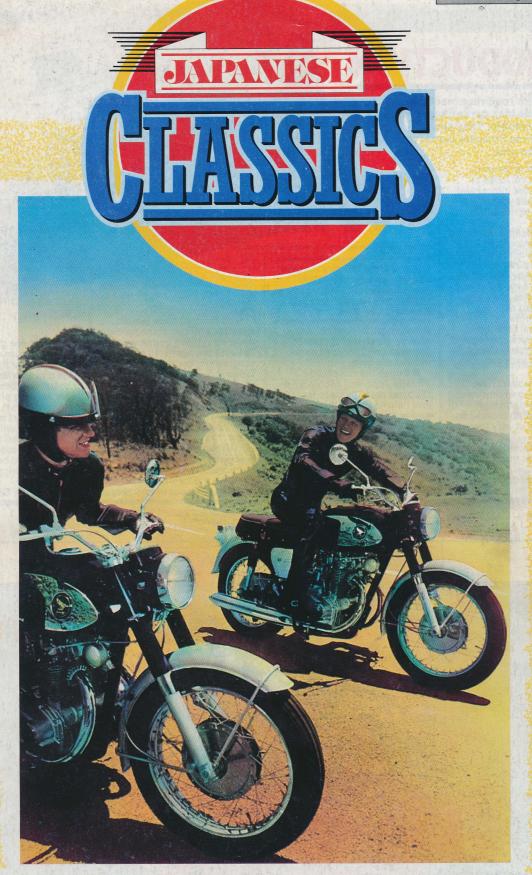
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20 Golden Greats' from the Landof the Rising Sun 1960-72



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YAMAHA TX500A

Power comes in so suddenly that the rider has to be extremely wary when turning it on out of low gear corners ... particularly in the wet.

Brian Crichton, MCN tester



The TX500 — claimed by Yamaha to be the first twin cam eight-valver in the world.

FROM THE Yamaha stable, the TX500A made its mark on motor cycling because of its combination of engine balancer and twin cam eight-valve twin cylinder engine. With this model it seemed that Yamaha had packed all

their four-stroke know-how into one machine.

It was almost as if the world leaders in two-strokes were telling the world that they knew a thing or two about four-strokes.

Yamaha's first four-stroke model had been the 1969 650 XS-1 which is featured in this magazine. But Yamaha had plenty of four-stroke experience

prior to this model.

They had been entrusted with the development of an ultra high performance twin cam engine for Toyota racing and sports cars during the sixties. This motor was subsquently used in models such as the Toyota Celica GT.

So it wasn't surprising that Yamaha should put their four-stroke technology to good use and build four-stroke motor cycles

In their approach to solving the vibration problem with big displacement four-stroke twins they decided on a balancing

This was called the Omni-phase balancer and it was first seen on the single overhead cam TX750 marketed for the first time in 1972

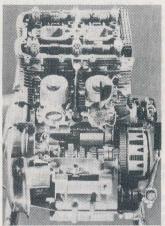
Later that year the TX500 was announced and first marketed in 1973. Only a handful of the TX750 models found their way to Britain. It is a rare model anyway because manufacture was cut short following reliability problems and poor sales.

Because of the 750's rarity and the 500's exotic technical specification both machines

are

Pentroof combustion chamber with eight valves offered excellent breathing and combustion. Sintered titanium alloy valve seats were press fitted into the cylinder head to reduce wear and allow the use of low octane fuel. These use of low octane fuel. These features plus the use of constant vacuum carbs gave much cleaner exhaust gases to satisfy the anti-pollution conscious American

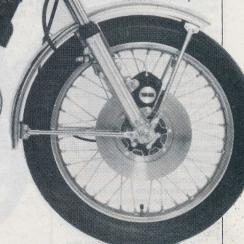
government.



The Omi-phase balancer on the TX500 was different to that on the TX750. The 500 featured a single

balancer whereas the 750 had two. Basically the idea was to cancel the forces which caused vibration with equal and opposite forces. Yamaha made it work, and now balances are fitted to all sorts of machines

including some Honda 50cc two-stroke mopeds.



YAMAHA TX500A

BALANCING

eminently collectable. The 500 survived and underwent styling changes until manufacture was halted in the late-seventies.

lt's hard to say why, but the 500, like the 750, didn't really catch on. Dealers heavily discounted the last examples of the model to try and get rid of

One thing sticks out in my mind about the very first TX500, and that was the sudden lurch forward as the motor came on power in first and second gear, and the incredible braking force when the throttle was shut off.

I remember thinking at the time that it must have been just how a four-stroke road racer

would feel.

All the other four-stroke twins I had ridden up to that time gave strong power from low rpm with a smooth progressive build-up.

The TX500 was different. It was very "cammy" with a distinct step when the power came on.

Checking back through past issues of *Motor Cycle News* I discovered that it wasn't until March '75 that the first model was tested with yours truly behind the bars and the typewriter.

So here I quote myself with a few extracts from that test:-

"Yamaha's TX500 eight-valver is a hard character to get to know.

"The power in the low gears comes in so suddenly and strongly, and the brakes are so terrific that assumed familiarity during early acquaintance is asking for rejection. "The TX has to be taken

gradually. It is not an easy bike

to ride.

Yamaha's Omni-phase balancing system works a treat. For a vertical twin the TX500 is incredibly smooth. "A 500 Honda-4 owner tried it

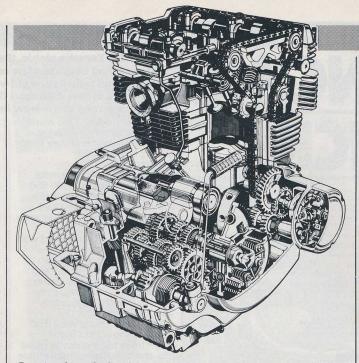
and said the smoothness was comparable'. Of the two he thought the Honda was the smoothest . . . well he owns one! Certainly there is very little in it.

The only drawbacks seem to be in increased engine weight and increased engine noise. Bobweights give off a mechanical chirrup which loses itself under speed. One of the weights can be seen through the oil filler orifice behind the

cylinders.
"The sound from the big silencers is very exciting. Reminiscent of a Honda twin the note reaches even more of a frenzied crescendo suitably mute to leave townspeople unoffended.

"Power comes in so suddenly that the rider has to be extremely wary when turning it on out of low gear corners . . . particularly in the wet!

"The same when turning the



Drawing shows duplex chain drive to the twin overhead cams. 180 deg crank is one-piece for strength. Oversquare bores reduce piston velocities for longer life. Two oil pumps, one feed and one scavenge, were fitted to effectively reduce oil temperatures.

SPECIFICATION IN 1975

ENGINE 498cc aircooled four-stroke double overhead cam parallel twin. Bore x stroke: 73x59.6mm. Compression 9:1. Carburettors two Keihin 32mm CV. Claimed power 48bhp at 8500rpm.

TRANSMISSION Primary drive by gear, multiplate clutch in oil

ELECTRICS 12 volt battery and coil ignition. Electric starter, battery recharged by alternator. Headlight 50/40

LUBRICATION Wet sump.

This is the dry sump sohe TX750. It was completely different from the

wet sump dohc 500.

Twin front discs 10.5in diameter, rear single leading shoe drum 7.1in diameter. BRAKES

Wheelbase 56in, overall length 87in, overall width 33in, seat height 32in, ground clearance 7.25in, weight including oil and reserve fuel DIMENSIONS

CAPACITIES Fuel 2.86gal. Oil (including gearbox and clutch) 5.3 pints.

Dunlop (made in Japan). Front 3.25x19, rear 4.00x18. TYRES

power off. With the eight valves popping in and out under the chain driven cams and the balancers whirring away, things slow down pretty quickly.

"Whipping the throttle open in first and snapping shut when the bike is on the power band brings to mind a parabolic curve on a graph to visually portray the bike's characteristics.

It is possible with the clutch fully engaged to wheelie in first by giving a light tug on the bars to help the tyre off the deck. This demonstrates the impessive acceleration capability of Yamaha's light heavyweight.

"The standing-quarter time of 13.596secs is further witness to its fleetness off the line, but the exact ton through the speed trap was a disappointment considering the exotic technical

specification.
"An explanation was later provided by Mitsui boss Jack Hird who claimed that when it was stripped down after the test three slightly bent valves were found in the left cylinder two exhaust and one inlet.

"Also, at no time during the test would the Yamaha start on the button or on the kickstart after a night outdoors.

"By far the simplest method to bring the beast into life was to bump it. An embarrassment on such a well cut and well finished item of transport."

I had forgotten about the Yamaha's reluctance to start. But I do remember that the TX had the acceleration edge over my brother's 650 Bonneville.

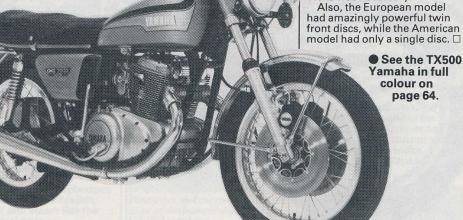
At the time of the test list price was £825. When it was announced in MCN in June 1973 that the TX500 was due to arrive in October the price was set at £656.18.

Late in '75 styling was revamped and the model renamed the XS500. It was listed as a current model until the end of '79.

Claimed power from this five-speeder was 48bhp at 8500rpm and claimed top speed 112mph.

An interesting feature was an instrument panel warning light which came on when adjustment of the rear drum brake was necessary.

had amazingly powerful twin front discs, while the American model had only a single disc.



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YAMAHATX500 YAMAHATX750 See story, page 53