

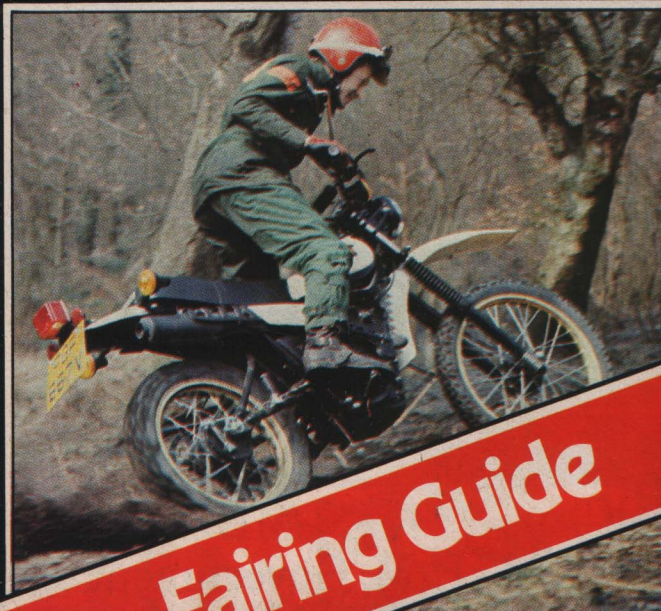
# MOTOR CYCLING

**YAMAHA**  
3 Bike Test Special

JULY 1980 60p

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**Dave Potter Profile**



**Fairing Guide**



# Yamaha XS250SE

**CRUISING the West Coast USA highways is a special kind of motorcycling which led to a special kind of machine, but this isn't it. Don't be fooled by the neat styling of the first 250 to get the California custom treatment, the Yamaha XS250SE Special is for urban use only.**

Colourful US Custom badges replace the traditional engine-capacity motif, and if you don't like that sort of harmless deception you won't like the bike. Bob hated it for all sorts of sensible reasons but I thought it was fun — as long as I didn't stray too far from the bright lights and city speeds.

Most obvious mod is the bars, exactly like the ones on the XS650 Special we Marathon tested back in January. They rise up high and are then pulled back instead of turning out sideways like apehangers. You get used to having your wrists turned in after a while but the switches become an awkward reach. Because of the bike's modest top speed arm ache is never a problem and there aren't any elbows in the mirrors, which is more than you can say for most bikes.

## Control in traffic

To meet the riding position set by the bars both sets of footpegs have been moved forward quite a lot. This has tidied up the gearchange by eliminating the need for convoluted linkage. Combined with a slightly lower seat at the front, the riding position makes the Special a lazily easy bike to control in traffic. It also cries out for lame stunts like jamming on the rear brake and

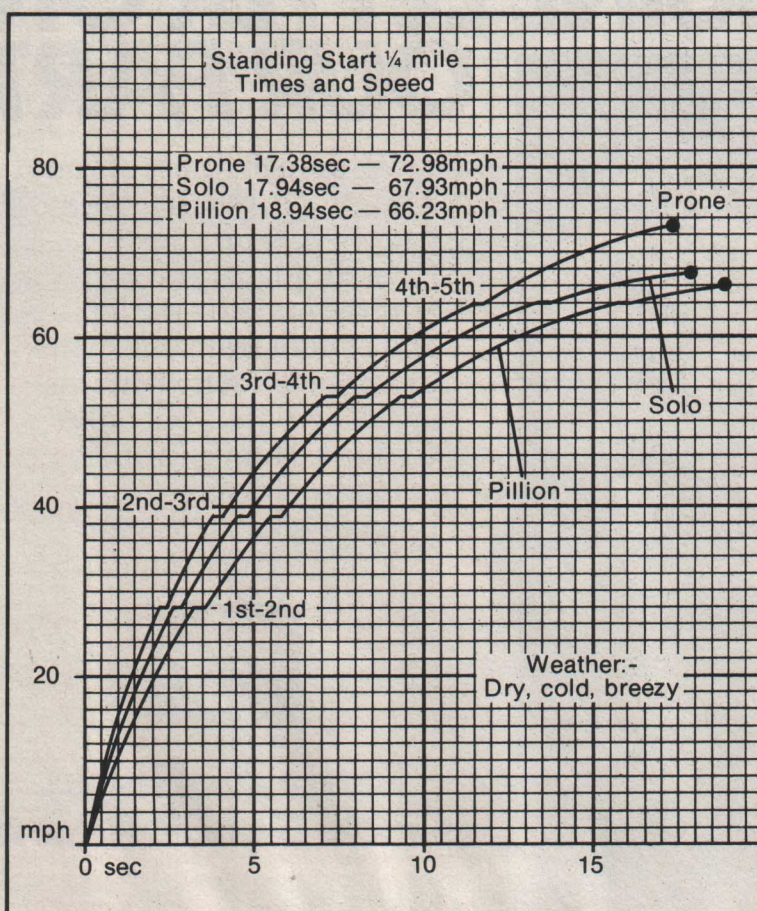
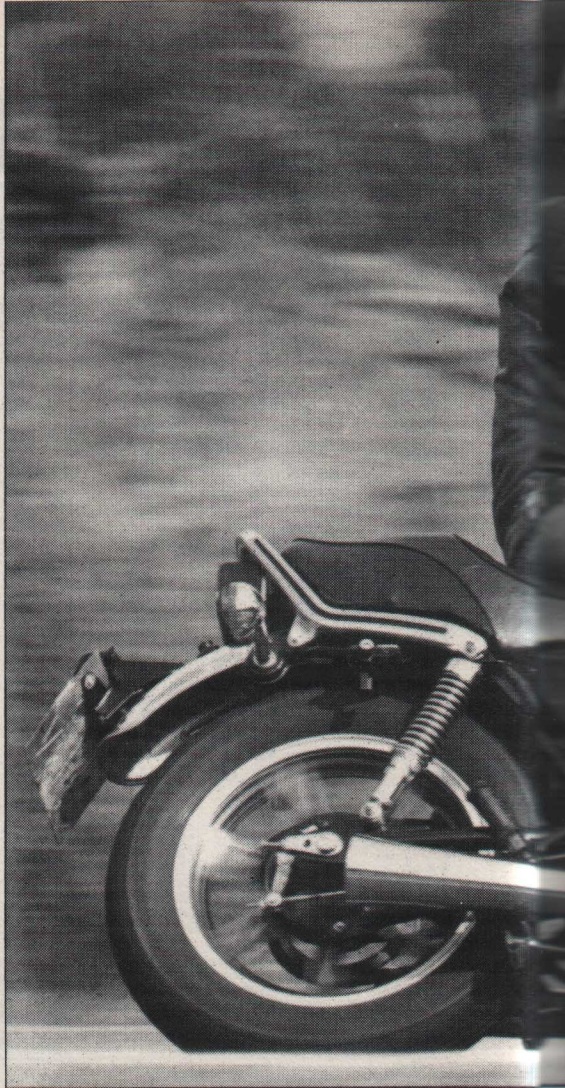
sliding sideways. With a bit of practice you could probably get the side stand down by the time the bike has stopped, but don't blame me if you ram someone in the shins with your sump.

The back brake of the low mileage test bike was very fierce for a drum so a rear wheel that locked too easily led to poorer solo braking figures than we got from our standard Marathon test XS250 (May issue). With a passenger's weight to increase traction at the back the Special came out on top.

The King and Queen seat was one of the first things Bob complained about. It definitely isn't as comfortable as our Marathon bike despite its overstuffed appearance. My theory is that the Special's riding position puts more weight on the bony bits of bum around the base of the spine instead of on nice flabby thighs. Whatever, it's only a pain if you have to sit there for more than half an hour.

Passengers get a lot more padding because of the very large step in the middle of the seat. Whether they like it or not will depend on how much they like cornering because being jacked up several inches makes the bike feel as if it's leaning more than it is. I got very annoyed with the fiddly and stiff locking catch that had to be released before the seat would lift off to get at the toolkit. I also cursed the helmet holder that is built into the same lock because it's a struggle to lock up two helmets.

Do you suppose Mitsui would notice if I returned the test bike without its beautiful cast-alloy grabrail? As a work of art it would grace any mantelpiece and as a reassuring handhold for passengers it's the right shape



## SPEEDO

ind	true
20	—
30	30
40	40
50	49
60	58
70	68
80	—
90	—

## Milometer

Accurate

## MAXIMUM SPEEDS and SPEED RANGES

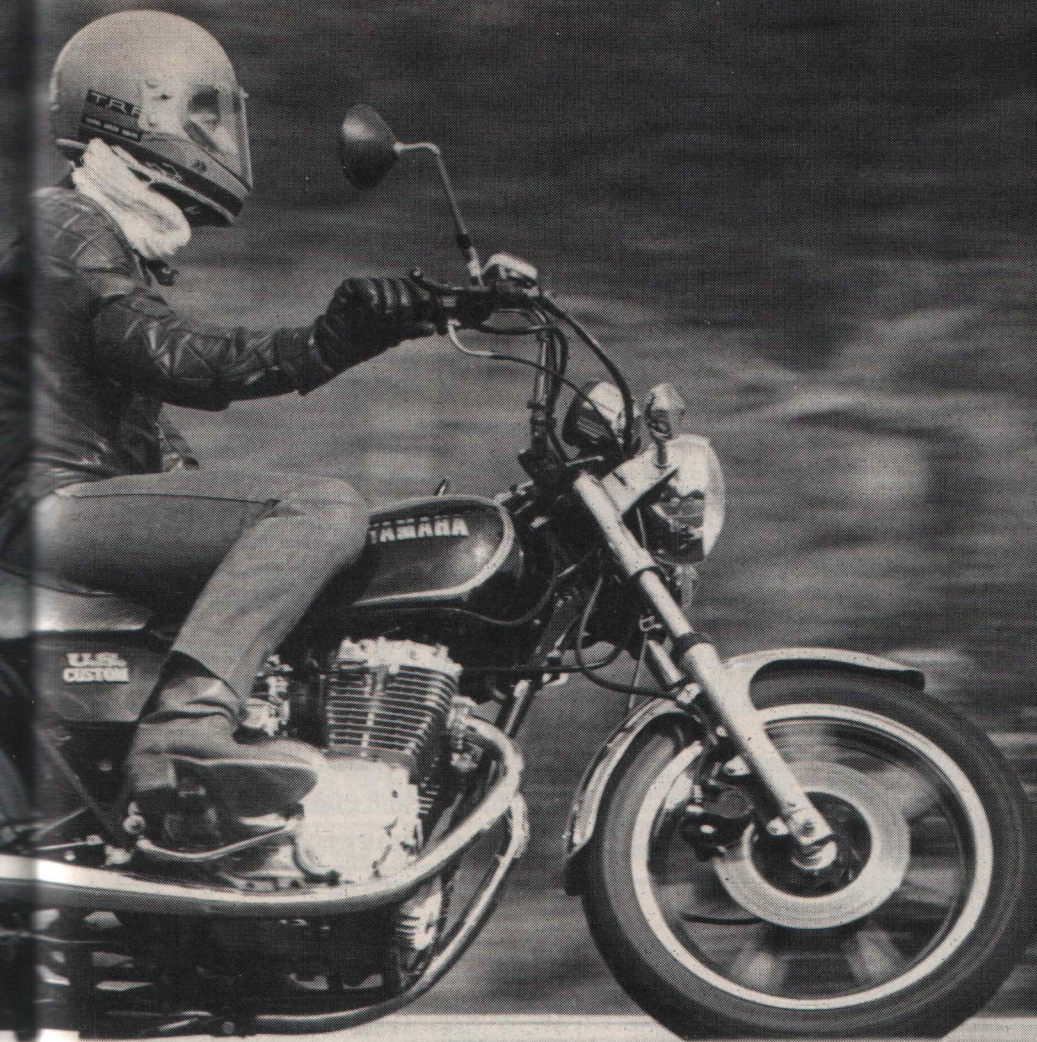
gear		mph max	mph min
1	solo	32.98	4.06
2	solo	44.66	6.04
3	solo	59.51	8.50
4	solo	72.02	12.11
5	solo	70.71	16.33
	pillion	70.22	
	prone	82.46	
6	solo	68.86	18.51
	pillion	67.33	
	prone	81.85	

## FLEXIBILITY IN TOP GEAR(sec)

mph	30-50	40-60	50-70	60-80	70-90	80-100
solo	14.0	18.7	—	—	—	—

Performance figures obtained at:-  
Motor Industry Research Association Test Track  
Nr. Atherstone, Warks.  
Test Rider: Neil Millen  
Weight: 11½ Stone





# Yamaha XS250SE

## BRAKES(both)

mph	solo		pillion	
	ft	m	ft	m
30	38	11.6	36	11.0
40	64	19.5	70	21.4
50	107	32.7	110	33.5
60	143	43.7	171	52.1
70	198	60.3	213	65.1

## OIL CONSUMPTION

Negligible

## MPG

mph	solo	pillion
30	108	105
40	95	91
50	85	81
60	69	63
70	—	—
overall	63	

## MPH per 1000 rpm

gear	mph
1	3
2	4
3	6
4	7
5	8
6	9

in the right place. Any grab rail would have been an improvement over the standard XS250 but I can't understand how such quality got past the accountants. This and the seat probably account for all of the extra 3lb. and most of the extra £30.

The big twin-bulb rear light has been tucked so tightly under the grab rail that there's no room underneath it for the number plate, so the normal clear lens has been blanked off. Instead there's a separate light on the number plate bracket. Looking a bit black and British, it's a twist in the tail that's just right for the styling.

## Conical silencers

Shortened, conical silencers (sorry, mufflers) are compulsory equipment for any Japanese custom variation. But these ones also serve a useful function because they're cut off short enough for the rear axle to come out without having to use a wire tool to compress the suspension. As well as being shorter than the silencers on the standard bike, the Special's pipes are connected by a balance tube just in front of the rear wheel.

There is no balance pipe on the standard XS250, and this was the only difference I could find to account for the laid-back performance. The test bike was so new that not even Mitsui knew the full technical specification when we went to press.

Outright performance for the Special is about what you'd expect from an XS250 with high bars — a few mph down on top speed, a little slower up the quarter mile, a few less

miles per gallon. But poke deeper into the figures and a few oddities crawl out. Like a quicker pillion standing quarter and more top-gear flexibility (although the Special won't pull much over 60mph without first changing down, whereas the standard bike went right up to 80).

Yamaha only claim one less horse for the Special's engine and maximum torque for the two engines is identical, but torque takes an extra 500rpm to work up to on the standard bike.

Sporty isn't a word you'll hear a lot when the subject of the conversation is XS250s. We liked the standard bike for its smoothness and flexibility, knowing that there was always a bit more poke to be had the nearer we got to 9000. Engine character has been messed about with on the Special to give more medium-speed punch to go with the laid-back image. But there's less to be gained by hanging on to the revs. Although you have to change down through lots of gears if you want to come out of a bend at a respectable speed, top gear always has enough urge to lift the bike out of the lean.

Carburation doesn't seem to be as clean as on the standard bike although the Mikuni units are the same type. On/off throttle work is less smooth and it takes more frequent correction to ride at steady speeds.



No doubt about the vibration — there's more of it. The mirrors shook at several points around the revcounter dial, usually just enough to make things indistinct but not invisible. The shaking doesn't bother the rider much — not surprising with rubber-mounted footrests and handlebars — but passengers get bolt-on pegs and heavily-tangled feet.

Flexibility pays off with slightly better fuel consumption at steady speeds — quite a lot better two-up. But on-the-road figures were always slightly down. Either the bars have a big effect or the stylist-designed silencers are mucking up efficiency during acceleration.

The Special managed 63mpg overall compared with 66 for the standard bike. Over 70mpg was common around town. Range before reserve was 120-170 miles despite a tank that holds a half-gallon less.

There's no doubt that the styling wouldn't be complete without the fat rear tyre on its 16 inch wheel but there are a few drawbacks. The first is that, although the rubber seems to be the same excellent stuff that stuck our Marathon bike to the road, the width or the need for stiffer sidewalls to support the width makes white lining even worse. I can't tell you anything about the tyres' wet grip because the test bike came complete with West Coast Californian weather.

A more serious problem caused by the fat back tyre is that the smaller rolling diameter

makes the back end sit lower and so reduces ground clearance by 65mm. The centre-stand prong hits the ground too easily on left-hand bends — much too easily two-up.

Gearing is altered by a smaller rear sprocket to give the same mph/1000rpm figures as the standard bike. No internal gear ratios were available from Mitsui by press date but they're probably the same.

The most serious effect of the vast difference between front and rear tyre sections is that it leads to poor stability at speed, not helped by the high bars. The standard bike became slightly twitchy towards its top speed but the Special gets out of hand as low as 60mph on bumpy country roads.

All this weaving and bump-induced flexing happened despite what felt like firmer damping. Again, damper specs weren't available and maybe the units on our high-mileage Marathon bike were knackered.

Possibly to compensate for the forks being thrown forward by the lower rear end, trail and rake have been increased. This shortens the wheelbase by 5mm and contributes to the trail-bikish tendencies at speed.

### Summary

The styling of the XS250SE is much more radical than on some of the bigger ex-factory customs. If styling is what you want, you get

good value for money at only £30 more than the standard bike.

The whole point is image. It may not say 250 on the side panels but, if you're getting near six feet tall and twelve stones heavy, onlookers may begin to get suspicious when you throw your leg over and dwarf the machine. For lissome under-21s it could be a big points winner when cruising the high street.

Neil Millen

Continued on page 58

### STAR RATINGS

Our Star system gives a quick reference to the standard reached in both performance and engineering.  
\* = Poor; \*\* = Below average;  
\*\*\* = Average; \*\*\*\* = Above average;  
\*\*\*\*\* = Outstanding.

Performance	***
Handling and Ride	*
Servicing	****
Engine	***
Transmission	***
Frame and Forks	*
Wheels and Brakes	***
Electrics	***
Dimensions	***
Equipment and Finish	****
OVERALL RATING	***

### COMPARISONS

	Speed prone	SS ¼ mile (prone)	Dry weight	Claimed bhp	mpg	Price inc. VAT
Yamaha XS250 Special	82mph	17.38sec/73mph	373lb.	26 @ 8500	63	£950
Yamaha XS250	88mph	17.12sec/74mph	370lb.	27 @ 9500	66	£920
Kawasaki Z250	88mph	16.02sec/78mph	337lb.	25 @ 10,000	51	£929
Honda 250N	80mph	16.85sec/75mph	367lb.	27 @ 10,000	59	£899
Benelli 254	86mph	16.90sec/75mph	257lb.	28 @ 10,500	53	£1399
Yamaha RD250	94mph	15.15sec/85mph	330lb.	30 @ 7500	44	£920

### TECHNICAL SPECIFICATION

#### Engine

**Type:** Air-cooled, parallel twin, SOHC four-stroke.

**Bore x Stroke:** 55.0 x 52.4mm.

**Displacement:** 248cc.

**Compression ratio:** 9.3:1.

**Carburettors:** Two Mikuni BS32 CV type.

**Max. horsepower:** 26bhp @ 9500rpm.

**Max. torque:** 2.1kg-m (15.2lb.-ft.) @ 8000rpm.

**Lubrication:** Wet sump containing 2.6 litres (4.6pt.) with trochoidal pump.

#### Transmission

**Type:** Six-speed, constant mesh gearbox.

**Final reduction ratio:** 2.73:1

**Drive sprocket:** 15 teeth.

**Wheel sprocket:** 41 teeth.

**Drive chain:** 104 rollers.

**Clutch:** Wet multiplate with seven friction and six thrust plates.

#### Wheels and Brakes

**Front tyre size:** 3.00/S 18.

**Rear tyre size:** 120/90 x 16.

**Front brake:** Hydraulically operated disc, 267mm diameter, with floating caliper.

**Rear brake:** Rod operated, single leading shoe drum, 160mm (6.3in.) diameter.

#### Frame and forks

**Frame:** Welded tubular. Double cradle with single downtube.

**Front forks:** Telescopic with oil damping.

**Rear suspension:** Swinging arm controlled by oil-damped units with five spring pre-load settings.

**Trail length:** 87mm (3.43in.).

**Castor angle:** 27° 30'.

#### Electrics

**Ignition:** Battery and coil system with twin contact breakers.

**Battery:** 12V, 12Ah.

**Headlight:** 12V, 45/45W.

**Rear light:** Twin-bulb tail/stop 5/21W.

**Indicators:** 21W.

**Warning lights:** Turn, neutral, high beam, oil pressure, 3.4W.

#### Dimensions

**Seat height:** 770mm (30.3in.).

**Length:** 2065mm (81.3in.).

**Width:** 870mm (34.3in.).

**Height:** 1140mm (44.9in.).

**Wheelbase:** 1375mm (54.1in.).

**Ground clearance:** 135mm (5.31in.).

**Dry weight:** 169kg (373lb.).

**Fuel tank:** 14 litres (3.08gal.).



**Yamaha**  
16 page Special