

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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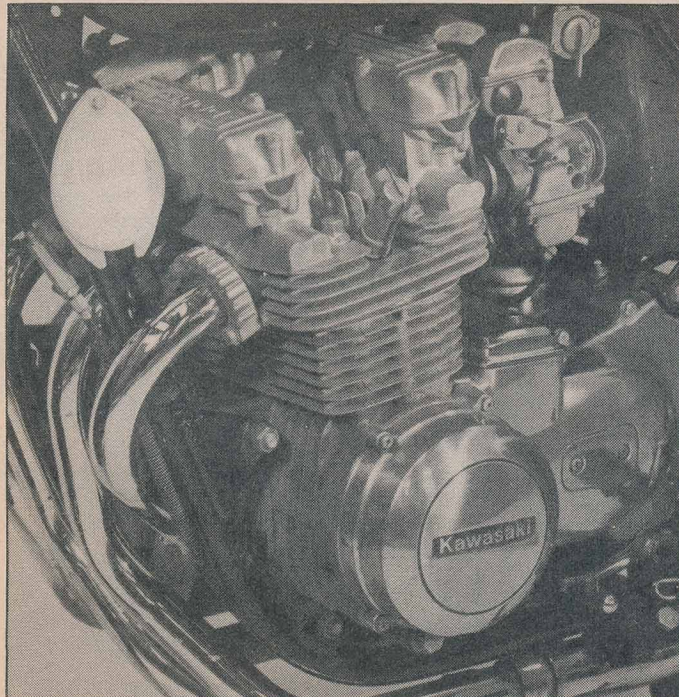
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Kawasaki's four-pot 650 motor ... power pack for the SR

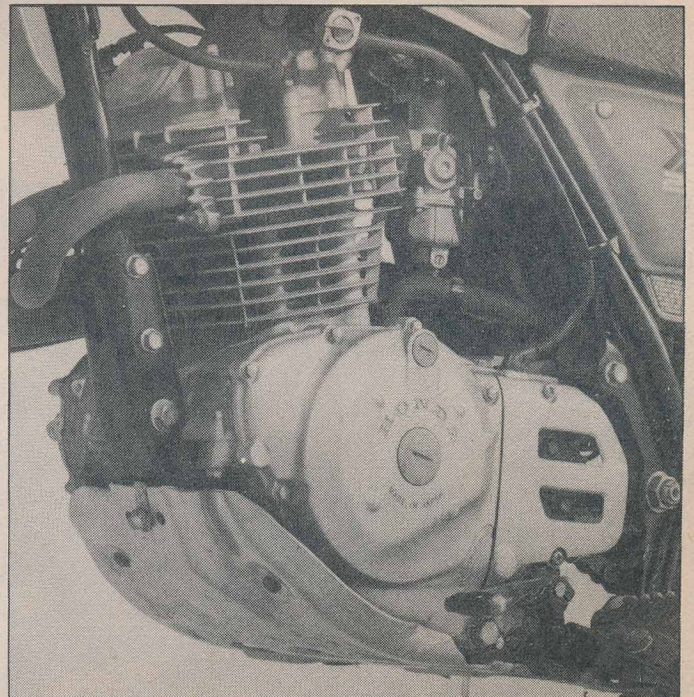
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One carb, two exhausts and four valves — the XL250S

YANKEE OVERSPILL



High-risers and doughnut tyres drift across the pond. Is the UK prepared for Kawasaki's USA Special?

Building a special around a well proven motorcycle like the Kawasaki Z650 has got to be a good idea — or has it? Is there really a market for the American-styled bike in Britain?

New models tend to draw at least a small crowd wherever they happen to be, but not so the Z650D SR. It seemed to be ignored by all but the local poser brigade. Pull up outside a 'greaser' pub and you

could guarantee being the centre of attraction, especially if you wear a denim waistcoat decorated with studs and chains, but pull up anywhere else and it was just another bike.

The Kawasaki is one of only a few American-styled machines offered by the Japanese manufacturers in this country, one of the others is the Yamaha XS650 Special. They differ greatly in that

the Kawasaki has a four-cylinder engine while Yamaha's is a twin. Other differences are minor.

The Yam has slightly more American flavour with its rounded fuel tank and pull-back handlebars. The appearance of the Kawasaki is described more as an accent than a style. It has extended front forks and chunky 'doughnut' rear wheel, but the bars are lower and the tank has square features.

Not so much an American style, more of an accent. 'Bars are lower and the seat flatter than on other Japanese US-styled bikes.



Continuing the purple paintwork, with its yellow and burnt orange coachlines, on to both mudguards has detracted from the standard brightwork look and helped to make it different. The cast alloy wheels sported by its stablemate, the Z650 Custom, are used although they are of very different sizes. Up front a 19in. rim remains, but is a size wider than the Custom.

The change in rear wheel dimensions, down from 18in. to 16in. diameter, and up to 5.1in. from 4in. cross section, has given it a 'doughnut' look, and together with the slightly remodelled rear mudguard has helped to alter the bike's appearance. The overall length is reduced by 30mm (1.18in.), but the 20mm (0.8in.) longer front forks, which give a more rakish angle of 62.5 degrees instead of 63 degrees, have increased the wheelbase by 15mm (0.6in.).

No power increase claims are made for the unusual exhaust system arrangement so one must assume it is purely for looks. A four-into-two set-up is retained, but the outside cylinders (1&4) feed through the righthand silencer, whilst the inner two pots (2&3) feed through the lefthand one. It does not affect the ground clearance in any way, that remains at 145mm (5.7in.).

Plenty of power

As with the two other Kawasaki Z650's we have tested the SR never failed to be a first time starter. From cold the cold start lever has to be lifted fully and the throttle kept closed, then all that's needed is a touch of the button with the clutch lever pulled in (a safety feature on all Kawasaki's with electric start). Almost immediately the choke can be partially closed to where the engine revs settle to a fast tickover of between 1600 and 1700rpm. After a couple of miles the lever, which is mounted on the

lefthand carb, can be fully depressed. A small throttle opening is all that is required to fire up a warm engine.

The excellent starting record suggests that Kawasaki should do away with the kickstart lever. Its position, in relation to the righthand footrest, proved to be very uncomfortable. The length of the lever rubs against the inside of the right calf and can become painful.

Delivering horses

The Kawasaki 650cc four-cylinder power pack has a reputation for delivering more horses than some bigger engines. The SR maintains the reputation even though the doughnut at the rear and a change in gearing have it down on speed compared with its two stablemates. Our maximum speed runs showed it to top 100mph, even with its sit-up-and-beg riding position and carrying a passenger. The prone figure of 108.44mph is really of only academic interest. It proved very uncomfortable to maintain a prone position with such high bars and is not really in keeping with the image of the machine anyway.

Throttle response was always immediate although there was a fair amount of travel required at the twistgrip. A second turn had to be made when trying very hard through the gears. Once the required speed was achieved the super-torquey engine would keep the bike there with very little adjustment to the throttle, even on fairly steep inclines. It would sit all day on the motorway at 70mph, but at 80mph a bout of vibration set in. However, at that speed becomes very tiring on the SR with its high riding position.

On the road the acceleration seems to be quite phenomenal, but this is not borne out by our performance figures. The riding

position gives the impression of the front end going very light with the wheel pawing the air, but this is not the case. In practice it was easier to break traction with the rear tyre than it was to pull a wheelie using power alone. It is still pretty quick though, managing to do the standing quarter in under 14secs.

Sitting up in the wind is not only tiring but expensive as well. The SR returned a poor average of only 43 miles to the gallon. All the other bikes in our comparison chart, with the exception of the Triumph, managed to obtain 50 or more. If the speed was kept to below 70mph all the time, as it was during one part of the test, it was possible to push it up to the 60mpg mark, but this required a lot of thought and careful riding. With a fuel tank that holds 3.1gals the effective range of the SR is about 130 miles, but the switch to reserve usually came with the trip reading between 100 and 110 miles. Consequently, long journeys at night could prove difficult.

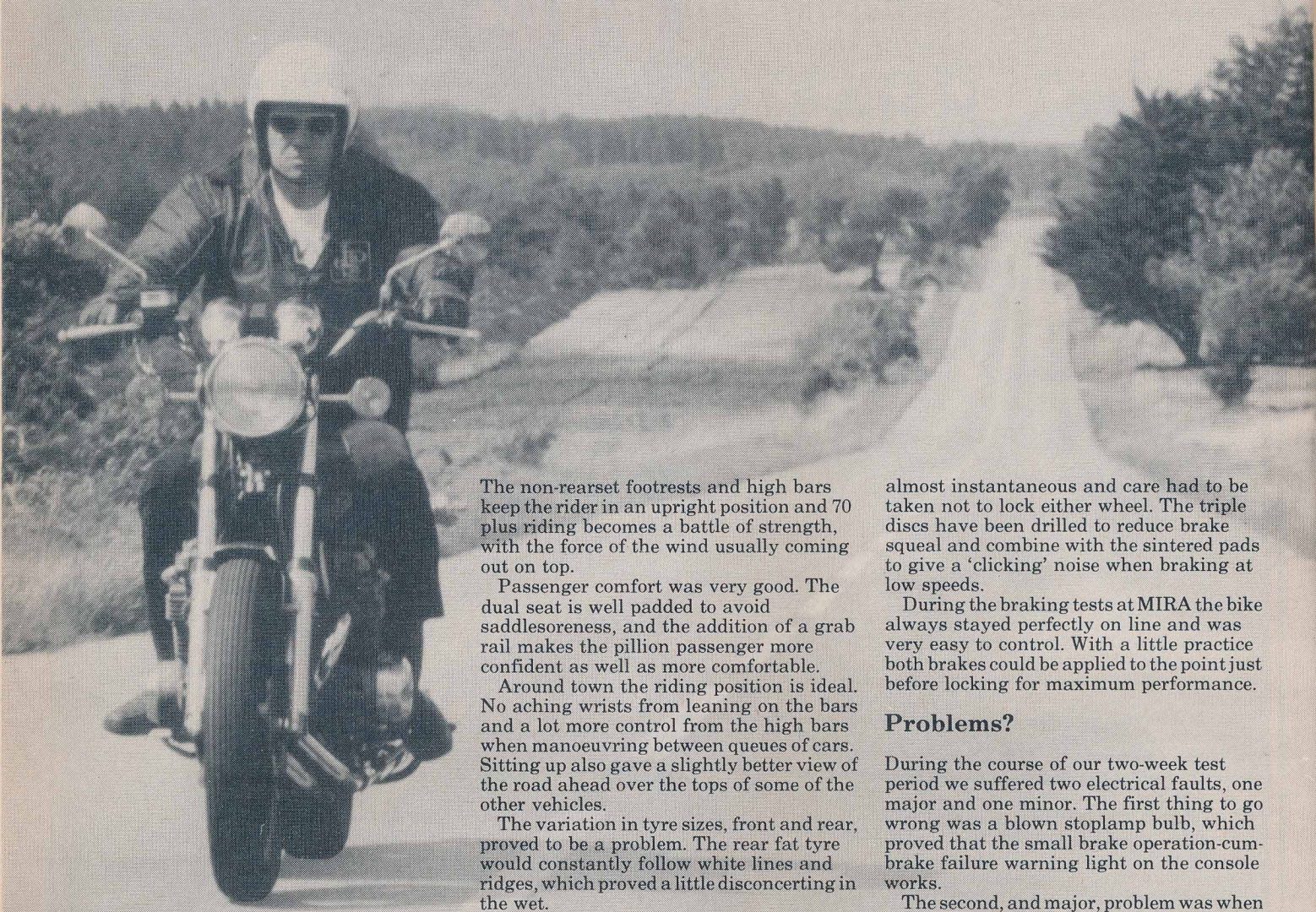
A useful little red warning lamp has been set into the rev counter face, and warns of low fuel. With about 1/2gal to go before reserve, and again 1/2gal before an empty tank when on reserve the light starts to glow. As the fuel decreases the light glows stronger.

Change in gearing

The change in rear wheel size has meant a slight change in the gearing, although nothing too drastic. Retaining the 16-tooth gearbox sprocket Kawasaki have increased the size of the rear sprocket from 40 to a 42 tooth. Its effect has been to maintain a gearbox that always allows for rider error. If you do happen to find yourself in the wrong gear the combination of well spaced ratios and the torquey engine would inevitably see you through.



YANKEE OVERSPILL



Selection of any gear, either up or down, was a first time positive affair, and with the exception of first, which was a little clunky when engaging from neutral, all the changes were very smooth. Neutral itself was always easy to find both from first and second gears and confirmation is given by the usual little green light on the panel.

Clutchless changes up the box were a piece of cake, as were the changes down from top to fourth and fourth to third. The change from third to second was possible but a little snatchy, and the clutchless change down to first was virtually impossible.

At the heart of the transmission is a very beefy clutch that was very light at the lever. It managed to cope with all the punishment we gave it at the track without the need for any adjustment.

Handling and stopping power

The riding position offered by the SR is very comfortable allowing long journeys without fatigue, but it does have one failing. If you travel at speeds above 70 to 80mph it becomes very tiring on the arms and neck.

The non-rearset footrests and high bars keep the rider in an upright position and 70 plus riding becomes a battle of strength, with the force of the wind usually coming out on top.

Passenger comfort was very good. The dual seat is well padded to avoid saddlesoreness, and the addition of a grab rail makes the pillion passenger more confident as well as more comfortable.

Around town the riding position is ideal. No aching wrists from leaning on the bars and a lot more control from the high bars when manoeuvring between queues of cars. Sitting up also gave a slightly better view of the road ahead over the tops of some of the other vehicles.

The variation in tyre sizes, front and rear, proved to be a problem. The rear fat tyre would constantly follow white lines and ridges, which proved a little disconcerting in the wet.

Most bends caused the bike to wallow about slightly. It became a bit unnerving at high speeds but never a real problem. In fact it was soon accepted as being part and parcel of the bike and simply tolerated when cornering.

In the wet a lot of care had to be taken on bends because it was all too easy to have the back-end breaking away without any prior warning. In the dry, providing you could manage the wallowing, the bike could be laid over until the footrests touched. The rear tyre never budged.

There didn't seem to be any difference in the front suspension, with its slightly longer forks, than on previous Z650's, it was still well damped and positive. The five-way adjustable rear units were kept on number four for solo riding, after it was discovered that this reduced the wallowing slightly, but they were always turned up to number five when carrying a passenger. The combination of the swinging arm, rear suspension units and that big fat rear tyre gave a more bump-free and comfortable ride than on the other models.

The change to sintered metal pads has made very little difference to stopping in dry conditions, but a vast difference to wet weather braking. Their operation was

almost instantaneous and care had to be taken not to lock either wheel. The triple discs have been drilled to reduce brake squeal and combine with the sintered pads to give a 'clicking' noise when braking at low speeds.

During the braking tests at MIRA the bike always stayed perfectly on line and was very easy to control. With a little practice both brakes could be applied to the point just before locking for maximum performance.

Problems?

During the course of our two-week test period we suffered two electrical faults, one major and one minor. The first thing to go wrong was a blown stoplamp bulb, which proved that the small brake operation-cum-brake failure warning light on the console works.

The second, and major, problem was when the coil supplying the two outside pots packed up. It proved possible to ride the bike on two cylinders as a get-you-home measure.

Equipment and Accessories

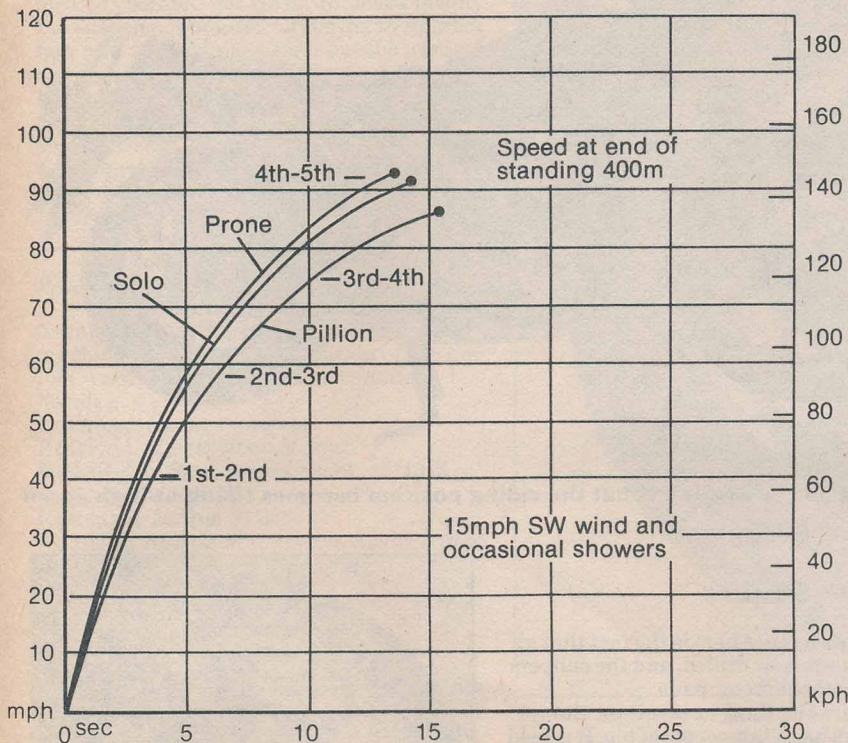
The headlight, which survived being kept on throughout the whole test, allowed speeds of up to 80mph to be maintained on unlit roads. Changing to dip left the rider groping in the dark a bit, and a speed reduction was required. The beam cut-off was not distinct on the road and its pattern could only be seen properly when the beam fell on to a flat surface like the back of a large van.

The speedometer proved to be fairly accurate, only just over 4mph out at 90mph, and always keeping you on the right side of the law. Both clocks were easy to read, and the idiot lights just bright enough to be seen in daylight, but not distracting at night. The bike is also equipped with a hazard warning lamp switch which brings all four indicators on at the same time.

In keeping with its American image the SR is fitted with a sidestand that has the bike leaning over at an incredible angle. It proved a little worrying at first, giving the impression that the bike was going to fall over and we chose to use the centrestand

TEST SHEET

Kawasaki Z650D SR



MAXIMUM SPEEDS and SPEED RANGES

gear		mph max	mph min
1	solo	41.51	5.00
2	solo	59.93	7.00
3	solo	78.26	9.00
4	solo	94.69	10.00
	pillion	92.14	"
5	prone	98.60	"
	solo	103.29	12.00
5	pillion	101.06	"
	prone	108.44	"

ACCELERATION FROM REST

mph	solo	pillion	prone
0-20	1.59	1.75	1.57
0-30	2.21	2.61	2.09
0-40	2.75	4.00	2.69
0-50	4.02	6.37	3.98
0-60	5.89	7.42	5.49
0-70	7.58	9.21	7.98
0-80	9.27	11.45	8.89
0-90	13.74	19.17	12.70
0-100	24.51	37.51	18.75
0-110	—	—	—
0-120	—	—	—

SPEEDO

ind	true
20	20
30	29
40	39
50	48
60	57
70	67
80	76
90	86

ACCELERATION OVER STANDING 1/4 MILE / 400m

	ft	164	328	492	656	820	984	1148	1/4 mile
	m	50	100	150	200	250	300	350	400
solo	sec	3.64	5.89	7.93	8.96	10.37	11.74	12.95	14.29
	mph	46.70	61.41	69.39	78.31	82.68	84.98	87.39	91.29
pillion	sec	4.07	6.71	8.69	9.84	11.24	12.41	14.16	15.04
	mph	40.81	53.94	65.42	73.62	78.98	82.73	84.18	86.72
prone	sec	3.62	5.74	7.74	8.74	10.29	11.59	12.76	13.92
	mph	46.88	62.76	71.76	79.51	84.63	88.29	90.10	93.04

Milometer

+0.5%

OIL CONSUMPTION

negligible

MPH per 1000 rpm

gear	1	2	3	4	5	6
mph	4.61	6.54	8.11	9.81	12.34	—

PASSING TIMES FROM STEADY SPEEDS

gear	mph	30-50	40-60	50-70	60-80	70-90	80-100
2	solo	2.34					
	pillion	2.42					
	prone	2.34					
3	solo	3.38	3.31	3.42			
	pillion	3.61	3.58	3.92			
	prone	3.38	3.30	3.36			
4	solo	4.49	4.30	3.92	5.50	6.13	
	pillion	5.07	5.21	5.71	7.17	9.07	
	prone	4.47	4.30	3.87	5.16	5.74	
5	solo	5.02	5.08	6.10	6.26	6.83	8.71
	pillion	5.81	5.93	7.41	7.86	8.72	11.93
	prone	5.00	5.00	6.04	5.98	6.15	7.90

BRAKES(both)

mph	solo		pillion	
	ft	m	ft	m
30	30	9.15	35	10.67
40	62	18.90	68.5	20.88
50	96.5	29.42	96.5	29.42
60	127.5	38.87	140.5	42.84
70	168	51.22	180	54.88

MPG

mph	solo	pillion
30	76.9	74.2
40	74.1	72.0
50	64.5	61.9
60	54.0	50.8
70	40.7	36.3
overall	43	

MOTOR CYCLING

Performance figures obtained at:-
 Motor Industry Research
 Association Test Track
 Nr. Atherstone, Warks.
 Test riders: Geoff Carless
 Merrill Boulton



YANKEE OVERSPILL

most of the time. Keeping the sidestand for posing.

The general quality of finish throughout the bike was very good, even welding neatness. The dark purple paintwork did tend to show up the dirt very quickly and prospective posers will need to keep a duster in their pockets at all times.

In conclusion

If you are willing to pay £100 more for the SR than the Custom, and you really want a motorcycle that looks different, if not fully American, then the Z650D SR is good value, but at the cost of high speed comfort and good roadholding in wet conditions.

There is a small market for this style of bike over here but it seems to be with the breed of bikers who were always anti-Jap. For the normal touring or commuting motorcyclist I think the choice will still be between the standard Z650, the Custom and the Honda CB650 in the four-cylinder 650cc range with savings up to £200.

Would I buy one? No, I would go for the Custom, but I did enjoy riding it.

Geoff Carless

TECHNICAL SPECIFICATIONS

Engine

Apart from the cross-over exhaust pipes the engine layout and specification is the same as for the Custom, although the claimed power output is 2bhp down. The small amount of vibration remains but is only felt when the bike is really put through its paces.

Type: DOHC 4 cylinder in-line four-stroke.

Bore x Stroke: 62mm x 54mm.

Displacement: 652cc (39.80cu in.).

Compression ratio: 9.5:1.

Carburettors: 4 x Mikuni VM25SS carbs.

Max horsepower: 62bhp @ 8000rpm.

Max torque: 5.7km-m @ 7000rpm.

Lubrication: forced, wet sump with 3.5 litres SAE 10W/40 oil.

Transmission

The slight reduction in gearing has been made by fitting a 42 tooth rear sprocket, as opposed to the 40 tooth fitted to the Custom. The gearbox sprocket remains the same at 16 teeth.

The rear drive chain only required one minor adjustment in just over 1400 miles of riding.

Primary reduction ratio: 2.55:1.

Final reduction ratio: 2.5:1.

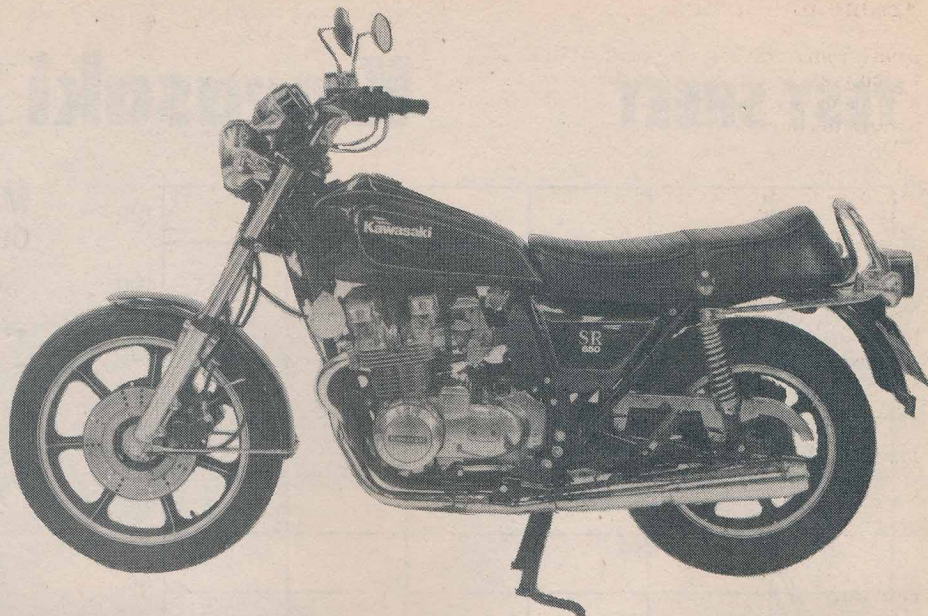
Overall drive ratio (top gear): 5.56:1.

Gear ratios: 1st 2.33:1, 2nd 1.63:1, 3rd

1.27:1, 4th 1.04:1, 5th 0.89:1.

Drive sprocket: 16 teeth.

Wheel sprocket: 42 teeth.



Plenty of power available, but the riding position becomes tiring at high speed

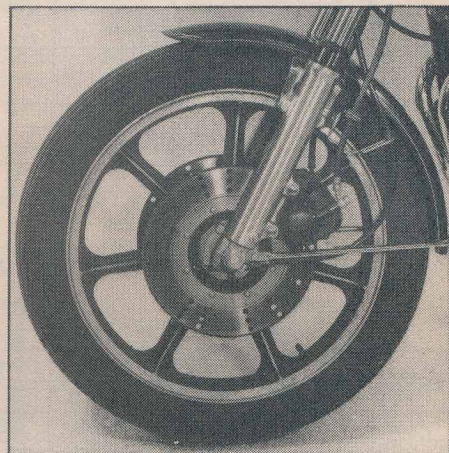
Wheels & Brakes

The main difference here is the fact that all three discs are now drilled, and the calipers contain sintered metal pads.

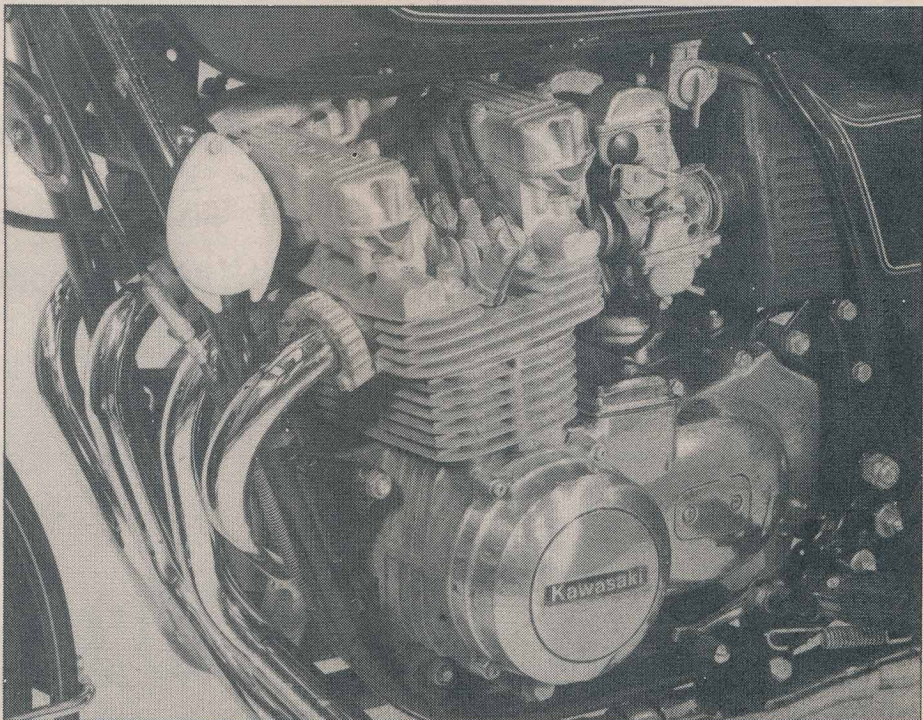
The hydraulic fluid reservoir on the handlebars has a tamper proof top. It is held on by four Phillips screws instead of the more usual screw cap.

Tyre sizes: front 350H19 4PR, rear 130/90 x 16-67H.

Brakes: front twin 231mm (9in.) discs, rear 237mm (9 1/4in.) discs.



The 19in. front wheel remains, although the tyre is 1/4in. fatter for the SR.



Power plant is standard Z650, only the exhaust pipe layout has been altered.



Frame and forks

Apart from a wallowing sensation in bends, which may be attributed to the tyres, the bike's soft rear suspension was the only feature to come in for complaint. Lighter riders required the rear shocks set at their middle position, but Geoff on board meant the suspension needed adjusting to number four and a pillion passenger put the hardest setting to its limit.

Frame: Tubular twin down-tube cradle welded frame.

Front forks: Telescopic with oil damping.

Rear suspension: Swinging arm controlled by five position pre-load rear shock absorbers.

Electrics

Nothing has changed from the standard machine apart from the addition of the low fuel warning lamp in the rev counter housing.

Ignition: Battery and coil.

Battery: 12 volt 10 amp hour.

Headlight: Semi-sealed beam, 45/40W.

Rear light: 5/21W.

Indicator bulbs: 21W.

Warning lights: Main beam, neutral, turn signals, oil and brake warning.

Dimensions

Although some of the basic measurements are now different to standard Z650 it is not noticeable once on board. In fact the only thing you really do notice is the height of the bars.

Length: 2190mm (86.2in.).

Width: 835mm (32.9in.).

Height: 1185mm (46.6in.).

Wheelbase: 1435mm (56.5in.).

Ground clearance: 145mm (5.7in.).

Dry weight: 221kg (487lbs).

Fuel tank capacity: 14 litres (3.1gals).

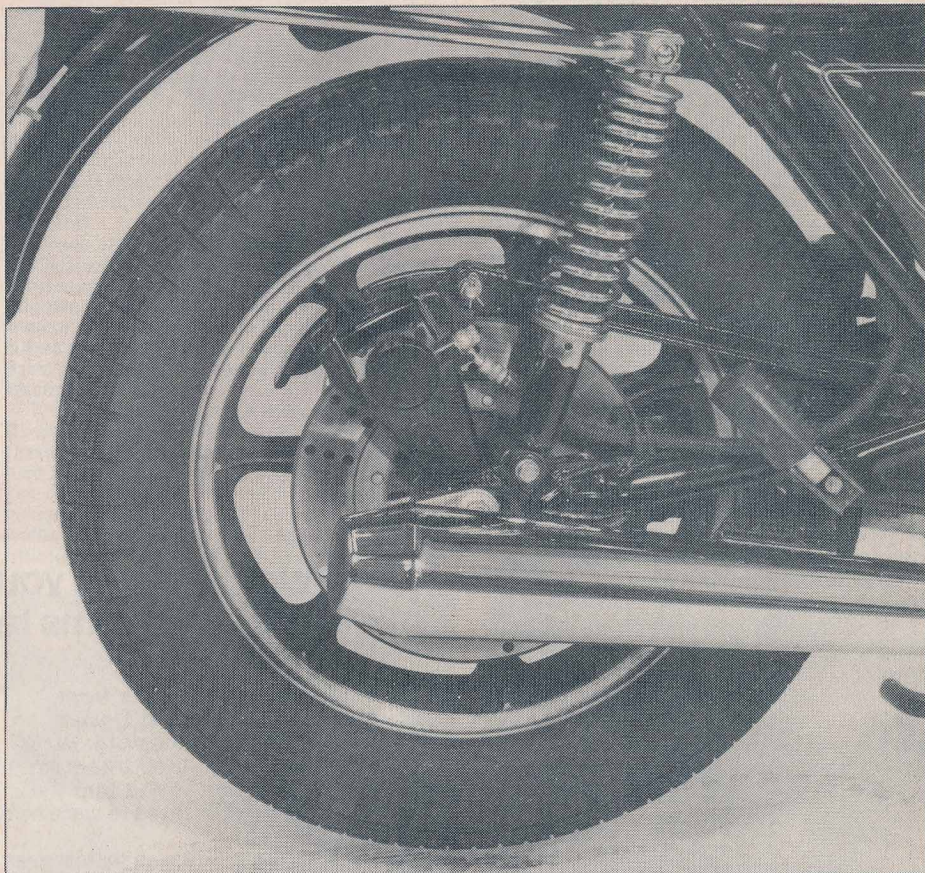
Equipment and Finish

The quality of finish through the whole bike is very good. The purple paintwork on tank, sidepanels and mudguards was certainly unusual with the yellow and burnt orange coloured coachlines adding that final sparkle.

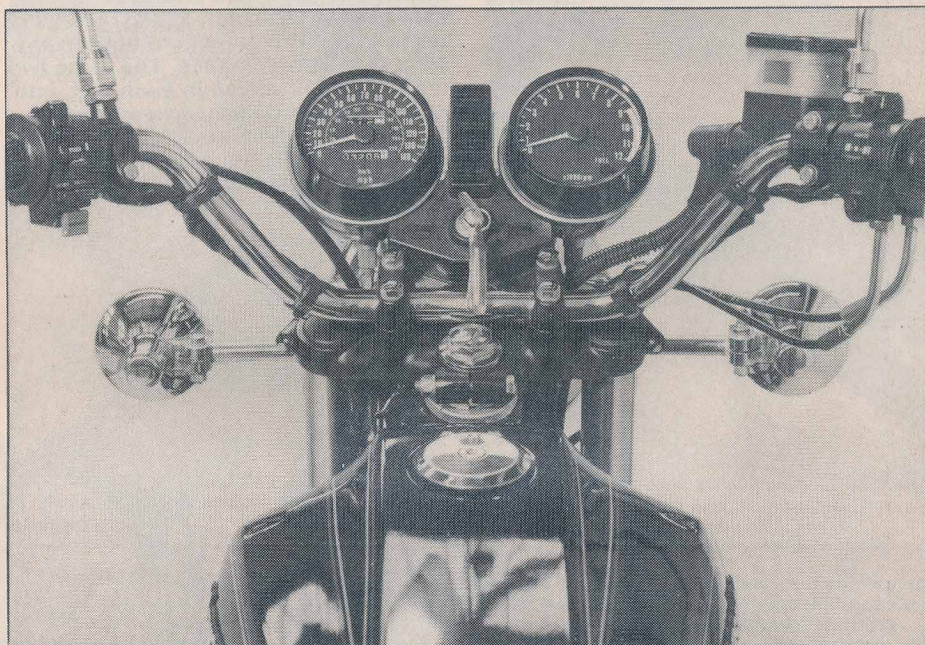
General

Price inc VAT @ 15 percent — £1749.00.

Test machine supplied by Kawasaki Motors (UK) Ltd, 748-749 Deal Avenue, Trading Estate, Slough, Berks.



The 'doughnut' that is the cause of the bike's white-lining and poor handling



Only the height of the handlebars detracts from otherwise standard controls

COMPARISONS

	Speed prone	SS ¼ mile (prone)	Dry weight	Claimed bhp	mpg	Price inc.VAT
Kawasaki Z650D SR	108.44	13.92sec/93.04mph	487lbs	62 @ 8000	43	£1749.00
Kawasaki Z650C	114.44	13.63sec/97.61mph	483lbs	64 @ 8500	50	£1649.00
Triumph Bonneville 750	109.95	13.93sec/95.04mph	395lbs	N/A	48	£1559.69
Honda CB650	109.55	13.61sec/93.54mph	436lbs	63 @ 9000	51	£1549.00
Yamaha XS650	110.35	13.85sec/95.04mph	474lbs	49 @ 6000	52	£1525.00
Kawasaki Z750	111.65	13.39sec/97.49mph	480lbs	55 @ 7000	52	£1499.00