

MOTOR CYCLING

EXTRA BIKE TESTS
EXTRA FEATURES

FEBRUARY 1980 60p

FEATURES

Helmet communication systems tested
Tyres for 1980

WORKSHOP

Superservice Yamaha's XS 250/400
Cut chain costs

ROAD TESTS

Kawasaki's Z 650 States-style
Honda's XL250 mud & track
Suzuki's X-150cc sportped



BERNIE SCHREIBER
World Trials Champion
Colour Action Poster



MOTOR CYCLING

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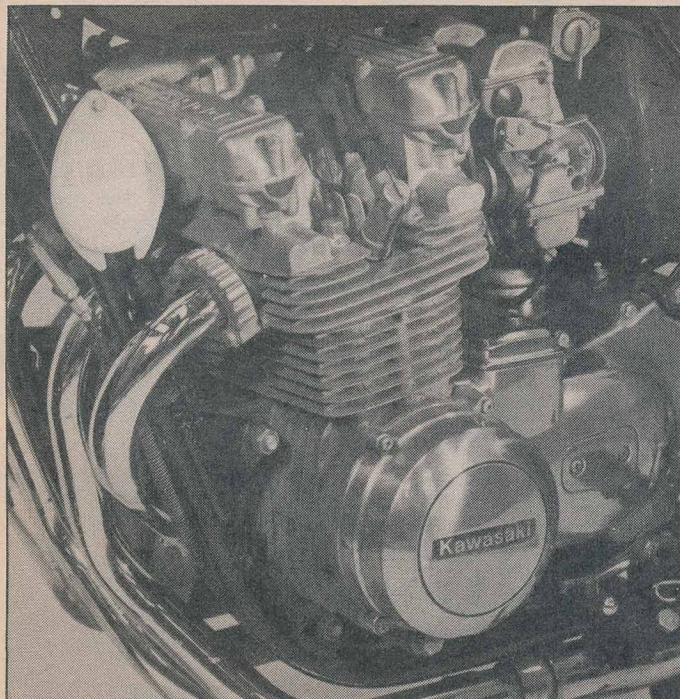
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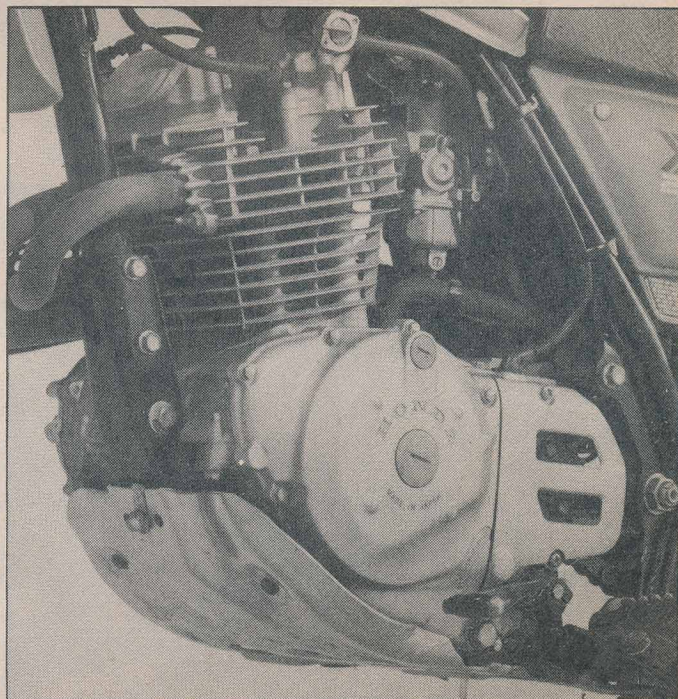
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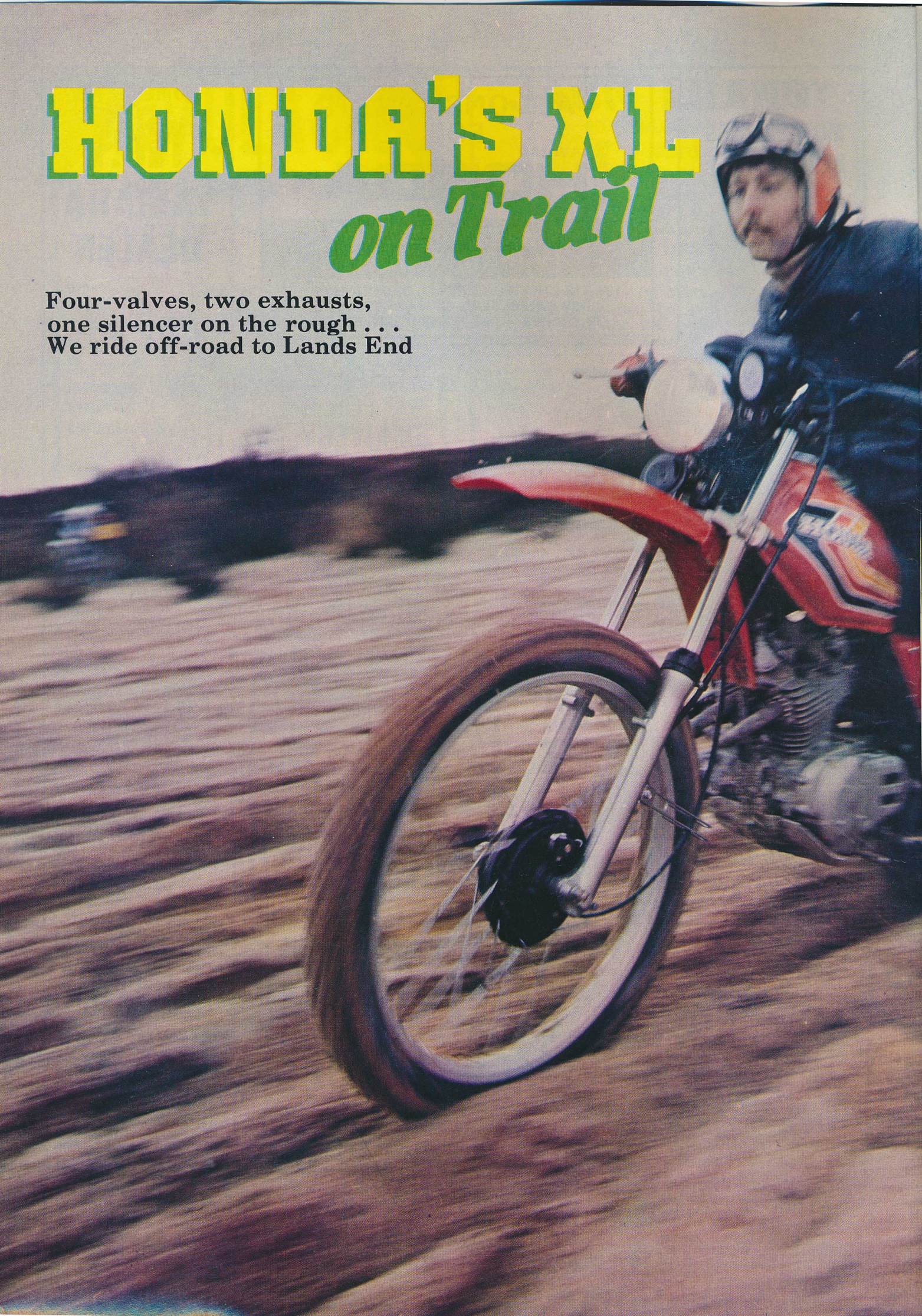
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One carb, two exhausts and four valves — the XL250S

HONDA'S XL *on Trail*

Four-valves, two exhausts,
one silencer on the rough . . .
We ride off-road to Lands End





Trail Impressions



didn't stop me from having a few doubts. Well, I hadn't taken the indicators off and I had a bet with Neil Millen that I wouldn't break them. Could I really guarantee not to drop it in rocky, muddy, crazy conditions? Gulp. Was the chain greased enough, maybe the lights would blow ... these four stroke singles ... vibration ... numbness ... would I survive?

When I first collected the XL250 from Honda earlier that week, it looked immaculate. The colourful, slim seat/tank/side panel design, the chunky rear tyre and, of course, the enormous front wheel made it look tall, purposeful and very striking.

It has taken on a completely new image compared to the old XL250. Not only is it lighter with new styling and colour scheme, but it has new frame and suspension units as well as engine modifications.

Contrary to the beliefs of those interested passers-by, who thought it was a twin because it has two exhaust pipes, it has basically the same engine as the old model, retaining the same (single) oversquare bore x stroke dimensions and four valves. This time though, the twin exhaust ports 'exhaust' into two header pipes which weave themselves round the front downtube, then sneak off behind the side panel to converge into a single exhaust pipe and reappear tidily poised under the seat on the same side.

Piece of genius

The apparent aim of this piece of genius is to encourage better heat dispersion from the cylinder head, provide a more efficient exhaust system and contribute to a wider power band. Whatever the reasons, the whole exhaust system is much neater and lighter and tucked well out of the way of trouble.

The engine modification of most consequence to smooth-as-silk fanatics is the inclusion of chain-driven counterbalancers, which eliminate vibration. One is mounted forward of the crankshaft, while the other runs concentrically with the gearbox mainshaft. Though this adds some weight to the engine, so much weight has been saved elsewhere that overall the XLS is about 18 pounds lighter than the old XL. An obvious saving has been made by using an all-steel frame with a single front downtube, incorporating the engine as part of the frame member.

While on the subject of the frame, the front and rear suspension units are also new. The front forks have 8in. of travel and together with good damping and the large front wheel, makes an excellent front end set up.

The rear units are moto-cross 'laydown' style with about 7in. of travel. They are also inverted, which keeps the adjusters out of the mud. Whilst I found both units very adequate if a little on the spongy side, over fast rough going, heavier riders than myself soon bottomed the rear units even on the hardest setting. Two-up riding found the pillion passenger comfortable, but only for short distances. Although the suspension

IMPRESSED with the Honda XL125S, tickled by the 100 and charmed by the 185 we could hardly ignore the 250. Our tests are tough enough, but since the smaller ones survived, surely the 250 would walk it. So this time we decided to stretch it just a little further and entered the Honda XL250S in the Lands End Trial...

WHAT do people normally do on Good Friday? Eat fish and hot cross buns perhaps? Play football? Go to the pub?

I couldn't help wondering what normal people would be doing as I set off into the dark night at 10pm Good Friday evening (the 13th as well) dressed to virtual incapacity in an attempt to stave off any impending weatherly doom that might befall me during the next night and day.

Other loonies

I wasn't alone mind you (thank God for other loonies) and as we set off one by one, trying to ignore the glowing lights from suburban houses that told of cosiness and warmth, we braced ourselves for the 400-mile journey that would be speckled with who-knows-what obstacles to taunt our way.

Probably the biggest worry passing through everybody's mind was whether their machines would make it. Just because I was riding an almost brand-new 250S

HONDA'S XL on Trail

coped well enough for normal road-going, the seat was rather hard.

Perhaps somebody small and weak like me has been involved with the design work as the 'S' model seems to echo the words 'lighter and easier' throughout its sales bump. Also, although it has a four-stroke single engine, even the starting procedure is nothing to get in a puff about. The engine features a unique decompression device which consists of a cable linking the kickstart to an actuating arm on the exhaust valve. Thus, when the starter is depressed, the exhaust valve is so controlled to automatically release a small amount of compressed gas when the piston is near the top of its stroke and this makes kicking the engine over considerably easier.

With the handle bar mounted choke lever pulled out to fully-closed position, I must agree that the XLS did start easily every time. On exceptionally cold mornings, it would usually start third kick after a couple of priming kicks without the ignition on. Because the kickstart stroke is quite long, I tended to jump heavily on it to make sure it went all the way. I found it easier to start while the bike was on its side stand, although I don't know how long it would put up with this sort of treatment.

The decompression device also represents an extra item to be included in the servicing agenda, because if the cable becomes slack, it needs to be adjusted as explained in the handbook. If not the kickstart/valve mechanism will become unco-ordinated and it'll be back to sprained ankles and red faces. Not that the compression ratio is that tough at 9:1, but as we're all accused of being softies nowadays, we might as well take full advantage of it.

On with the road show

The first part of the course was a 90-mile blast along ordinary roads, which included a mixture of country lanes and dual carriageways. I therefore had absolutely yonks of time to become either mesmerised by the red blobs I was following, which were all I could see, or look at the handlebars where at least the milometer seemed to be moving. It eventually sunk in that Honda had not left the speedo out of their catalogue of redesign. As on the other 'S' models, the speedo is incorporated in a new square-shaped instrument console and actually excludes a rev counter, an item that's become much of a gimmick on the smaller machines. Instead, a numbered black line, called a gear range indicator, runs parallel to the speedo markings as a clue to riders when to change gear, although engine noise should be enough indication.

Also on the console are the ignition switch, usual idiot lights and to the left of these the trip and milometer. The trip meter has a very conveniently-sized knob for reset, so that even a heavily gloved hand is no hindrance. Unfortunately, this same useful knob rendered the trip meter useless as it was easily nudged, especially when pulling the choke lever out with gloved hand. This proved rather irritating as the trip is handy for gauging petrol and, in this case, distance between stages and refuel points.

In the dark unlit lanes, I became conscious about the lights, especially as in the very tight bends the lights of the other bikes would disappear out of sight. For a 35W headlight, it doesn't do a bad job, but switching to main beam produced a vague, watery light and it seemed safer to ride more slowly with a maximum of 45mph.

The main lights only work when the engine is running and the 6V battery, which looks vulnerable fitted to the frame next to the side panel, only provides juice for the indicators and stop lights. It is protected by a small, black plastic cover, which makes checking the fluid level an easy task and the battery is easily removed for off-road use.

Creature comforts

The same off-road accessibility has been applied to the tool box, which also hangs exposed. It may be a handy position as regards grabbing the tools out quickly, but it is not lockable, so for normal everyday use, which may involve parking in town, this leaves the tools rather exposed to a light-fingered passer-by.

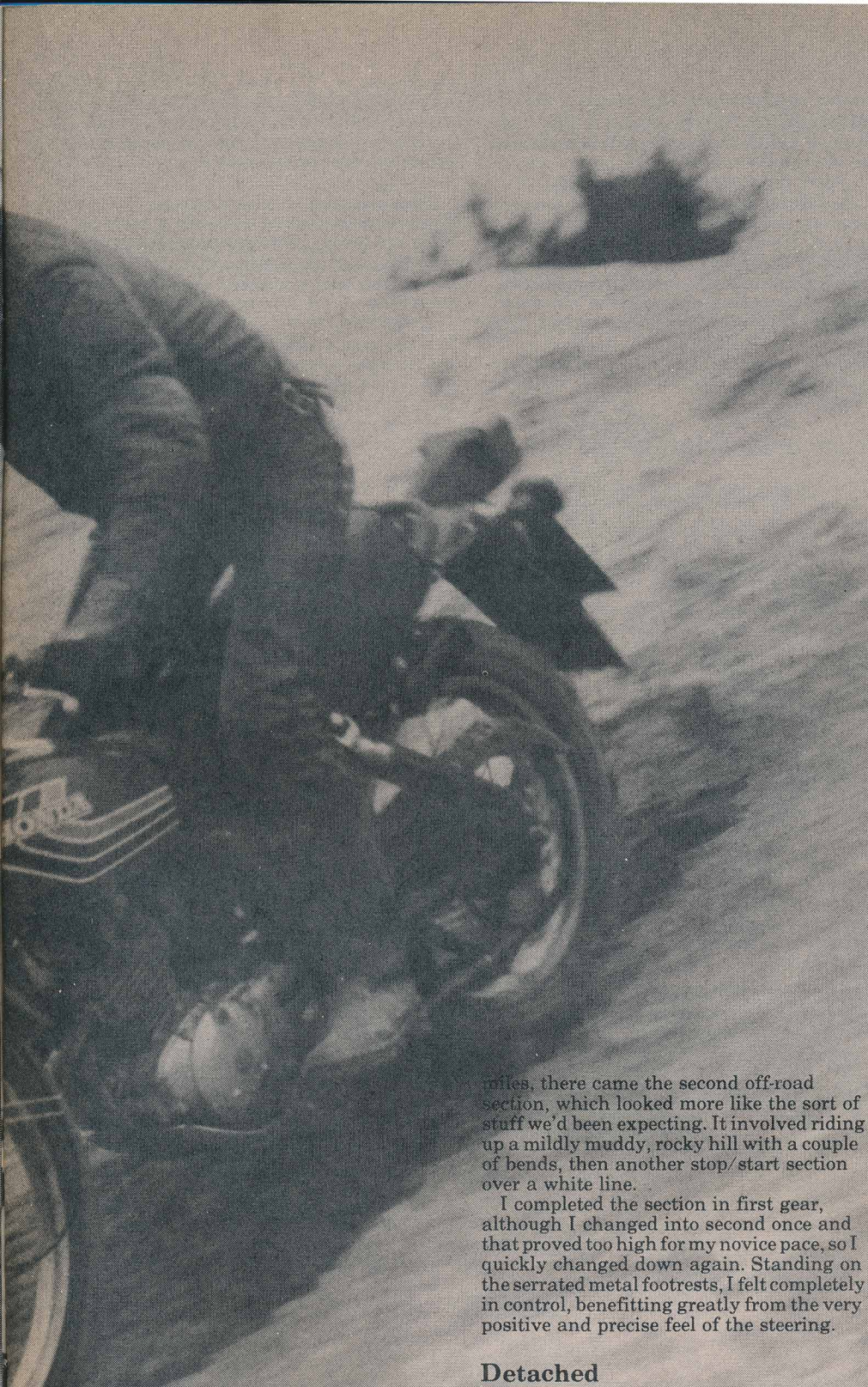
My next concern was comfort. For, not having just been redesigned myself, I wondered how my own frame would fare after 20 or so hours in the saddle. Unlike the Honda, I couldn't adjust my rear if the going got too rough. At the time however, the reply from all working parts was f.a.b. The riding position is good. Both legs and arms felt at ease with no straining to hold on tight. My knees nestled quite naturally around the tank and the numbness I was expecting to feel from the engine was absolutely non-existent.

With the suspension set on the middle notch, I felt quite immune to any bumps or holes in the road and enjoyed breezing through the bends and occasional roundabouts. The Honda seemed quite happy poodling along for the majority of the time at around 55mph in top gear and for the whole of the first part of the trip, I seldom needed to change gear.

I was glad to arrive at the first checkpoint as I was not only famished, but slightly bored and, as some of the smaller bikes had fallen by the wayside hunting for garages, I was pleased to have made it without even going on to reserve. Later calculations showed the Honda to have an average range of about 120 miles per tankful, depending on the kind of terrain. Steady road work was obviously easier on fuel consumption.

COMPARISONS

	Speed prone	SS ¼ mile (prone)	Dry weight	Claimed bhp	mpg	Price inc.VAT
Honda XL250S	73mph	17.26sec/73mph	260lb.	20 @ 7500	61	£899
Kawasaki KL250	81mph	16.76sec/80.20mph	280lb.	21 @ 8000	58	£849
Suzuki TS250/ERN	83mph	16.63sec/79.82mph	267lb.	23 @ 6000	54	£689
Yamaha DT250	84mph	16.52sec/81.64mph	287lb.	23 @ 6500	50	£875



Trail Impressions



the road and both the Honda and I were still going strong. Even if it was never taken off the road, which would be a great shame and a waste, the Honda makes a remarkably pleasant road bike. Its great turning circle provides a superb ability for filtering through the traffic. And the quietly chuffing, seemingly docile engine is a great accompaniment, for it is as happy trickling along at 20mph in top gear as it is hacking at 70mph.

It doesn't have the acceleration of the two-strokes and it does need to be revved quite high through the five-speed box in spite of its broad power band, to really build up speed. Maximum prone is 73mph and, as our figures show, that can be achieved within a quarter mile. What the Honda does have over two-strokes is engine braking and this is very important on slippery, rough ground, when touching the brakes is taboo. Also, a four-stroke has a classic reputation of being more economical and more reliable and who's to argue? The Honda's fuel consumption averaged out at 61mpg after several hundred miles of riding road and trail, although we did get a couple of readings in the 70's and some in the 50s. So it's up to the rider to get what he wants from his engine.

Compromise tyres

Another point that makes the Honda so worthy of being a road bike is the tyres which are not as restricting as on other trail machines fitted with trail tyres. This compromise, exclusive to Honda, although Suzuki have now developed their own, allows as much freedom on the tarmac as an ordinary road tyre and encouraged us to go blatting round the corners faster than we might.

With all that ground clearance (10.2in.) we were aware that the tyres would run out of ground before the bike did and probably very suddenly, too, as the tyres square off very quickly to the sidewalls. If they're not pushed, the tyres behave remarkably well in very wet conditions.

Unfortunately, all this extra road grip has been acquired to the detriment of off-the-road grip (more about that later), so when the standard tyres wear out, the owner can decide where his priorities lie in the choice of tyre he replaces them with, although there's not much choice over who'll supply the front 23in. Honda tyre...

It must've been about 5.30am when we came across the next section and although we couldn't see it from where we were waiting, it looked more like a hippo's playground than a plot to ride over. But just think of the challenge... droop... imagine the surprise on our faces as we rode up the innocent little slope to the start of the section. Not only did it seem like a long tunnel with no hole at the end, the marker posts went on and on, but there were actually spectators. They had come for a good laugh I s'pose, it's amazing what some people do on a Good Friday...

I was so shocked that I just held tight on to

miles, there came the second off-road section, which looked more like the sort of stuff we'd been expecting. It involved riding up a mildly muddy, rocky hill with a couple of bends, then another stop/start section over a white line.

I completed the section in first gear, although I changed into second once and that proved too high for my novice pace, so I quickly changed down again. Standing on the serrated metal footrests, I felt completely in control, benefitting greatly from the very positive and precise feel of the steering.

Detached

Wherever I pointed it, the Honda would go. The long, well-damped forks absorbed the bumpy terrain so well that I felt quite detached from the surface over which I was riding. When riding down the other side of the section I came to a very mucky gulf on slippery gunge. It was pitch black, with only the bike's dim light for guidance and as it ticked over on its side, I struggled to re-orientate my legs, arms and the hill, so that we were all pointing in the direction we should have been. At the bottom of the hill I met Neil on the DT100 — 'No, the indicators weren't broken.' Luckily, the front ones are well tucked into the bars and the rear are rubber-mounted and after impact ping back to normal position.

As dawn began to lighten the darkness hours, we had covered many more miles on

Standing amongst the other machines parked outside the Frying Pan cafe on the A30 near Sparkford the Honda looked quite distinctive. Probably because it was newer than most, but more because of its enormous front wheel. Honda claim that it's the only trailster to be fitted with a 23in. front wheel as standard and if they try and better that, it'll end up looking like a dragster in reverse. It contributes to the deceptively tall look of the XLS although the seat height is apparently lower than the old model. And if I can touch the ground, then most people can. Because the front is uplifted, the usual high-rise trailster bars are not needed and the Honda is fitted with flatter bars with a classy matt black finish.

With the first warm-up stop/start section out of the way, followed by a few more road

HONDA'S XL on Trail

the bars, into first gear, stood up on the rests and set off. The ground seemed a long way down from where I was standing, but as long as my feet were pinned to the pegs, the rest of me was forced to literally 'hang on in there.' Almost unbelievably I completed the section having been totally converted to the talents of a 23in. front wheel. It was like a guide dog leading the blind. It firmly led the way and while the rear end squirmed occasionally at the route chosen for it, the front end remained unperturbed by the tremendous mounds and ditches that had me frowning from ear to ear.

High action, low traction

From then on the sections became more challenging (ie got worse) and I flunked on three out of twelve. The content and consistency of mud was an absolute joke, although many British singles thumped through it very nicely, thank you. However 'adequate' the tyres were in reasonably muddy going, they couldn't cope with an onslaught. The fairly close-knit, shallow tread became choked with mud within a few feet of entering the splurge and couldn't throw it off. Instead the tyres collected more and more layers 'til they looked like muddy slicks. Having lost traction at the rear and not having much at the front, the bike slipped around and, in an effort to maintain the balance and counteract the slides, I

turned the bars from side to side. Then the bars took over and the whole event was like having a tank slapper on a soft slab of butter — but in slow motion!

Next time around I tried riding a bit faster and getting into second gear, but this was too much of a jump and the motor couldn't cope — it's obviously not that torquey low down — and a quick change down to first resulted in the same procedure as before, plus a few squawks, because the bike didn't stop at the banking, but decided to turn right angles on it. It's not fair to blame the bike for my incapacities, after all, a good workman never blames his tools but a bad woman does!

Nice brakes, bad chain

Checking the bike over after each section was a necessity. The tyres were relieved of more and more air in the hope of success and had to remain at about 15psi as a safe balance for riding on the road as well. Efficient people carried a pump with them. The brakes remained oblivious to what was going on around them. Riding straight from wet bog on to public roads it was reassuring to know they would work straight away and did not leak in water. We were very impressed with the brakes, particularly the position of the brake arm on the front wheel, which is situated above the wheel hub and not likely to get snarled up. Both front and rear drum brakes had plenty of feel and stopped the bike safely in wet or dry conditions and we thought that stopping in 30ft from 30mph at MIRA very reasonable.

What we didn't think very reasonable was the rear sprocket/chain set up. On such a

large rear sprocket, the chain was very exposed and collected a great deal of dirt, particularly when making full use of the ground clearance and scraping the bashplate.

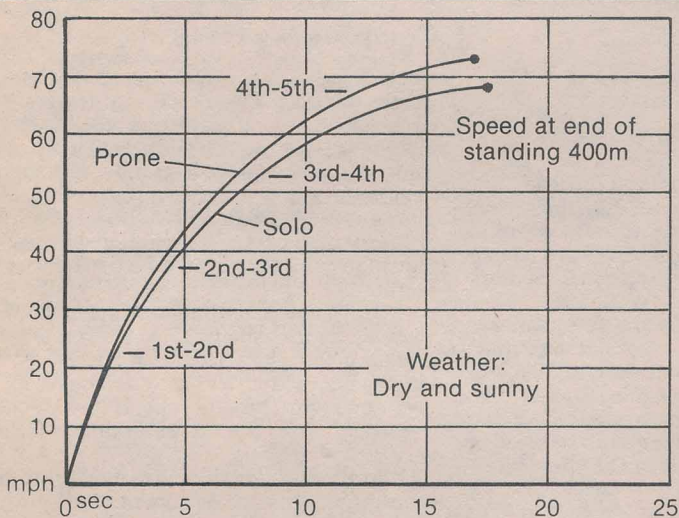
The chain runs fractionally over the top of the swinging arm and if slightly slack runs on it and is only protected underneath by a very flimsy chainguard, which gathered more twigs and muck than anything else. By sitting on the bike and rocking the suspension up and down, it is easy to see how the tension of the chain varies. Imagine that speeded up over fast and bumpy ground and it's no wonder the chain and sprocket have since developed a reputation for wearing unreasonably quickly. A chain tensioner would help to control the situation.

As the day wore on and I made more use of the gearbox, the gears seemed to become harder to engage and neutral had to be selected before coming to a standstill. The correct tensioning of the chain was critical to maintaining smooth gearchanges, which had initially been good. The chain was adjusted twice in 400 miles, kept continually greased and the situation improved. The clutch cable also received minor adjustment.

Journey's end came late on Saturday afternoon after a tussle with the rocks at Perranporth. But we made it.

Same again please

By this time, I was aching all over; not badly, but just enough to be glad to get out of the saddle. Considering the miles and hours covered, the Honda had been a good bet for me. No particular place ached more than the



MPH per 1000 rpm

gear	1	2	3	4	5
mph	3	4.7	6.4	8	9.8

MAXIMUM SPEEDS and SPEED RANGES

gear		mph max	mph min
1	solo	26.03	3.04
2	solo	38.08	4.53
3	solo	52.98	6.96
4	solo	66.51	10.48
	prone	69.82	„
5	solo	68.45	13.96
	prone	73.34	„

SPEEDO

ind	true
20	18.18
30	27.55
40	37.59
50	48.32
60	58.05

BRAKES(both)

mph	solo	
	ft	m
30	30.5	9.30
40	53.5	16.31
50	79.5	24.23
60	119.0	36.26
70	195.0	59.43

MPG

mph	solo
30	114
40	89
50	65
60	53
overall 61	

Milometer

+3%

ACCELERATION OVER STANDING ¼ MILE /400m

	ft	164	328	492	656	820	984	1148	¼ mile
	m	50	100	150	200	250	300	350	400
solo	sec	4.27	6.68	8.77	10.44	12.65	14.08	15.73	17.36
	mph	39.42	49.51	55.51	60.33	62.93	64.85	68.90	69.11
prone	sec	4.26	6.63	8.59	10.20	12.13	13.73	15.62	17.26
	mph	39.91	50.64	57.60	62.45	66.35	69.03	72.03	73.21

ACCELERATION FROM REST

mph	solo	prone
0-20	2.16	2.16
0-30	3.28	3.27
0-40	4.34	4.30
0-50	6.81	6.54
0-60	10.29	9.62
0-70	—	14.14

rest. I was just suffering from general wear and tear.

Talking of bets, all indicators survived in one piece, that is until Neil took the Honda out for a ride a couple of days later...

Having spent one whole day and night on the Honda, I felt quite attached to it. It must be one of the best trail bikes around having a fairly torquey, economical and apparently reliable motor within the bounds of a good

handling frame. Apart from that, anything that helps you earn a Finisher's Certificate in the Land's End Trail must be a good buddy. I wonder if it would be interested in a little action replay this year...

For further details of Lands End Trial contact the MCC Membership Secretary, A. L. Bonwick, 'The Pines', Tenterden Road, Croydon CR0 6NQ.



TECHNICAL SPECIFICATIONS



Forks: Telescopic front forks with 8.0in. travel.
Rear suspension: Rear swinging arm with five-setting, adjustable hydraulic shocks with 7.0in. travel.
Castor: 61.5 degrees.
Trail: 138mm (5.4in.).

Wheels and Brakes

Enormous front wheel together with long suspension make easy work of tricky, bumpy trails. Exclusive Honda compromise road/trail tread patterns grip well on the tarmac to the detriment of performance on the mud. Brakes withstood mud and water very well.

Front tyre: 3.00-23, 4PR New Pattern.
Rear tyre: 4.60-18, 4PR New Pattern.
Recommended tyre pressures for road: Front — 21psi; Rear — 21psi.
With passenger: Front — 21psi; Rear — 24psi.

Electrics

CDI ignition is maintenance free and should aid reliability. 6V battery is easily accessible but also vulnerable. Headlamp provided dim guidance on unlit roads but otherwise, electrics were of a high standard.
Alternator: 80 watts @ 5000rpm.
Battery: 6V/4Ah.
Headlamp: 36.5/35W.
Tail/Stop Lamp: 5.3/25W.
Turn signal lamp: Front/Rear 17/17W.

Dimensions

Slim seat and tank plus position of footrests and handlebars make a good riding position, that is reasonably comfortable over long distances. Deceptively tall, but lighter well-balanced weight is fairly easy to manhandle.

Length: 85.6in.
Width: 34.4in.
Height: 46.6in.
Wheelbase: 54.7in.
Seat height: 33.4in.
Ground clearance: 10.2in.
Dry weight: 260lb.
Kerb weight: 280lb.

Equipment and Finish

By looks alone the Honda is hard to resist in its colourful livery. Fitted with all the usual equipment you'd expect on a road bike: Side-stand, steering and helmet lock, mirrors, indicators, toolkit, handbook, trip meter, bash plate.

General

Test machine supplied by: Honda UK, 4 Power Road, Chiswick W4, Available in Tahitian Red only. Price: £899 inc VAT.



With that huge front wheel, all that ground clearance, and an almost invisible exhaust system, the XL250S can be pointed at just about anything

Engine

The XLS retains the four valves and oversquare bore of previous XL250 but with the new twin exhaust cylinder head. Modifications include chain-driven counterbalancers to eliminate vibration and automatic decompressor. This contributes to a more tractable and economical vibration-free motor.

Type: OHC, single-cylinder, four-stroke, four valves, with torque balancers.

Bore x Stroke: 74.0 x 57.8mm (2.913 x 2.275in.).

Displacement: 248cc.

Compression ratio: 9:1.

Claimed max power: 20.2bhp @ 7500rpm.

Claimed max torque: 14.5lb ft @ 6000rpm.

Carburettor: 28mm Keihin piston valve.

Lubrication: Forced lubrication, wet sump.

Air filter: Oiled polyurethane foam.

Starting: Kick only.

Transmission

New five-speed gearbox provides ratios to suit the broader power band. The big jump from first to second gear was not always accommodating on the rough and gear selection often proved awkward.

Clutch: Wet multi-plate

Transmission: Five-speed, constant mesh.

Primary reduction: 2.379.

Final reduction: 3.785.

Overall gear ratios: 1st 25.2, 2nd 16.65, 3rd 12.37, 4th 9.99, 5th 8.1.

Frame and Forks

New design has made lean work of the frame, now substantially lighter than previously, by using the engine as a frame member. Suspension is also new with much longer travel at the front and rear.

Frame: Diamond type steel frame.