

# MOTOR CYCLE MECHANICS

SEPTEMBER 1977 40p



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KE125: Mixing  
business with pleasure**

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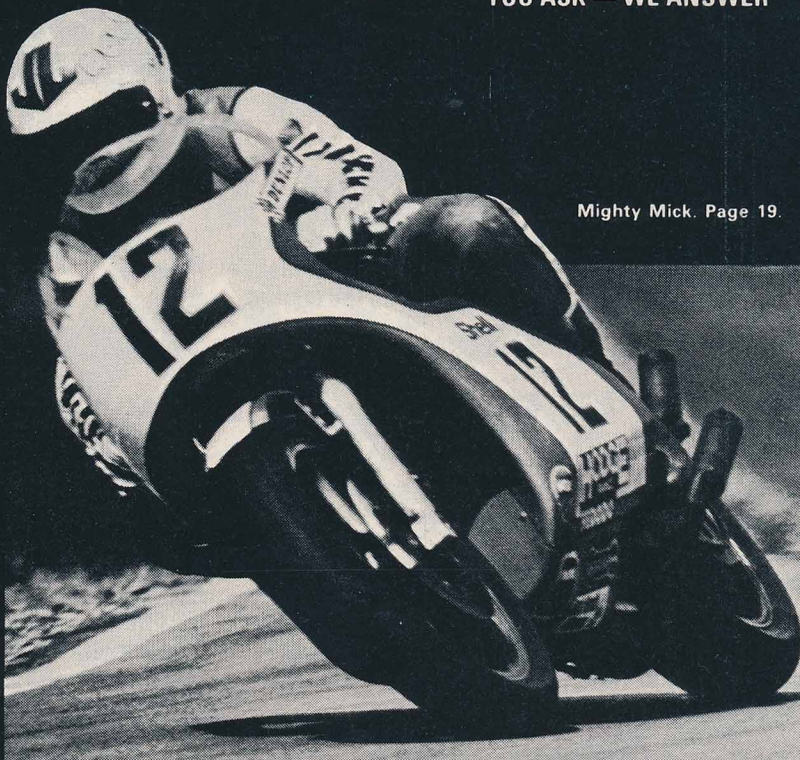
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How to service the Suzuki B120.

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YOU ASK — WE ANSWER

# PLUS: WIN A YAMAHA XS 250

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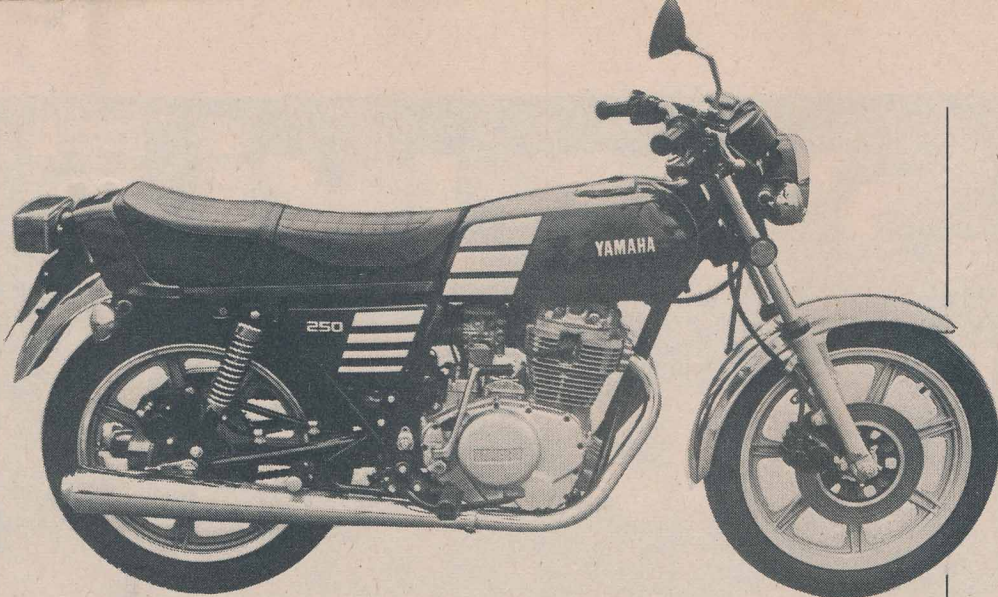
**S**INCE the demise of the British lightweight the 250 class has fallen into two well defined extremes. On the one hand we have the relatively sophisticated, high performance, high price bikes produced by the factories of the western world, while, on the other, we have the simple, low price, low to middle performance machines produced by the Communist countries. As yet, nothing has appeared on the scene which comes between the two extremes.

With the introduction of their four-stroke XS model to run alongside their long running RD250 two-stroke, Yamaha, of all the Japanese manufacturers, had a superb opportunity to take the emphasis off out and out performance, and to produce an economy four-stroke designed for the needs of to-day, rather than for the speed-at-any-price world a lot of 250 owners seem to live in. They didn't and the result is a predictably quick, predictably thirsty and predictably expensive machine which does, however, manage to pack a few surprises.

I liked the looks of the XS. Somehow it contrived to look bigger than it really was, the chunky twin cylinder, single overhead camshaft engine mounted low in a hefty duplex-cradle frame, contributing much to the illusion. The only discordant notes were the white styling flashes painted on the tank and side covers. Distinctive they may be but they do detract from the lines of a machine that is otherwise notably free of gimmicks.

The Yamaha arrived just in time for a weekend 550 mile round trip down to the West Country. The route, half motorway and the rest fast, but sometimes bumpy B class roads, provides a good test for any roadster, whatever its capacity.

The Yamaha's first surprise came very quickly, its engine thrives on revs and produces little usable power below 7000 rpm. This makes town riding something of a problem, giving the choice between thrashing along in second or third or saying, as I eventually did, "to hell with it" and sticking it in fourth. The only trouble with the latter tactic is that 35 mph in fourth coincides with 5000 rpm on the speedo and it is in this rev



## Yamaha XS250

range that the motor is at its least responsive when the throttle is snapped open. At first we thought it was a flat-spot in the carburation, but the hole in the power curve tells a different tale.

In contrast to its indifferent performance in town the Yamaha really comes into its own on the open road where it can be a lot of fun playing boy racer and keeping the motor on the boil in its narrow 2000 rpm power band. But miss a gearchange or fail to change down at the right time when cornering, and the loss of power once the needle drops below 7000 is almost like turning off a light switch. In short the XS is rather like the RD250 in that it is not the easiest of bikes to get the best from but once the technique is acquired the satisfaction gained from riding it quickly and smoothly is well worth the well developed left calf muscle that the constant gear changing will inevitably lead to. Fortunately, the gearchange is superb, the lever having a short positive action. Neutral is particularly easy to locate.

Sixth gear was strictly for motorway use and then only on level or downhill stretches and with a following wind. In these conditions the motor would eventually build up to the rev-counter's 9250 rpm red-line, showing an indicated maximum of 92 mph. For the most part, though, fifth gear was the best for motorway use when the Yamaha could be held at between 70 to 80 mph without any difficulty, even into quite

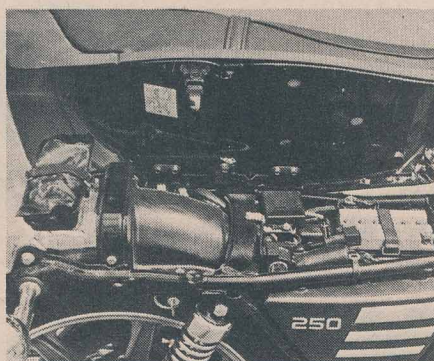
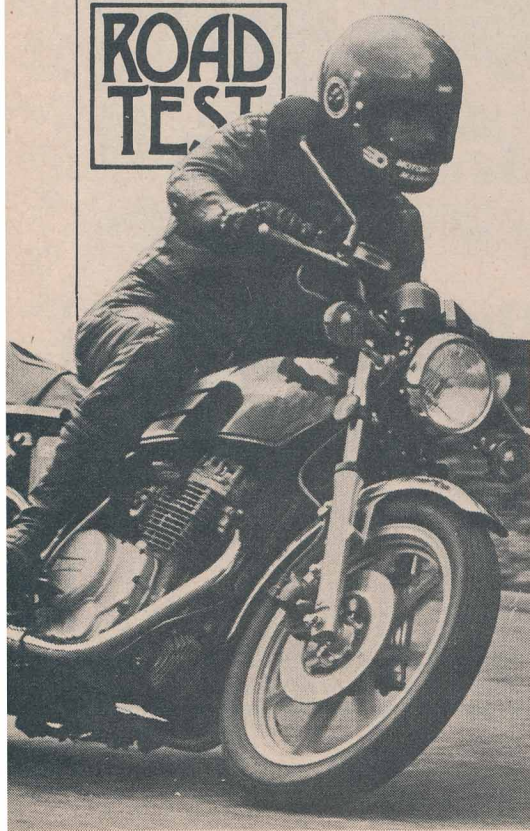
strong head winds.

The price of riding the XS as it has been designed to be ridden is, as might be expected, very heavy fuel consumption and, as I found to my cost, the small tank which has room for just over two gallons before going onto reserve, is good for a range of only 90-95 miles. Reserve gives another 15 miles if the motor is run at under 6000 rpm. At its worst the Yamaha consumes fuel at the rate of 42 miles to the gallon and while this can be improved upon with steady riding to get anything up to 60 mpg, most owners will be lucky to average much over 50 mpg.

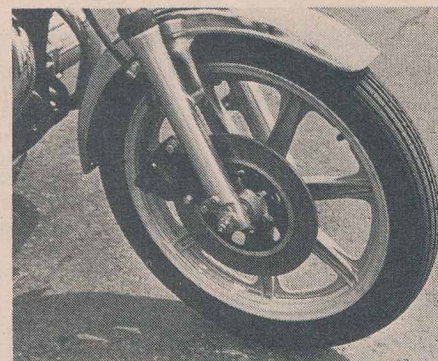
The Yam's suspension strikes a pretty good compromise for road use with the front forks absorbing most of the road shocks, but not damping out the rider's feel of what the front wheel is doing. At the back the five position dampers follow current fashion with exposed chromium plated springs. Set on their middle position they gave a firm but not uncomfortable ride. Although the Yamaha's handling is not so responsive or as quick as on the RD model, the XS still reaches a very high standard in this department. On dry roads it can be safely cranked over without drama until the footrests touch down, while in the wet the extra weight of the four stroke does, if anything, add to the stability of the machine.

The single discs at front and rear could

**ROAD  
TEST**



The stylish dualseat hinges to reveal fuse box, battery and tool tray. The seat is lockable.



Cast alloy wheels come as standard. The single disc front brake worked well in the wet.



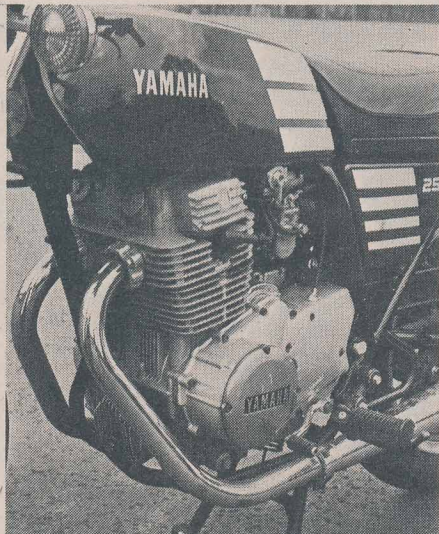
hardly be compared to the extremely powerful disc and drum combination on the RD250. However, they are equal to the performance of the machine and, just as important, they work well in the wet, even when cold.

Long distance trips soon highlight any shortcomings with rider comfort and this proved so with the XS. I found that the enforced fuel stops every 90 miles provided a welcome break from the dualseat which is much too hard and from the slow action twist grip which could not be taken from shut to open with a single movement of the wrist. The footrests too, are mounted a shade too far forward. Pillion passengers complained of high frequency vibration through the footrests but vibration only became apparent to the driver in the single rear view mirror which lost its clear image as soon as the motor got into its power band. And talking of the mirror, it needs to be mounted on a longer stalk so that the scene behind is not half concealed by the rider's right shoulder.

A feature I particularly liked was the self-cancelling indicators. They worked for about ten seconds before automatically switching off which in most traffic situations was about right. I also liked the diaphragm fuel tap which cut out the need for turning the fuel tap off every time the bike was parked. I didn't like the constant attention the chain demanded — it needed adjusting every 400 miles and I didn't think very much of the headlight which was hardly adequate for much above 50 mph in any safety after dark.

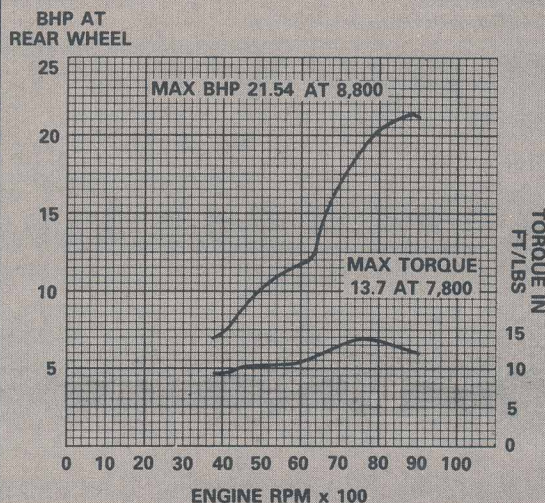
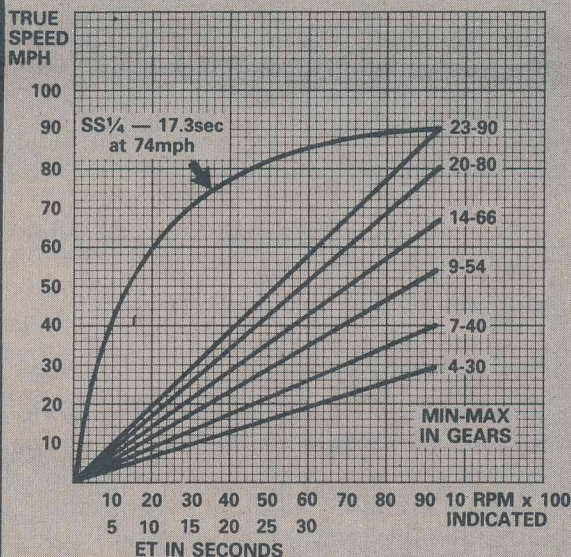
The XS is not a simple bike to sum up. The nature of its power output makes it a demanding machine to get the best from, but once the technique is perfected it can give a lot of enjoyment in a lot of safety. In short, a very satisfying bike to ride properly, something that can't be said about many of the pretty bland small capacity machines coming out of Japan these days. On the other hand, the Yam's engine characteristics hardly make it suitable for serious touring or, even, for regular city commuting where its narrow power band and lack of throttle response at anything much under 7000rpm make it something of a liability.

**COLIN MAYO**



The engine gets its 21bhp to the rear wheel via a six-speed gearbox.

## Performance & specification



Engine tests run on a Heenan and Froude DPX2 dynamometer operated by Lincolnshire Engine Developments and Racing Ltd., 10 School Lane, Baston, Peterborough.

**TRACK CONDITIONS:**  
Dry, 5-7mph tail wind, ambient temperature 64 deg F.

### PERFORMANCE:

Maximum speed 90.5mph  
Standing start 17.3 sec  
1/4-mile at 74mph  
Braking from 30mph 29 feet  
Fuel consumption Worst 42mpg  
best 53mpg  
average over test 49mpg  
Speedo error 1mph slow at 50mph

### ENGINE:

SOHC, twin cylinder four-stroke, wet sump, twin Mikuni constant-vacuum carburetors, ignition by cb and coil, 12V alternator feeding 12A-h battery.  
Displacement 248cc  
Bore x stroke 55x52.4mm  
Compression ratio 9.6:1  
Claimed output 27bhp at 9500rpm

### TRANSMISSION:

Gear primary drive to 6-speed gearbox via multi clutch. Final drive by chain. Gearbox ratios: 2.500; 1.778; 1.381; 1.125; 0.962; 0.867.

### CHASSIS:

Duplex-cradle frame. Hydraulic 267mm single discs front and rear.  
Wheelbase 52.75in  
Overall length 79.5in  
Castor 29deg 30mins  
Trail 81mm  
Dry weight 365lb  
Test weight 380lb  
Fuel tank 2.42galls

### PARTS PRICES INC VAT

Handlebar £7.35  
Front mudguard £17.23  
Speedo cable £3.09  
Exhaust system £41.09  
Piston and ring set £9.74  
cb points £3.69  
List price £674.18  
Warranty six months or four thousand miles

Importer: Mitsui Machinery Sales Ltd., Oakcroft Road, Chessington Surrey.

Model	Price inc VAT and delivery	Max speed	av mpg	SS 1/4	dry wt
Yamaha XS250	674.18	90.5	53	17.3	365
Yamaha RD250C	667.50	91	47	16.4	320
Honda CJ250T	685.50	84.5	56	18.0	356
Kawasaki KH250	647.50	92	46	17.2	348
Suzuki GT250B	637.00	92	44	15.9	322