross bikes. In fact, all but one thought it did those things better than any other Yamaha. And every one proclaimed it as an eminently competitive 500 Novice or Amateur motocrosser. And to top that, four of them had never ridden a four-stroke in the dirt before.

It does all that despite a dry weight of 260 pounds, perhaps the TT's only real bugaboo. On a closed course, mo-



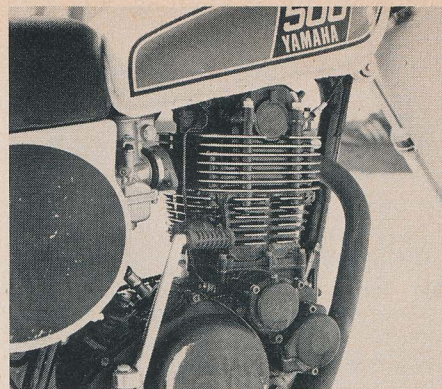


Kayaba gas shocks are undersprung and underdamped, but the pipe isn't too bad.

tocross for instance, the weight is not particularly noticeable. Despite the fact that motocross machines are the lightest available to us today, weight makes a lot more difference to an aggressive trail rider. No one felt that the weight of the TT interfered much with their quickness around a motocross course. But when you have to lift it, you quickly know what it weighs.

Many people, including *Dirt Rider* itself, will do extensive lightening of the TT to make it more competitive. The exhaust system no doubt weighs at least 20 pounds. On the other side, it is acceptably quiet for a competition machine and comes equipped with a spark arrestor. Oddly enough the gas tank is already aluminum. Substitution of a smaller one for competition could save a couple of pounds, though. Many areas of gusseting on the frame could be drilled or removed to save a few pounds. Without extreme effort the TT could be dropped to the 230-40 range. Russ Darnell claims that he could get it to 200. We're all excited to ride a 200 pound TT 500.

The motor itself bares more than small physical resemblance to a B-50 BSA. The shape of the cylinder and

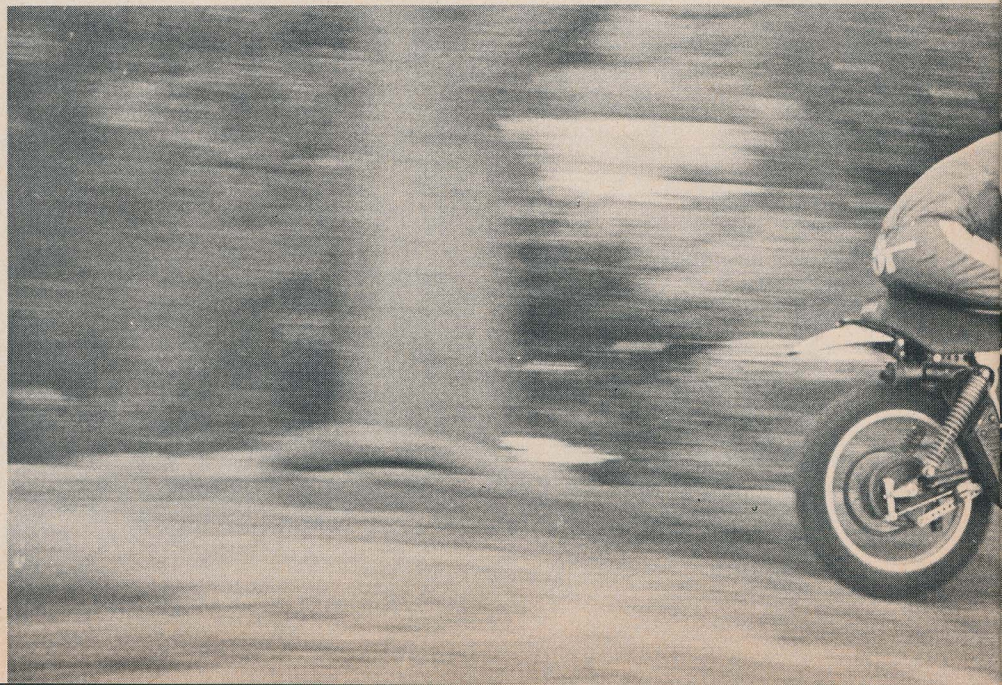


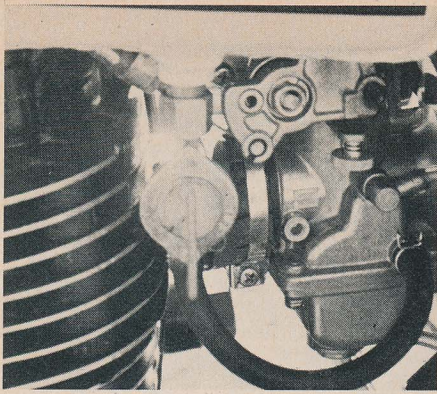
Does this motor look at all familiar to anyone?

head along with the length of the cylinder for the long stroke motor, produced more than a couple of comments about similarity. Of course, the TT 500 has a chain driven overhead cam. Nothing but an improvement over the BSA head. Points, oil pump and centrifugal filter run by gear off the end of the crankshaft. An arrangement similar to British cam shafts. Another Yamaha bonus is a compression release which lifts the exhaust valve.

Yamaha stuck to a traditional 5-speed gearbox, certainly not necessary with the TT's considerable torque. In fact, first and fourth can be a nuisance at times. Fourth especially is a bit too close-ratio. First is just not necessary unless you want to walk next to the bike. Still, the gearbox operates well in traditional Yamaha fashion. Occasionally, the concussion from landing off a jump would nudge the lever to a false neutral. The clutch unit seldom has to take any abuse because the motor is so flexible, but it will. It is stronger than the one on the MX series.

If you've ever ridden a 441 or 500 BSA you will immediately relate to the TT's power. It comes on smoothly from down in the idle range, makes strong power in the middle RPMs, say 3-6,000,

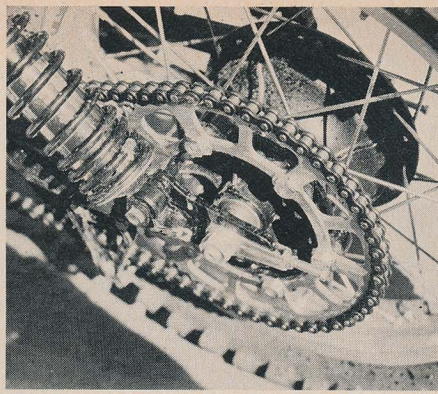




Mikuni imitation Keihin works surprisingly well. Better than the real thing at least.

and trails off slowly above that. The TT pulls an additional 1,500 over the BSA, to about 8,000. The TT has less fly-wheel effect than the BSA, which is noticed only in two situations. With the clutch in the motor responds to the throttle quickly, as quickly as most competition two-strokes, and returns to idle very quickly. The only time this is a problem is in very slow rock sections, like a boulder strewn stream bed. There the TT will lose momentum if the throttle is closed. Keep a little throttle on and it will bump into and over most anything.

Most of the TT's running gear is common to other Yamahas. Forks are the same as the large enduro models, not milled down like the MX series. Considering the nature of the TT (weight and brute torque) we'd just as soon have the larger tubes. The pound or so in weight will be more than compensated for in rigidity. Wheels, hubs and tires are the same as the MX 250 and 400. The front brake is excellent, the rear a bit too powerful. The rims take some time to seat in and will dent in extreme situations. Still, DID is second best to Sun. Surprisingly, those wretched Dunlop motorcross tires we gripe about all the time almost work



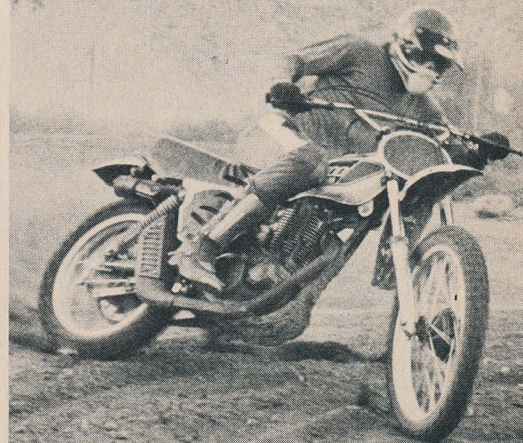
Chain guide is just not up to the task. Some sort of tensioner would be a good idea.

on the TT. Front wheel traction is acceptable and rear adequate. With Full-Bores or Metzlers it could be a wondrous thing.

Suspension is not spot on stock. What else is new? ATF made the forks slide through until Brian could design a Trickit for the forks. The Works Performance Shocks off the Word Director's Bultaco tamed the rear. The stock gas Kayabas are under sprung and under damped. They do the bike a discredit. With a simple change to shocks not even set up for the TT the improvement in manners was amazing.

This, the TT 500, is the first plebian Yamaha which turns. Sure the YZ series was hard to argue with, but the rest . . . Not only does the TT turn, but it turns confidently, precisely and without much strength required. It will track into a corner and turn when leaned, like a Maico (well, pretty much), or square-off like a Bul or Husky (well, pretty much). It will turn under other motorcycles (quite a few of them) or it will skid around the outside. Most anywhere you want to put it on a track it will go.

By combining the front brake with engine deceleration the TT will out-



brake most motorcycles, and by turning on the throttle sooner than you could on a two-stroke it will out accelerate most motorcycles. In addition, we drag raced the TT against a number of production 500 class bikes and found that it gave away little to any of them. The TT is surprisingly fast, too.

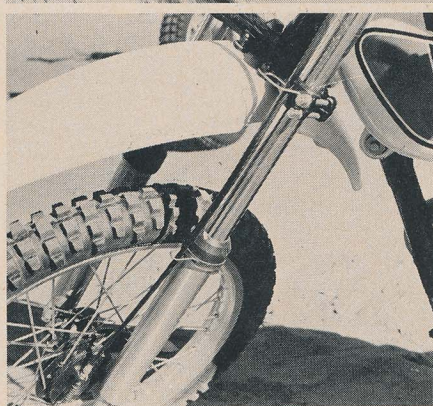
Okay, that's two big surprises: they built it and they did a good job. There's another surprise. Without need of extensive thought it's easy to proclaim the TT 500 the first genuine dual or even multi-purpose motorcycle to come from Japan. The TT will do at least a couple of things quite competently. With absolutely no changes it will perform competitively on a race track or be a manageable and enjoyable trail bike. No other competent Japanese motocross machine can claim that. The TT will stride casually through areas that will leave a motocross bike a steaming, broken hulk.

This is not to say that the TT 500 is anyone's ultimate enduro bike. Actually, it's probably a little better suited for motocross than heavy-duty enduro stuff. First of all, it must have a bash plate. Those exposed cases beg to be nibbled by a convenient rock. Second, it's frame geometry is a little better suited to motocross than enduro work—the wider the expanse of terrain is, the better it will do. It steers just a little slowly for tight trail work and the weight of the machine requires exaggerated body English to make a fast enduro clip. Not that it can't be done; just that it can be done more easily on a number of other bikes.

But slow the TT down to an easy scenery pace and it bumphs down the trail placidly. There's nary a trace of festiveness to the motor's nature, despite its power output. With both ends of the suspension improved and a seat with more padding added, it would no doubt be the ultimate sit down bike.

Up until this point the TT has been set in comparison with motorcycles in general and many people may be curious about how it rates up to a custom Honda—Bajandas as we dubbed them. Today only one Bajanda remains in our neighborhood, the Cycle Factory long-stroke 350. The C&J went to Bakersfield to the hands of an ex-Rokon owner. And one friend, Larry Langley, still rides a exaggerated engine, stock framed Honda in D-37 enduros. The surprising admission: with the suspension changes and a bash plate, our otherwise stock TT 500 performs as well as either of the \$3,000 Hondas in any situation and better in some. The better part is where the long-stroke power of the TT can shine. If the chassis are similar the Yamaha engine is plain superior.

So the TT is a dual-purpose bike



Fork action is of course not quite right. ATF helps some, #1 Products kit helps a lot.

too. You can ride trail or motocross, or maybe even TT on the same bike. And with some Preston Petty lights you could ride it to work, too. The motor is acceptably smooth to allow street cruising. In fact, with some work the TT might make one of the all-time fine cafe racers. There's no street bike quite like a four-stroke single. In fact, we're willing to say, though it's got nothing to do with dirt, that Yamaha's missing the boat if they don't make a street model, too.

For a huge segment of America's off-road motorcycling population the TT 500 is a panacea—answer to a maiden's prayer and all that. At once it offers competence, versatility and most importantly—good healthy fun. And it does it all without being noisy and obnoxious. The TT 500 is in concept what all dirt bikes must come to be. Therefore, without much hesitation, *Dirt Rider* proclaims the TT 500 The Off-Road Motorcycle of the Year. ●

YAMAHA TT 500C
Yamaha International
6600 Orangethorpe
Buena Park, California
Retail price: About \$1500

SPECIFICATIONS

Engine Four-stroke, OHC, single
 Bore/stroke 87mmx84mm
 Displacement 499cc
 Compression ratio 9.0:1
 Carburetion VM34SS Mikuni
 Gear ratios
 (:1) . . . 2.357; 1.555; 1.190; 0.916; 0.777
 Primary drive Gear (2.566:1)
 Final drive Chain (3.466:1; 15/52)
 Lubrication Dry sump
 Fuel recommendation Premium

DIMENSIONS

Wheelbase 55.9 inches
 Ground clearance 8.5 inches
 Peg height 10.5 inches
 Seat height 34.0 inches
 Running weight 265 lbs.
 Fuel capacity 2.24 gallons
 Transmission capacity 2.6 qts. (dry)
 Throttle turn 90 degrees
 Air filter texture Slimy

COMPONENTS

Forks Kayaba 6.5 inch
 Shocks Kayaba 5.5 inch RWT
 Frame Steel single downtube
 Pegs Folding sprung steel
 Hubs Conical alloy
 Brakes SLS cable
 Rims DID
 Rimlocks 1 front/2 rear
 Chain DID 520
 Ignition Energy transfer
 Lighting Available
 Air filter Foam
 Sparking plug NGK BP7ES
 Fenders Plastic
 Kill switch Yep
 Number plates Appropriate spots
 Muffler Not bad, forestry approved