

"MOTORCYCLE SPORTS"

by
Mark Donnelly



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THE 250 RACE REPLICAS

KAWASAKI KR-1S

It's the old leap-frog story . . .

WITH the frantic sound of Suzuki's RGV still ringing, literally, in my ears (test report last issue), the contrast when swinging a leg over a four-stroke of four times the 250's capacity was bound to impress. Arm-stretching acceleration available, even in top gear; a deep hum replacing the two-stroke's shrill crackle . . . We are going twice as quick as we think — and with unaccustomed economy of over 40 mpg. Lazy stuff by comparison, but monotonous and short lived. Crawley (Suzuki) and Bourne End (Kawasaki) are both within a quick sprint of the motorway network; and soon my FZR was seeking bed and breakfast on alien territory at Kawasaki's premises, in exchange for a KR-1S.

Anyone who has visited Reception at Kawasaki recently will have noticed a fine

monument to Big K's one-time involvement with two-strokes. A restored 750 IV stands as a reminder, from the early 1970s, of the "New Japanese" big-bike age, in which engines triumphed over handling. This was the dinosaur of a formidable range of three-cylinder road bikes. Complete unfaired, with inappropriately high and wide bars, its forward-canted cylinders stand individually, beautifully shaped and utterly predominant. Two exhausts one side and only a single on the other was a Kawasaki trademark of the day. The frame, such as it was, almost escapes notice . . . compare with today's massive alloy surrounds. And did we ever go so quickly, on those spindly forks and skinny tyres?

Two-strokes are no friend to the environment (or the environment is a threat to two-strokes, depending on how you look at

it). Kawasaki's later triples were denatured by emission and noise regulations before the whole scene changed to four-strokes, spear-headed by the Z1. The rest we know. Meanwhile, on the two-stroke front, Kawasaki were content to sit out the 500cc grand prix replica phase (the square vee fours of Suzuki and Yamaha, and Honda's smaller vee three) without fielding a competitor.

So the KR1, when it entered the 250 race replica fray in 1989, was Kawasaki's first hot roadgoing two-stroke in many years. At once, comparisons were drawn with the earlier fire-breathing triples. Everyone said what a sensible bike the Yamaha TZR was, as a relative all-rounder, if a bit behind on pace, while the then new RGV was an attractive and rapid arrival. It was the Kawasaki, though, that boasted the highest state of tune and carried the day. In 1990 it

Kawasaki KR-1S with yellow patch . . . for a race number?



KAWASAKI KR-1S

was updated to the KR-1S. For 1991, however, it is the Suzuki RGV that has undergone the biggest changes, not only to its suspension but also to the engine, which strains hard to produce a small claimed power advantage over the Kawasaki. It's the old leapfrog story, and the RGV has made the latest jump.

Whether you go for blue and white or mean green depends on which team you support. Personally I favour the more rounded lines of the Suzuki, with its sharp end and cheeky twin tail lamps. Despite the Kawasaki's yellow patch for the racing number, the bike evidently aspiring to be a 500, the Suzuki looks closer to a grand prix racer with its fancy swing arm, stacked silencers and inverted front forks. The KR-1S is taller and leaner, with flatter side panels, and is slightly the smaller machine. While its exhaust system may have a less charismatic appearance, the layout is actually more logical for a roadbike. Being a parallel twin, rather than a vee, the pipes run symmetrically one each side. This allows an orthodox straight rectangular swing arm arrangement and low enough footpegs for a pillion passenger to be carried in reasonable safety (unlike the RGV situation), if not in comfort.

The riding position is less hunched — but not a lot — with a seat height even lower than the Suzuki's, and the Kawasaki has bigger and better finished instruments and warning lights. Mind you, when writing about race replicas one should perhaps adopt a hairshirt philosophy — the more discomfort and general inconvenience, the better? Quite possibly the little sponge-

Red marking on the rev-counter of the KR-1S begins at "11,500". Exhaust system may not be as charismatic as the Suzuki's but it is eminently logical for a parallel-twin road bike.

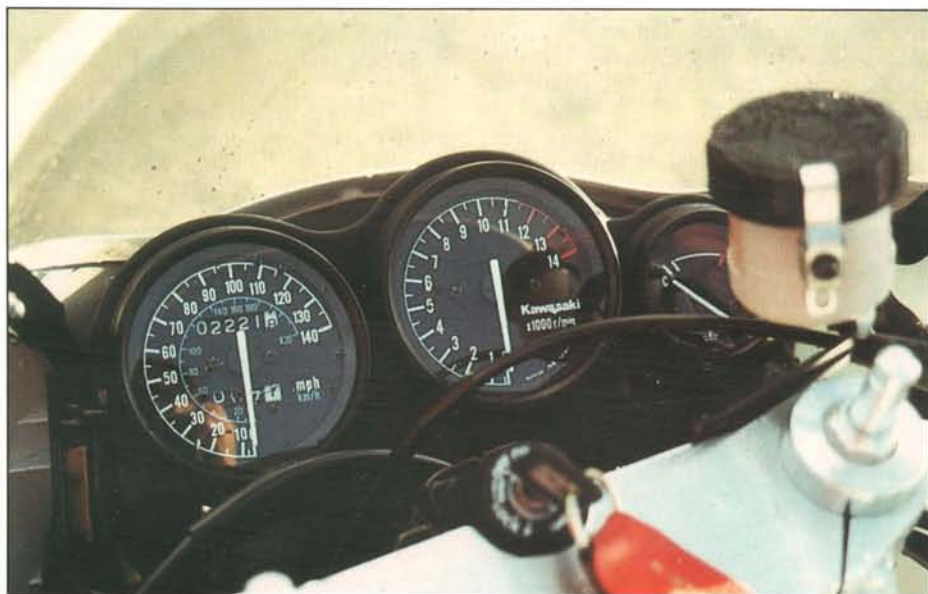
protected clocks on the Suzuki are superior wear. By the same token, we might excuse the thin and very flexible fairing panels on the KR-1S. The foldout bungee hooks will never add to the action around Donington but acknowledge that the KR-1S may be used as well as "raced"; and the diaphragm tap is another convenient item not to be found on the Suzuki. However, the switch gear is not as user-friendly.

Stories of KR-1S motors firing up in mid-winter as 125 singles are not hard to believe. Even in stuffy July, the choke control didn't seem to enrich the mixture sufficiently. It took several stuttering starts before the engine would finally kick into life, and a minute or so longer before it would pull away. But once up and running, the Kawasaki quickly scored points. It was mechanically much quieter and smoother than our RGV, which sounded somewhat secondhand by comparison. Whether 5,000 journalist miles on the RGV were making themselves heard, or whether Kawasaki's special piston treatment, allowing

tighter tolerances, accounts for the difference, I cannot know. Anyway, the KR is a surprisingly refined little motor and makes the Kawasaki much better mannered around town than the Suzuki, so that one can use its four lower gears as if the bike was a docile two-stroke commuter. Its smoothness advantage over the vee-twin is less surprising when you discover that the KR-1S uses a balance shaft.

Motorcycle importers are denied the opportunity to roadtest rivals' products; understandably therefore the people at Kawasaki were keen to discuss 250s with the man who had, earlier in the day, stepped off an RGV. Both motors employ similar technology. Apart from the difference in cylinder configuration, bore and stroke are the same, at 56 x 50.6mm, with reed valve induction, and close copies of Yamaha's Powervalve. The Kawasaki lacks electrical input to its carburetors, without being apparently any the worse off.

The roll-on third gear comparison reveals



that, despite the similarities, characteristics on the road between the two are very different. The Kawasaki feels about twice as useful as the Suzuki away from 2,000 rpm, which perhaps will be irrelevant to most owners, but it continues to maintain a striking power advantage up to about 8,000 rpm. At eight-five, in come the acoustics — a sharp ripping sound backing a fairly blatant racing buzz. From here to 10,000 rpm, both machines are really singing. Beyond this, the Kawasaki goes on building progressively all the way with no single lifting point but the Suzuki, from ten to eleven-five, puts in an extra kick quite suddenly which is discernably just that bit stronger than anything the Kawasaki can manage. Yet beyond this the Suzuki runs out of steam quicker. Although the KR is redlined lower, at 11,500 rpm, it will happily pull into the red zone and at 12,000 is once again producing more power than the Suzuki at the same revs. In each engine, maximum torque and peak power coincide. The RGV at 11,000 revs throws out 62 bhp and 4.0 kg/m while the green one at 10,500



rpm makes 60 bhp and 4.1 kg/m.

So the differences are small, particularly if you take into account the Kawasaki's weight advantage. It only scales 289 lb which makes it the lighter machine by 17 lb. On the road this translates into close competition, but with the Kawasaki much the easier bike to keep on the boil, with its less critical rev range. Ridden accurately within its peak powerband, the Suzuki does have a slight edge, but the RGV rider only has to blink once and miss the heat zone and the Kawasaki will be past him! With eyes on the corners, this is easily done with the Suzuki, as much by over-revving the motor as by being caught in too high a gear.

Interestingly, both machines are quoted at

The Kawasaki is overwhelmingly a better road bike than the RGV, is less thirsty, and (with a balance shaft) smoother

130 mph flatout, and appear to reach this figure, even allowing for some speedometer optimism. The RGV is past its peak but the Kawasaki is appreciably higher geared throughout. Third gear, for instance, shows 95 mph compared with 90 on the RGV, both speedos over reading by a similar margin, and fifth gear is nearly the equal of the Suzuki's sixth. Smoothness is fairly uniform, with a slight vibration point at 6,000 rpm, if you look for it. On the Kawasaki what little vibration there is feels like a transverse four's, whereas the RGV is lumpy low down but enjoys vee-twin smoothness when in its powerband.

The picture that emerges is clear cut. The Suzuki's vee-twin power is concentrated

KAWASAKI KR-1S

between 10 and 11,500 rpm, where it is narrowly the faster bike, but the KR-1S has overwhelmingly the better road bike motor, while still being great fun to ride. It has a quicker gear change than the Suzuki too. Economy may not be the name of the game, but it helps if it's there, and the KR-1S is far less thirsty. You have to thrash it fairly well to get below 40 mpg and its oil consumption, at nearly 300 miles per pint, is better by almost half. Furthermore, Kawasaki are happy to prescribe ordinary mineral-based oil for their hot baby. The low-level warning light rehearses itself whenever the gearbox is in neutral, but to refill means unlocking the rear seat in order to get at the toolkit in order to find the Allen key in order to remove the rider's seat in order to get at the filler...

The alloy E box frame is right up with contemporary fashion and the KR-1S comes with the same menu of suspension adjustments as the Suzuki, comprising preloaded adjustment at the front, and at the back as well, provided you go and see your Kawasaki dealer. Damping is adjustable at the rear only but in both directions. Unfortunately the rear rebound adjustment faces the chain, which means rubber gloves or Swarfega every time you alter it. Or plain oily fingers. If you buy the appropriate tool, the Suzuki's rear preload would be the easier to reach.

The KR-1S is one of those machines that is disgracefully easy to handle to extremes first time aboard, despite being a two-stroke. Its power is more accessible and the whole package is so compact. Again, the feel of the road is

its greatest asset, aided by its Dunlop radials. The 110/70 front tyre is the same size as the Suzuki's but at the rear the Kawasaki runs an 18 inch rim and slightly less fat 140/60 rubber.

There are two aspects of the KR's handling that one notices first off, compared with its arch rival. The suspension is a bit firmer (though not hard in the manner experienced last year on our ZXR test), and secondly, the steering is a shade quicker. The geometry is close all the way through with less than a 1/2 in shorter wheelbase, a degree less on the rake, and a fifth of an inch shorter on trail. But when it comes to accuracy of steering, the KR-1S cannot quite manage the hairline precision of the RGV. One would not notice any deficiency in the way the Kawasaki steers unless swapping straight from an RGV, whose upside down forks do seem to make a small difference.

In fact in the handling department the Suzuki has it by a tiny margin all the way through. You can get the suspension pumping furiously on both machines along uneven roads at very high speeds, and still be forgiven, but the Kawasaki's suspension begins to kick suddenly at slightly lower speeds, that the RGV rides out. The rear rebound damping uses its softest setting as standard and while the range of compression on the remote reservoir offers a wider range, backing off even a few clicks does detract from the tautness of handling. On a racetrack, both settings could probably be increased with some advantage.

Massive 300 mm front discs serve both machines, gripped by four-piston calipers. The only difference, for the technically minded, is that the Kawasaki's are semi-floating discs, as opposed to fully floating. My vote goes to the

KR-1S by a narrow margin. Both are equally powerful but Kawasaki have got the progression about right. However if you use the brakes really hard across a humpy surface at high speed, the front wheel of the KR-1S will begin to bounce before the Suzuki, whose upside down forks retain their flexibility better under extreme duress.

Which brings me down to the end of this list of so far unlabelled pluses and minuses. A fuel range of 130 miles from the same-size, 16 litre tank is about 30 miles more than you'll get from a hard-ridden RGV. Brake levers are similarly adjustable, the Kawasaki's clutch action is less sudden. Weather protection scarcely improves upon the RGV despite a slightly higher screen, which threatens to flap at maximum speed. The rider's seat is comparably hard, clearly intended for racing bums only, and there is but one tail light. Lastly the horn, nearly as high as a choirboy, is a dangerous joke. The RGV does little better. The answer, of course, is to drop a couple of gears instead. It is a lot louder and certainly has an immediate impact on the vehicle in front. Unfortunately the effect more frequently induces intimidation than respect. The busy and fussed small bike sound does not go down well with motorists. You can read their thoughts behind those tinted windows. Very few seem to be 250 race fans.

And so to the £4,000 question. Which of these two would I put my money on? The honest answer is neither. I fear that ultra highly tuned two-stroke engines must prove disposable in too short a timespan, certainly on a tally of piston rings, pistons and barrels. Yet it must be conceded that both have

To remind you... the 90-degree vee-twin RGV Suzuki (reported on last month) has a box-section aluminium frame and what Suzuki term "inverted" telescopic front forks.





KR-1S at speed . . . though not with R.P. aboard.

enormous fun-per-mile characteristics and the Kawasaki in particular, at £3,779, looks excellent value alongside any of the latest 400 cc four-stroke race replicas you care to name. In fact both these two-strokes have little difficulty delivering similar performance to that of bikes in the 400 class, except on maximum speed, with considerably less mechanical complexity. None of the others can show the RGV which way to go on corners.

Even between the RGV and KR-1S, the choice is not entirely straightforward. One reason is the price difference. The latest developments in the RGV push its price to over £300 more than that of the Kawasaki, and the running costs will be considerably higher on fuel and oil, even if these are recouped a little with a service interval of 3,500 miles instead of 2,500 for the KR-1S. My own choice between the two would stay with the Kawasaki which, on the road, can do nearly everything that the RGV can do. The slight superiority that the Suzuki achieves in out and out performance and handling ability is small compared with the Kawasaki's advantages as a road bike, with its wider power spread, higher gearing and

refined yet still extremely quick motor.

The potential road-racer will see it differently. This class is all about what psychologists call "peer pressure", which in motorcycling terms means "impressing one's mates". Here, the RGV has the looks plus the trappings; the vee-twin, gullwing swing arm, stacked silencers and those front forks come closest to today's

race technology and the slight ultimate performance gain over the KR-1S may well prove worth the extra outlay and running costs. To such a buyer, the very absence of low and mid-range power, the vibration lower down and the appalling pillion seat might even be seen as advantages. It's that hairshirt again. R.P.

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