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パフォーマンス・バイクス

Performance BIKES

GSX-R750LC



LIQUID REFRESHMENT

RAZOR HANDLING

HOW TO GET IT

52bhp TDRs

BLESSED
ARE
THE
FREAK



Contents

FEBRUARY 1992

Cover story: following our new policy of keeping all the interesting pics at the back of a dark cupboard, this will probably be a shot of a scooter beside a brick wall

Features

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22. SPOT ON — if winter comes can

spring be far behind? It can if you've got too much rebound damping.

38. BACK ISSUES — what you've missed. Forever in some cases, but there are still a few copies of some issues left.

40. CENTRES — it takes special talent to do this, for a start you need a road and a ditch and an adult to help you.

46. TDM BITS — sorting out the TDM's suspension, among other things.

58. READER OFFER — ever wondered why hotel bedrooms always have a copy of The Bible? It's because it has more sex, violence and rude bits

than any other book. Never take your wife or your mother to a hotel bedroom.

70. SMOULDERING BELLYPANS — the familiar chant which Japanese technicians are taught to say over and over. Forsyth smoulders from Hockenheim.

Road tests

8. SUPER MOUTARDE — Gilera Nordwest. This will blow the socks off anything that has got socks on. *PS if anyone knows what Nordwest means, would they please tell Gilera?*

34. EH GRINGO — Wendy "bendy" Burch gives the GSF400 a good greasing. Er, are we allowed to say that? No? How about just thinking it, then?

50. FINS AIN'T WOT THEY USED TO BE — GSX-R-watercooled. No more sexist drivel, this is a real man's machine. Well it was until they lowered the seat height.

54. DANGEROUS BROTHERS — there's more than one way to tune a TDR. And we've got both of them.

Regulars

3. CONTENTS — there is a subliminal message here which can only be revealed by reading this page backwards at twice the normal speed.

4. NEWS — there is nothing subliminal here at all. It is perfectly safe to read this with the naked eye.

13. NEXT MONTH — it is perfectly safe to read this with the naked brain. After all, it was written with one.

14. RESPONSE — judging by the stains, most of this was written in the foetal position, except the one in green ink.

30. THE PB INTERVIEW — Wayne Rainey. Does he favour green ink? Or is he rich enough to have someone write his letters for him? And other probing questions.

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78. READER'S SPECIAL — a very beautiful TZR250, underlined in green for emphasis.

BACK ISSUES

To get hold of a back issue just follow these simple steps:

1. Ring 0733 237111 ex 5725 to check which issue you want and whether an actual magazine, or only a photocopy of the specific feature is available.
2. The cost is £2.50 inc. p&p for each issue/photocopy, payable to Performance Bikes, Send to PB Back Issues, Bushfield House, Orton Centre, Peterborough PE2 5UW, with your name, address and the date of the issue/feature you want. We can only deal with orders via the post and sorry, we can't take credit card orders.

BINDERS

PB binders to hold 12 issues from: PB Binder Offer, PO Box 136, Peterborough PE2 OXW, £5.95 including p&p. Please allow 7 days' delivery. Access and Visa only for orders of £10.00 or more; telephone 0733 237111 and ask for ext. 5791.



Dangerous liaisons — Stan's tragic menage à trois with his beloved TDRs, except it wasn't — page 54.



73,716

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Like all good monsters, this is the product partly of genius, partly of demonic inspiration and partly of strange experiments in dimly lit rooms. The story continues.



The

accumulators hummed gently in the background, current flowed to the electrodes, sparks flashed

across the room and suddenly the professor was awake. Time to ask him how he's been getting on with the monster bike.

"I know it doesn't look as if I've done all that much since the Bike Show," Steve admits. "But I have made a lot of things

MONSTER

Part three



actually work."

The main thing which now works is the exhaust routing, cause of much angst the last time Steve spoke to us. His overall vision for the bike called not only for the (originally side-facing) exhaust to exit underneath the seat for practicality's sake, but also for it to look as yummy as the rest of the bike. The pics show he achieved both of his objectives, but only hint at the thought and care that went into the end result.

Starting at the manifold, four pipes of equal length curl down to meet in a small collector. These are the original down-pipes from Steve's old wheelie bike, and the dimensions are crucial. Unequal length pipes are sometimes used in ordinary systems to allow the exhaust pulses to interfere with each other, producing extra back-pressure over certain parts of the rev range; with a turbo you need the pulses to follow one another smoothly and in sequence because too much turbulence will

affect throttle response.

From the collector to the turbo housing the pipe is slightly smaller than usual in an effort to speed the exhaust gas up and turn the impeller faster for a given engine speed. "The wheelie bike would've been nicer to ride with a bit more low down. The turbo's got so much potential that if you lose 5psi boost at the top and transmit it lower down that's got to be better." Trading top-end for mid-range? Outrageous, he'll be drummed out of the NDRHA if they hear about that. ▶

MONSTER

Part three



So what happens after the gases come out of the turbo? *"It's important not to restrict them. When they come out of the housing they're swirling in the opposite direction to the impeller travel. Ideally the exit pipe should be as big as possible to stop the gases from swirling."*

After that things should be simpler: *"The overall length makes no difference — after 15-18in from the housing it doesn't matter what you do with the pipe."* But Steve doesn't like his life to be too easy, so he spent untold hours making up the 2 1/2 in tail pipe to go 180° in one direction and then 90° in another. *"I'll tell you what 'appens. I go down to Spondon, cut the tubes up, tell them where I want 'em and Tex welds 'em up."* The tubing used for the pipes, by the way, is mega-grade stainless steel with a surgically smooth internal finish and was originally intended for the dairy industry.

The pipe ends in a carbon fibre can which, lovely though it is, will soon be hidden forever under the RGV250-based seat unit. Steve probably polishes the soles of his shoes, just in case anyone might see.

On the other side of the turbo, what sort of air filter will you be using, Steve? *"No filter at all. But it's not a problem. Besides, a filter really affects the power."* I bet it makes a hell of a lot of induction noise. *"Probably. In the past I've not been able to hear it 'cos the exhaust's always been, er... unrestricted."*

But there's more to life than exhaust pipes and turbos — and after Steve's obsession with technical perfection in those departments it's refreshing to hear his views on, for example, choice of wheel sizes: *"It's got a 17in front and 18in rear 'cos bikes look good when they seem to be diving into the ground."*

Then you realise he's just as pedantic about the styling as he is about anything else. *"I wanted Spondon to make the frame side rails run at the same angle as the fins on the engine, but that would have made access difficult. So instead I've made the exhaust side pipe the same angle as the frame rail,*

and then milled slots into the gearbox outrigger bearing cover at the same angle again. You don't notice all these things individually but they all affect your brain."

The rest of the styling isn't finalised yet — Steve is only half way through making the tank: *"Then I've got to mount the seat and then make the subframe to fit — NOT the other way round. Small tank, small seat. It'll look mean."*

"Some people just aren't happy unless they've got the newest or the best," says Goodridge's Pete Fildew, pointing at Steve, *"and he's one of them."*

True to form then, Steve has got Goodridge's latest toy — Kevlar braided hoses made up from parts used by the F1 car teams. They're 45% lighter than anything else, have absolutely no unwanted expansion and can withstand pressures of up to 7,000psi. To put that into perspective, a standard cast brake caliper would burst at just 3,000psi. You guessed it — they're the only set in the country. But it's lightness rather than rarity which Steve covets in particular. *"One of my ultimate aims is a good power to weight ratio. OK, so it's got a heavy, agricultural engine, but all the attention to detail should help."* I wonder whether this attention to detail will go so far as to find a neater alternative to the cable tie currently holding the rear suspension reservoir on?

Well, he's got other things to worry about. When I spoke to him just before Christmas he was planning to spend the festive season sorting out the electrics. *"While everyone else is shutting up shop I'll be sitting around making a wiring loom."* Makes a change from fixing up the fairy lights, I suppose.

By the next time you see the bike it should have electrics, some sort of bodywork and a sporting chance of a running engine.

Coping with the huge power means the gearbox output shaft needs an outrigger bearing and an extended shaft. The shaft is made by spark-eroding the centre from a standard sprocket and welding a splined tube into place, one end of which fits the original output shaft, the other locating into the outrigger bearing. Taking the power from there to the back wheel will be a super-strong HQR530 Tsubaki chain sourced from the drag racing world. *"It's as strong as a 630 'cos of the size of the side plates. It's supposed to be more resistant to shocks and stretching too."* It'll need to be.

Oh yes, one other thing Steve will be doing over the next month or two is thinking up a suitable name for his creation: *"I think a bike should make a statement. It's got to say something."*

And what is this bike going to say, Steve? He won't tell us. Is it a secret? *"No, but I wouldn't want you to print it — I've got to show this to my mum!"*

SPEC

CHASSIS

Spondon 7020 alloy tube frame with single-sided swinging arm manufactured from solid and extruded 7020. RC30 radial and axial swinging arm bearings. Spondon adjustable offset yokes. Head angle adjustable via barrel bearings and interchangeable cups.

SUSPENSION

White Power ud race forks and Öhlins shock, both adjustable for rebound, compression and preload. Spondon rising rate linkage with tie-rod ride height adjuster.

WHEELS, BRAKES AND TYRES

Marvic 3.5 x 17 front, 5.5 x 18 rear complete with wonky stickers. Tyres: 120/70 VB17 V250 ME1 MBS front, 180/55 VB18 V250 ME1 MBS rear. Front brake: Spondon 320mm floaters drilled for lightness. Spondon four pot calipers. Spondon fixed rear disc, Brembo opposed piston caliper. Rear caliper torque arm pivots in a plastic bush in the swinging arm before making it back to the frame.

ENGINE

GSX1100E with bored-out crankcase mouths, heavy-duty studs, 1498cc MTC block and pistons, stock head with flowed exhaust ports, oversize exhaust valves and APE valve springs, stock cams with Tom Falicon camwheels, Rayjay FF40 turbocharger, balanced crank with straight cut primary gears driving a Tom Falicon clutch basket, undercut gear dogs with extended engagement slots and splined second gear, heavy duty crankcase bolts, deep sump and uprated oil pump gears, Dyna S ignition with MSD multi-spark amplifier.

EVERYTHING ELSE

Wait and see.

LOOK MUM I'VE GOT A FREE PLUG

Supersprox (0547 528201) — sprockets. Sprint Engineering, Nottingham (0602 862571) — outrigger bearing sprockets. Steve Foster at Performance Bike Tyres, Coventry (0203 631051) and Tony Salt at SMD Tyres, Leigh (0942 604511) — fitting and balancing tyres. *"You can take a Marvic or a Dymag to Joe Public and he can destroy £400 worth of wheel in two seconds. These guys take care."* Venhill engineering (0306 885111) — alloy fasteners with 30 ton tensile strength. Pete Fildew, Goodridge UK (0392 69090) — bespoke hosiery to the populace. Spondon Engineering, Derby (0332 662157) — supremacy in metal since the days of Samuel Pepys. Steve Burns, Manchester (061 336 2674) — turbo engine goodies and African mole rat imports.



Wee, sleekit, cow'rin', tim'rous
beastie, O what a panic's in thy
breastie! Thou need na start
awa sae hasty, Wi' bickering
brattle! — To a mouse, Robert
Burns (no relation).