

NOVEMBER 76

NEW Motorcycling Monthly 35p

INSIDE

50 sets of Girling Spring Units

TO BE WON!

TRAIL TRIAL:

Yamaha XT500

MARATHON:

**Honda CB550F
10,000km test**

SERVICING:

**Suzuki 250
efficiency check**

TECHNICAL:

**Yamaha DT175
engine
analysed**

WORKSHOP:

**Getting by
without power**



Yamaha

XT500

MINI TEST

The minute the XT500 appeared in Britain, the motorcycle press was buzzing with tales of good, old-style, four-stroke singles, 'plonkability', and funky, bottom-end torque. Then Mitsui, the UK Concessionaires for Yamaha, topped them all with their own description — "An expert's machine designed to bring back the joy and freedom of real motorcycling."

Now I've got nothing against the 'fifties — straight jeans and motorcycles that fire at every other lamp post; but there seemed a danger that the new Yamaha was destined to leave today's bikers about as cold as a bunch of Rollers fans confronted with a scratched 78rpm recording of Elvis Presley's *Hound Dog*. So, by the time I was headed down to Chessington to collect the test machine, I was determined that the XT would have to have a lot more going for it than a handful of well-worn clichés if it was to make it in my books.

As it happens, on first sight the new 500 bears a close

resemblance to the DT400 we tested in July. Overall dimensions, length, seat height and handlebar width, are near identical, while several component parts — the wheels and mudguards, for instance — appear interchangeable.

The most immediate difference is the XT's stunning white and red paint job and those massive forward-inclined rear shock absorbers. Only after these do you notice, nestling snugly beneath the petrol tank, the unmistakable lines of the four-stroke engine.

The XT500 may be kitted out for the road, but it is basically the same machine as the original 500cc Yamaha four-stroke single — the American market TT500 'desert racer'. The desert bike, introduced in the US at the beginning of the year, comes from the factory in all the naked glory of a true competition machine — no lights, horn, or turn indicators; not even a speedo or rev counter — and sports a really chunky pair of moto-cross knobbles. It is every

inch a purpose-built motorcycle, and must have been a welcome addition to a scene that still reveres our own BSA 'Gold Star' and Matchless singles.

Fortunately for once, the transformation from competition to road model, from TT to XT, has been achieved simply by adding the necessary road-going equipment, and the character and appearance of the original bike come across as strong as ever. So many 'dual purpose' machines are ill-suited to anything but leisurely off-road riding, but the XT's set-up is well nigh perfect wherever you go.

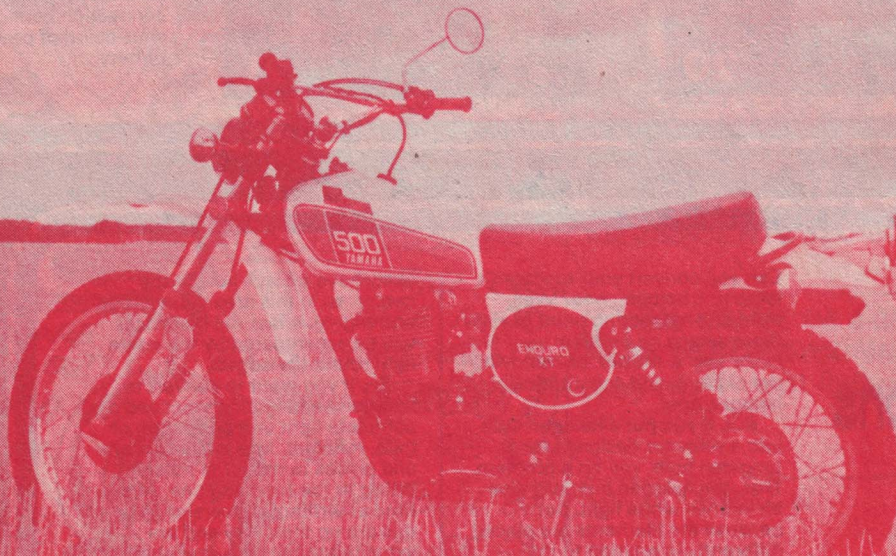
The only snag is that all the extra road gear increases the bike's weight by over 40lb, making for a rather top heavy feeling when you first climb aboard. This uneasiness, combined with the ever-suspect block tread tyres, gives a false impression of the XT's handling ability on tarmac, but a few hard-riden miles soon dispel any initial doubts. The 500 can be gunned through corners with the same surety as a pure street

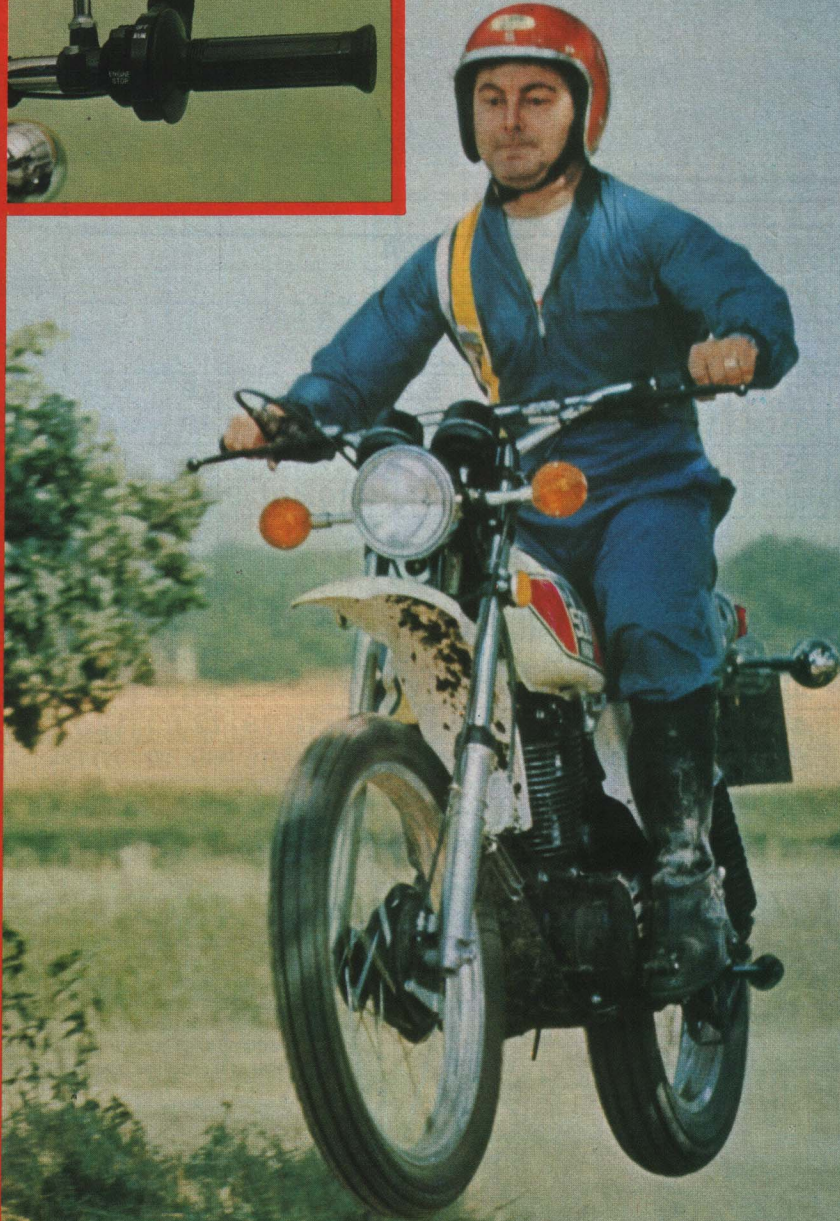
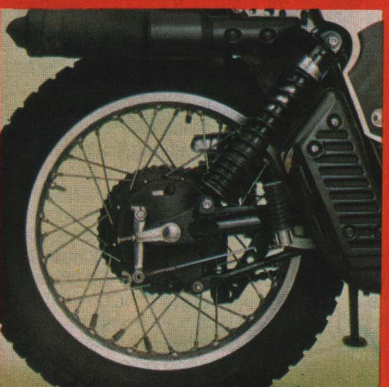
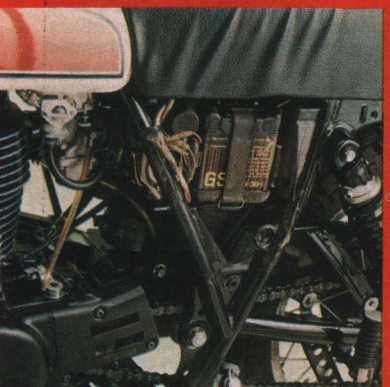
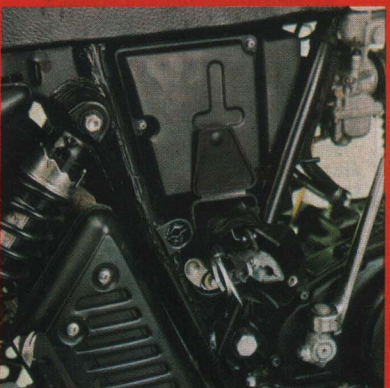
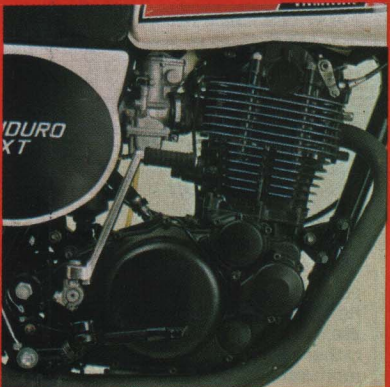
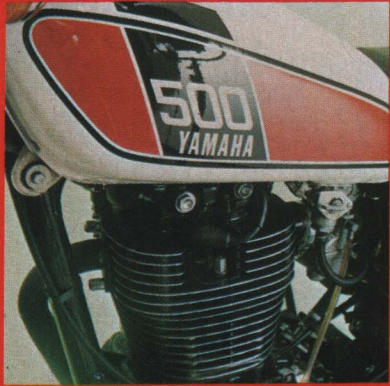
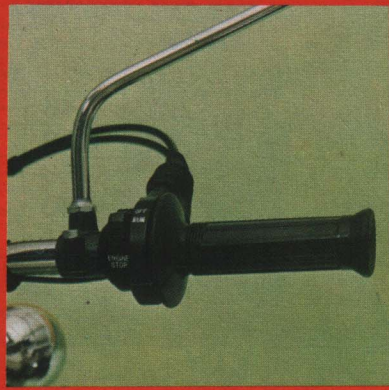
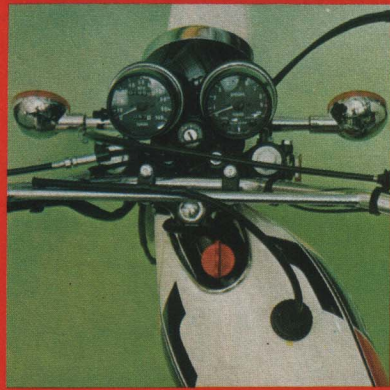
machine.

In some ways, in fact, the XT's ride is superior to many of its touring contemporaries. Suspension on Japanese bikes has long been a bone of contention with European riders, particularly softly sprung and poorly damped rear units.

Movement of the XT's swinging arm is controlled by a pair of hefty-looking shocks which utilise nitrogen/fluid internal damping as opposed to the more conventional light oil. Gas units have superior shock absorbing and heat transfer properties; they are nothing new in motorcycle sport, and after riding the XT you wonder why they haven't been adopted sooner on road bikes.

Almost every test machine I have ridden has needed its rear suspension units racked round to the hardest setting to gain some satisfactory degree of feel from the back end, but throughout the





NMM MINI TEST CARD YAMAHA XT500

SPEED RANGES / GEAR SPEEDS

gear		mph		sec ^
		min	max	
1	solo	8.28	31.20	2.45
	pillion	8.85	29.35	2.55
2	solo	11.10	45.84	3.70
	pillion	11.32	41.89	4.60
3	solo	14.59	56.28	5.75
	pillion	17.37	55.33	7.57
4	solo	19.08	73.33	11.34
	pillion	22.66	70.01	14.69
5	solo	28.06	79.45	17.10
	pillion	26.24	78.28	28.05

RESPONSE IN THE GEARS/SECONDS

mph										
	10	30	20	40	30	50	40	60	50	70
3.13										
3.32										
3.00	3.24									
3.25	3.44									
	3.72	3.98								
	3.84	4.72								
	5.84	5.12	5.29	7.01						
	6.98	7.40	6.49	8.75						
		7.14	7.66	8.16						
		10.40	9.52	13.01						

ACCELERATION FROM REST

	solo	pillion
0 - 20	1.48	1.60
0 - 30	2.19	2.45
0 - 40	2.80	3.69
0 - 50	4.50	5.52
0 - 60	6.44	8.50
0 - 70	9.00	12.49

Performance in Brief

MPG

steady speed

	solo	pillion
30	83	70
40	75	61
50	70	54
60	53	48
70	51	45

BRAKES (BOTH)

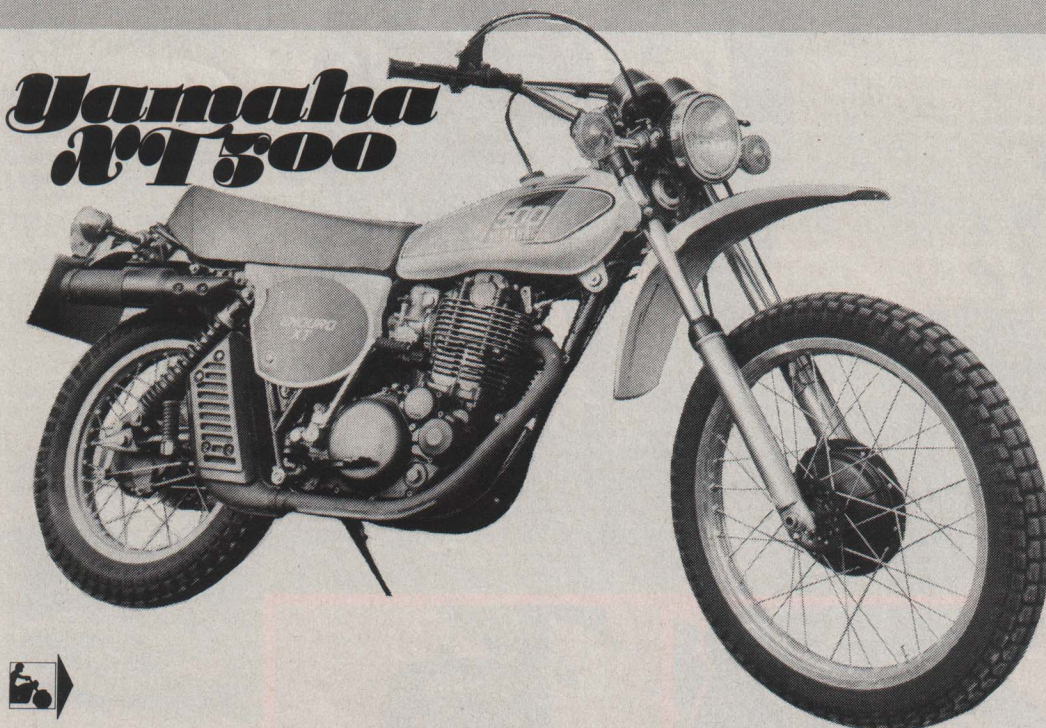
		ft	
		solo	pillion
10	3'6"	6'	
20	16'	18'	
30	30'6"	35'	
40	55'	59'	
50	91'6"	96'	
60	144'6"	152'	
70	186'	218'	

SPEEDO

ind	true
20	20.66
30	30.46
40	41.02
50	50.06
60	61.01
70	70.40

ACCELERATION OVER STANDING ¼ MILE / 400m

	ft	100	200	300	400	500	600	700	800	900	1000	1100	1200	¼ mile
	m	31	61	91	122	152	183	213	243	274	305	335	366	400
solo	sec	2.90	4.24	5.50	6.45	7.68	8.76	9.98	10.85	11.47	13.01	13.80	14.53	15.92
	mph	39.45	50.13	55.56	60.43	65.61	69.20	72.66	74.89	75.73	77.09	78.52	79.22	79.44
pillion	sec	3.00	4.72	6.15	7.27	8.78	9.62	10.79	12.09	12.75	13.85	14.83	15.92	17.01
	mph	36.43	46.03	52.32	56.63	61.75	63.83	66.36	69.30	70.64	72.12	73.05	73.30	73.71



test the XT's units remained at their softest, smoothing out the roughest roads with no trace of bottoming or jarring. Up front, the tele. forks were rather spongy for fast road work, although I understand there are two rates of internal springing — first soft, then hard — to cope with on and off-road going.

The front end as a whole must come in for further criticism, for

at speeds in excess of 60 mph the steering became extremely light and there was a marked tendency for the bike to weave. Different and changing road surfaces had no apparent effect on stability, so the trials-pattern tyres are probably not the villains in this particular case; rather the combined aerodynamics of the high-mounted front mudguard and a rider spreadeagled

between an incredibly wide (34in.) pair of bars!

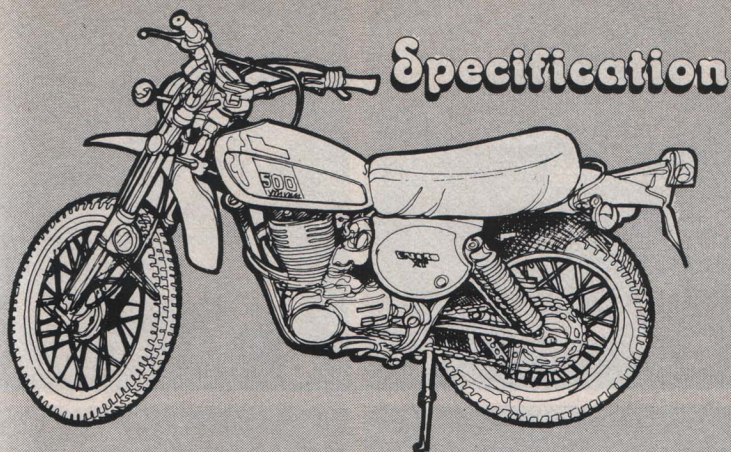
Such wide handlebars are ridiculous unless you intend doing a lot of off-road riding. As soon as you wind the XT out on a stretch of open road — it soars beautifully to the 6,500 red line in all five gears — you find yourself hanging on desperately against the wind pressure. A narrower and lower bar would

complement an otherwise ideal riding position, for the footrests are mounted beneath the rider rather than slightly forward as is more often the case these days.

In comparison with similarly-styled two-strokes, and despite a concerted effort on the part of Yamaha to make things as light and compact as possible, the XT500 is a heavy off-road machine. Magnesium brake plates and engine covers, aluminium wheel rims and petrol tank, plastic front mudguard and side panels all save weight and are part of the XT500 pedigree which is in itself guarantee enough of the bike's potential, but for the most part, and with the UK market very much in mind, I am inclined to view the XT500 as a roadster gone astray rather than the other way around.

What Yamaha's weight-paring has done is give their new, mildly tuned, detoxed and over-silenced 500cc single a chance to show its teeth without depriving the rider of a sane level of reliability and control. That ohc four-stroke mill may look an awesome sight in its all-black finish, but a power output of only 30 bhp doesn't take much beating on its own.

Although predictably over-square internally, the overhead cam gear gives the motor a tall appearance which is further accentuated by the compact unit construction of the gearbox and crankcases. The cam chain is driven direct from the crankshaft



Engine

Air-cooled, single-cylinder four-stroke with single chain-driven ohc. 87mm bore x 84mm stroke. Capacity 499cc. Compression ratio 9:1. Maximum power 30 bhp @ 6,000 rpm. Carburettor 34mm Mikuni. Dry sump lubrication, oil capacity 3.8 pints.

Transmission

Wet, multi-plate clutch. Gear primary drive. Primary reduction 2.56:1, secondary reduction 2.75:1. Overall ratios: 1st, 16.6:1, 2nd, 10.9:1, 3rd, 8.3:1, 4th, 6.4:1, 5th, 5.4:1.

Electrics

6v flywheel magneto ignition. 6v 6ah battery. 30/30w battery, 5/17w tail/stoplamp. Turn indicators. Neutral, turn and main

beam warning lights.

Chassis

Telescopic front forks, 7.6in. travel. Swinging arm rear suspension, 3.9in. travel, 5-way adjustable dampers. 1.9 gal. petrol tank. Brakes: front 6.2in. sls drum, rear 5.9in. sls drum. Tyres: front 3.00 x 21 Bridgestone, rear 4.00 x 18 Bridgestone. Seat height 32.5 in. Wheelbase 57in. Ground clearance 8.75in. Dry weight 304 lb.

General

Prop stand. Single rear view mirror. Steering, side panel and helmet locks. Toolkit. Sump guard. Price £685 inc VAT. Test machine supplied by Mitsui Machinery Sales, Oakcroft Road, Chessington, Surrey.

on the right-hand side of the motor, and a spur gear on the same side of the crank drives the contact breakers.

Engine oil is carried in the frame top tube and is pressure fed to the mains, big end and rocker gear by a trochoid pump housed in the bottom of the crankcases. A paper-element oil filter is located inside the right-hand engine cover for easy maintenance, and a sci-fi rubber 'bellows' — the only source of oil weepage on our test bike — above the gearbox contains an engine breather filter.

The oil filler cap is accessible immediately behind the steering head. Sparks and power for the lighting are provided by a conventional flywheel magneto mounted on the left-hand side of the crankshaft.

Dropped into a sturdy high tensile tubular steel cradle frame, with well balanced suspension front and rear — not to mention a surprisingly effective pair of sls. drum brakes — the 500cc Yamaha four-stroke motor completes a very enviable package reminiscent of... well, the only machine that springs to my mind that would do the XT justice is the 450cc Desmo Ducati, but even that fine machine is now sadly out of production.

Let's face it; the XT is breaking new ground, whether as a competition machine or a road bike, but the 'desert sled'

application of the slogging four-stroke is as generic to the Yanks as the relaxed, thumping power of the big single is to the British touring rider. A single produces its power with less fuss than a twin, triple or four; it is cheaper to produce, cheaper to buy, operate, maintain and service; it is easy to work on.

Critics will immediately point to the knobby tyres and the spartan mudguarding; they will make disparaging remarks about anybody's ability to kick-start a half-litre single. The first two I would agree with, adding a couple of gripes of my own. Why is it that the Japanese, being generally little people themselves, cannot combine a reasonable amount of ground clearance with a generally comfortable (around 30in.) seat height? What point is there in putting the battery, which is, after all, firmly strapped and wired to the rest of the machine, behind a locked side panel, when the precious tool kit is open to all comers?

The third? Anybody *can* kick-start a big single so long as they (a) master their own routine, and (b) don't worry about it kicking back until it happens. After all, isn't that part of the "joy and freedom of real motorcycling"?

Phil Mather



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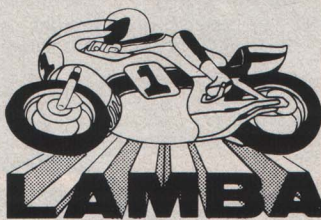
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