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— EJ 'The Michigan Madman' Potter, page 131

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ROBERTS



SPENCER



SHEENE

If these guys were your racing heroes in the early 1980s, chances are you wanted a bike just like theirs. Fortunately Honda, Suzuki and Yamaha obliged, producing three true race-reps for the road

FEATURE: Bag packet road bikes



YAMAHA RD500LC 1984-1987

It was the bike the world longed for – a 500cc V4 two-stroke. With balls

Yamaha's RD500LC was, perhaps, inevitable. Two-strokes were big business in the early 1980s, thanks, in part, to the technology's success in Grand Prix racing. First appearing in GP's blue-riband class at the start of the Seventies, strokers took just five years to crush their four-stroke opposition – MV took the diesels' last 500 win in '76.

More importantly, however, with four-strokes gone, two strokes were fast-tracked to the cutting-edge of motorcycle development. And it didn't take long for the results to filter down to the street.

Yamaha's RD350LC set the precedent, proving new wave two-strokes were a quantum leap from the fickle, half-baked 'stinkwheels' of old. 1980s strokers were the

real deal – affordable giant-slayers with race-bred handling. Popularity was assured.

The link between road-going two-strokes, like the LC and Suzuki's RG250, and GP machines proved irresistible to wannabe racers. But the one everyone really wanted was a 500GP replica for the road. In late '83 it appeared; Yamaha's RD500LC.

It was a masterstroke. Not only did Yamaha produce the world's first V4 500 Grand Prix replica, it also, quite deliberately, revealed to the world the depth of its two-stroke know-how and cunning. Like the 1983 works YZR500 OW-70 that inspired it, the RD was powered by a 50° twin-crank V4 with YPVS (Yamaha Power Valve System) knocking out a claimed 87bhp, wrapped in a box-section cradle frame.

With its mouth-watering specification and performance – those wealthy enough to afford the £3000 asking price could see 140mph – the RD proved good enough to worry Kawasaki's GPz900R in the right hands. In a road test of the time *Motorcycle Mechanics* claimed the RD had "...the power-to-weight ratio to give scary performance that is rarely available away from a race track".

Not only was the 500LC fast, it handled too. At 180 kilos dry the RD enjoyed a considerable weight advantage over its larger four-stroke rivals (GPz900: 228kg, VF1000R: 244kg, FJ1100: 230kg). With such an advantage the RD was able to bloody the nose of any big four-stroke it came up against.

But behind the hype the truth was somewhat more sobering. The RD500 wasn't actually the



Just like Kenny's? Not quite, but that didn't really matter. It was a 500cc V4 two-stroke and that was what counted. There was even a Marlboro colour option for those chasing the GP dream



GP replica it claimed to be and owed more to its 350 sibling than any YZR prototype. For proof, one only had to look at its spec sheet.

Its motor was fuelled by four 26mm Mikuni carbs and reed-valve induction, for a broad spread of power, unlike the racer's rotary valve arrangement. Despite Yamaha's claim that the RD was not a compromise, it used two induction methods – crankcase induction on the lower two pots and cylinder induction for the top two – due to a lack of space between the 'V'. And all non-Japan-bound models used a fixed diameter box-section steel frame, unlike the YZR's aluminium Deltabox.

But in reality none of that mattered. The RD elevated not only the status of two-strokes but sports bikes in general, such was its desirability, performance and impact on the market. Even now, over two decades on from its launch, the RD remains a highly sought after machine – many owners still state its looks as a major factor in the 500's appeal. Sales weren't huge when it was new, mainly due to its salty £3199 price tag, but a clean, original 500LC is now very much an investment. Expect to pay anything up to £4500-5000 for a minter and even £3000-3500 for something that needs tidying.

SPECIFICATION

YAMAHA RD500LC

ENGINE/TRANSMISSION

Type	liquid-cooled, reed valve, V4, two-stroke with YPVS
Capacity	499cc
Bore x stroke	56.4 x 50mm
Compression ratio	6.6:1
Carburation	4 x VM26SS Mikuni
Final drive	chain
Clutch/gearbox	wet multiplate/six-speed
Electrics	12v, CDI ignition

CHASSIS

Frame	box-section steel cradle
Front suspension	37mm telescopic forks, hydraulic anti-dive
Rear suspension	box-section steel swingarm, monoshock
Brakes front/rear	2 x 260mm discs/1 x disc
Wheels	six-spoke cast alloy
Tyres front/rear	120/80V 16/ 130/80V 18

DIMENSIONS

Dry weight	397lb/180kg
Wheelbase	54.1in/1375mm
Seat height	30.7in/780mm
Fuel capacity	4.8 gal/22 litres

PERFORMANCE

Top speed	133.9mph
Power	87bhp @ 9500rpm (claimed)
Fuel consumption	26.3mpg
Price new	£3199



LIVING WITH

SMOKER'S STORY 1

Name: Steve Wright

Bike: 1988 Yamaha RD500LC

Years owned: 6 months

Mileage: 10,000

CB: Why buy an RD500LC?

SW: I had one years ago and regretted selling it. Seven years ago I bought one to restore, which I'm still working on, but I wanted one to ride too, so I bought this '88 bike.

CB: What was it like to own a 500LC in its heyday?

SW: Incredible. It'd beat most things on the road – even GP250s. The acceleration and noise were amazing. It was the ultimate then.

CB: And now?

SW: Shocking! The original shock and brake lines are terrible. Even so, when I raced it – with the French RD Owners' Club – it was amazing around a track, just like riding one all those years ago. We raced for two days solid and it lapped it up.

CB: What goes wrong?

SW: My first RD500 packed up after two weeks. Yamaha traced the fault to a bad connection on the tachometer. That, in turn, shorted out the coils. The left rear barrel can seize too. Coolant runs to the front cylinders before the back two, so it's hot before it even reaches the rear – more of a problem for tuned bikes. They're also a pain to start when hot, due to fuel evaporation.

CB: Are spares easy to find?

SW: Forks seals, rings, pistons, cranks, all that kind of stuff is still available, although barrels are hard to find. Yamaha has a good stock of parts, but they're getting short on obscure stuff.

CB: Yamaha is still keen on the 500, isn't it?

SW: Last year was the RD500's 20th anniversary. Yamaha invited RD owners from all over the world to a factory visit. There's even talk of limited parts runs because the 500's got such a cult following.

"The RD was fast and enjoyed a considerable weight advantage over its larger four-stroke rivals"

FEATURE: Flag packet road bikes



HONDA NS400R 1985-1989

If there's one manufacturer that has to do things their way, it's Honda

Honda never were a company to take the easy option – just look at their return to GPs in 1979. Rather than build a two-stroke, which could have been competitive from the off, they built a four-stroke, the NR500, and failed miserably. Three years and several million yen later the NR hadn't even made it near a GP podium, so the project was scrapped and Honda was forced to build a two-stroke.

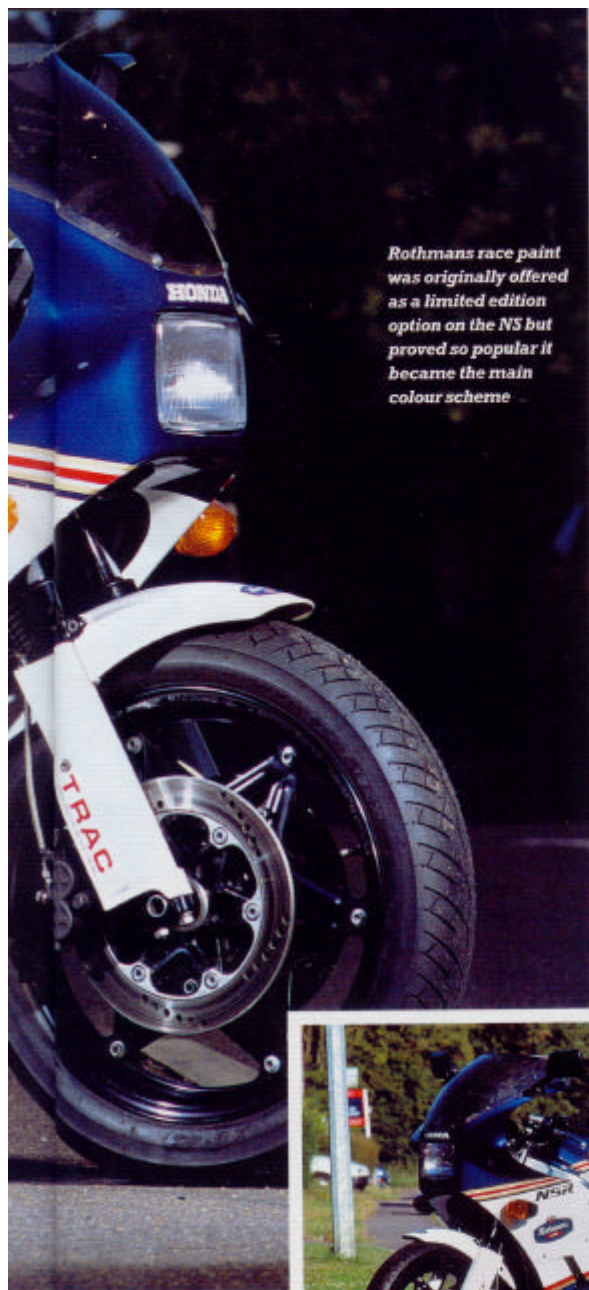
Of course, it was no ordinary two-stroke. That would have been too easy. While Yamaha, Suzuki and Kawasaki chased the world championship with four-cylinders, Honda built a V3. The NS500. Fewer

cylinders meant less weight and, ultimately, better handling. It worked. In '83, Freddie Spencer took his and Honda's first 500 titles.

Despite the company's four-stroke bias, Honda was only too aware of the commercial rewards to be had off the back of a GP title. The firm had already dipped its toe in the performance two-stroke market in early '83, with the MVX250. A V3, like the NS500, but featuring two front cylinders and one rear – the opposite of the racer, the MVX was Honda's attempt to take on Yamaha's 250 YPVS (Japan only) and Suzuki's RG250. It failed. The MVX proved woefully unreliable and was quickly dropped.

Although seemingly dead and buried, the MVX formed the basis of the far more impressive NS400R. Sharing the same 90° one-up, two-down V3 configuration as the MVX, the NS wasn't really a replica of the GP bike at all, and, falling more than 100cc short of the RD and RG, wasn't a direct rival to them either. At 387cc Honda's creation was better placed to take on Yamaha's 350 YPVS. The NS400R had the ATAC (Auto-controlled Torque Amplification Chamber) power valve system, Honda's way of providing a wider powerband and more low-down torque.

With an optimistically claimed 76bhp on tap – around 50bhp on a dyno, the NS didn't



Rothmans race paint was originally offered as a limited edition option on the NS but proved so popular it became the main colour scheme

Attention to detail was synonymous with the NS. Owners even got a paddock stand as part of the package



have the performance to take on its 500cc rivals, even if it wanted to. But it did have the sweetest-handling chassis of any mass production road bike of the era. The frame and swingarm were – and still are – works of art that wouldn't have looked out of place on a works racer of the time. Despite the NS being down on power, its chassis looked as if it could handle the most bhp of the lot.

The 400 set itself apart on finish too. Faired-in fork legs and side-stand, a paddock stand, a gold aluminium top yoke, six-spoke ComStar wheels just like the racer, a braced aluminium alloy swingarm (unheard of in the mid-'80s), Rothmans race paint... Everything, with

exception of the ludicrously skinny 110/80 18 and 110/90 17 tyres, was desirable. And, as a new wave classic, still is.

There was a Japan-only 250cc V-twin too, the NS250R, as ridden to victory by Mat Oxley in the 1985 250cc Production TT (see *Classic Bike*, January 2006).

But like the RD and RG, the NS400 arrived too late and was too pricey to make a dent on the middleweight market, even with a promotional campaign fronted by Wayne Gardner and Ron Haslam. Yamaha's cheaper 350 YPVS was just as quick, while the marginally more expensive 500s were faster, which left Honda with a problem. Neither the

SPECIFICATION

HONDA NS400R

ENGINE/TRANSMISSION

Type	liquid-cooled, reed valve, V3 two-stroke with ATAC
Capacity	382cc
Bore x stroke	57 x 50.6mm
Compression ratio	6.7:1
Carburation	3 x 26mm Keihin
Final drive	chain
Clutch/gearbox	wet multiplate/six-speed
Electrics	12v, CDI ignition

CHASSIS

Frame	box-section alloy cradle
Front suspension	37mm telescopic forks, TRAC anti-dive
Rear suspension	box-section alloy swingarm, monoshock
Brakes front/rear	2 x 256mm discs/1 x disc
Wheels	six-spoke alloy ComStars
Tyres front/rear	110/90V 16 / 110/90V 17

DIMENSIONS

Dry weight	358.5lb/163kg
Wheelbase	54.5in/1385mm
Seat height	31.1in/790mm
Fuel capacity	4.18 gals/19 litres

PERFORMANCE

Top speed	125.94mph
Power	76bhp @ 9500rpm (claimed)
Fuel consumption	30mpg
Price new	£2899



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LIVING WITH

SMOKER'S STORY 2

Name: David Smith
Bike: 1985 Honda NS400R
Years owned: 20
Mileage: 16,000



CB: Why an NS400R?

DS: I was a Freddie Spencer fan, saw the NS and thought, 'That's the one I want'. I bought mine, new, in '85. It arrived two days before Spencer won his 350 title at Silverstone. I rode to that GP too.

CB: What was it like to own back then?

DS: I'd been used to a CB250N so the 400 felt like a rocket. It was certainly fast – a mate's Z1000 blew a gasket trying to keep up with me. The handling, too, was superb.

CB: NS400s are notoriously thirsty; is yours?

DS: Hard riding or strong headwinds drops mpg into the low 20s, which can be expensive, but I've had it as high as 45mpg.

CB: Modifications?

DS: The bike's totally standard except for the additional Rothmans, Shell and NSR stickers. I was given the stickers by Roger Burnett, who rode for Rothmans Honda Britain at the time. Although they're not standard, they are authentic Rothmans stickers.

CB: Problems?

DS: None. I've not even changed the rings. Tuned bikes can be problematic though. Tyres are getting rarer – I use Bridgestone BT45a, although consumables are still easy to buy.

CB: Would you sell it?

DS: If I did I'd want what I paid for it – £3,000, but I can't see me ever parting with it.

“Despite the NS being down on power, its chassis looked like it could handle the most bhp of the lot”

RD, RG or NS sold in sufficient numbers to justify further development. They were dropped after only a couple of years.

Even so, in its 1986 middleweight shootout, featuring the NS, VF500 and GPZ600R, *Performance Bikes* asked, “Which one's going to be the classic in 25 years time?” Well, one of the three is a two stroke and is beautiful, so I think we all know the answer to that...



SUZUKI RG500 GAMMA 1985-1989

A square-four stroker, just like Barry's, the RG was the hairiest rep of all

Not the original 500GP replica but, for most people's money, the best. Launched a year after the Yamaha RD500 and built to beat its V4 rival in every respect, the RG500 Gamma fulfilled its remit with aplomb and even made the 500LC feel tame.

Based on Suzuki's hugely successful 500 GP racer – which, between 1976 and '82, won four 500 world titles and seven world constructors' crowns – the Gamma was a far more authentic replica than Yam's RD. So much so, it looked as if Suzuki had simply fitted lights and mirrors to Franco Uncini's '82 title winner and offered it for sale.

The similarities weren't just visual, either. Powered by a square-four, liquid-cooled, disc-valve two-stroke with Automatic Exhaust Control (AEC), just like the racer, the Gamma used a lightweight box-section aluminium alloy cradle frame too – again, just like the track bike. Suzuki claimed 95bhp (82 at the rear wheel), which was 8-10bhp more than the RD, and 150mph-plus wasn't unheard of. In '85 that was fast, seriously fast, and more than enough for the RG to take on Kawasaki's new GPZ600R, Yamaha's FZ750 and its own stable mate, the GSX-R750. Little wonder, then, that some quarters suggested it was too good to be true.

Speculation has long surrounded the 'standard' nature of Suzuki's first press RGs. Rumour has it they were blue printed, to ensure a 150mph top end. If they were, it was a stroke of publicity genius. The gushing copy published about those bikes undoubtedly elevated the RG to mythical status.

Yam's RD was quick, for sure, but the Gamma...now that was a man's bike. Anyone lucky enough to own one 20 years ago was considered hardcore, just for being brave enough to ride the thing. "Nothing on the road takes you so close to the Grand Prix experience," cooed MCN's Mat Oxley at the time. And he was right.



Still mean and menacing 20 years on. With mild porting a healthy RG should be good for 150mph

Four smoking spannies – the view most other riders got of Suzuki's barmy RG500 Gamma



Perhaps more telling is the fact RGs are still considered prickly today. Admittedly they're not as fast as modern 600s, but few bikes explode into their powerbands with the intensity or violence as a big two-stroke. Especially if the big stroker is an RG500.

There's no question that Suzuki succeeded in their mission to better the Yamaha in every department. Not only was the Gamma more authentic and faster, it was considerably lighter too – just 154 kilos. That, coupled with the extra 8-10bhp, explained its rampant performance. Surprisingly the 500 could be civilised too. Its four-cylinder motor offered a broad spread of power, for a two-stroke, and

could even return reasonable fuel consumption (42-43mpg) if kept out of the powerband.

In many ways the RG500 was too little, too late. Using performance as a yardstick the Suzuki is unquestionably the best of the bunch but, by '85, the writing was already on the wall for two-strokes and four-strokes were fighting back for road supremacy. Kawasaki's GPZ600R and Honda's VF500 showed that four-strokes could be almost as fast, almost as fun and a whole lot more practical to boot.

The Japanese got a 400cc version to meet their funny licence laws, so be wary of an import 400 wearing 500 stickers. The Jap models had kph speedos and a fuel gauge.

SPECIFICATION

SUZUKI RG500

ENGINE/TRANSMISSION

Type	liquid-cooled, disc valve, square-four, two-stroke with AEC
Capacity	498cc
Bore x stroke	56 x 50.6mm
Compression ratio	7:1
Carburation	4 x 28mm Mikuni
Final drive	chain
Clutch/gearbox	wet multiplate/six-speed
Electric	12v, CDI ignition

CHASSIS

Frame	box-section alloy cradle
Front suspension	38mm telescopic forks
Rear suspension	box-section alloy swingarm, monoshock
Brakes front/rear	2 x 260mm discs/1 x 210mm disc
Wheels	six-spoke cast alloy
Tyres front/rear	110/90 V16 / 120/90 V18

DIMENSIONS

Dry weight	140lb/154kg
Wheelbase	56.1in/1425mm
Seat height	30.3in/770mm
Fuel capacity	4.8gals/22 litres

PERFORMANCE

Top speed	136.5mph
Power	88bhp @ 9500rpm (claimed)
Fuel consumption	26.7mpg
Price new	£3299



LIVING WITH

SMOKER'S STORY 3

Name: Roy Lavercombe
Bike: 1986 Suzuki RG500 Gamma
Years owned: Three
Mileage: 14,000



CB: Is this your first RG500?

RL: No, I had one a few years ago, which I swapped for a GSX-R1100K. I missed it though, so I bought this one. It blew up three months after I'd bought it. It cost £700 to rebuild and I've done 150 miles in three years since.

CB: Why the RG and not an RD?

RL: I've had an RD500 as well, but the RG looks and goes better – it's just a better bike. My mates with R1s tell me: "It's only an old two-stroke". Then they ride it, and come back shaking. The power comes in twice – about 5500rpm and again at 9000rpm. It's just beautiful.

CB: Handling?

RL: Unbelievable. It handles like a dream. I ride against guys on FireBlades and R1s and they have to catch me.

CB: Are RGs reliable?

RL: They're better than RD500s. RDs last 20,000 miles then go bang, but RGs are a lot stronger. They're a lot easier to work on too. I took the barrels off in situ, and the crankcases split horizontally; you can split them without taking the engine out.

CB: Modifications?

RL: Suzuki doesn't sell pistons bigger than 1mm oversize, so I've used TS126 pistons, 1.25mm up, with 10mm off the bottom of the skirts. I've put heavy-duty clutch springs in too. I was going to put RGV stuff on it, but that would spoil it.

“Anyone who owned one was considered hardcore, just for being brave enough to ride it”

The RG remained in Suzuki's range for five years. 20 years on its angular lines look awkward, even ugly, its 16 and 18 inch wheels and skinny tyres are deeply old fashioned, yet its popularity is, if anything, stronger than ever. Two decades ago it was the nearest anyone could get to riding a GP bike on the road. It probably still is.