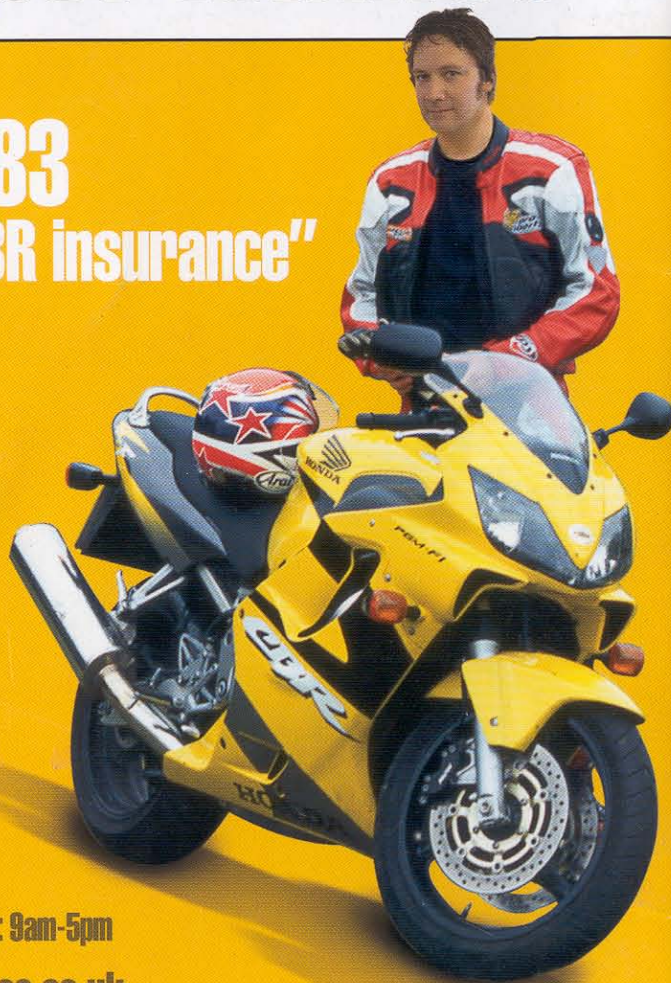


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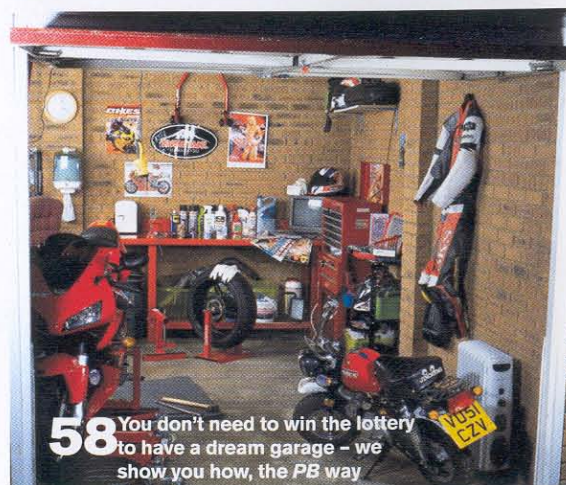
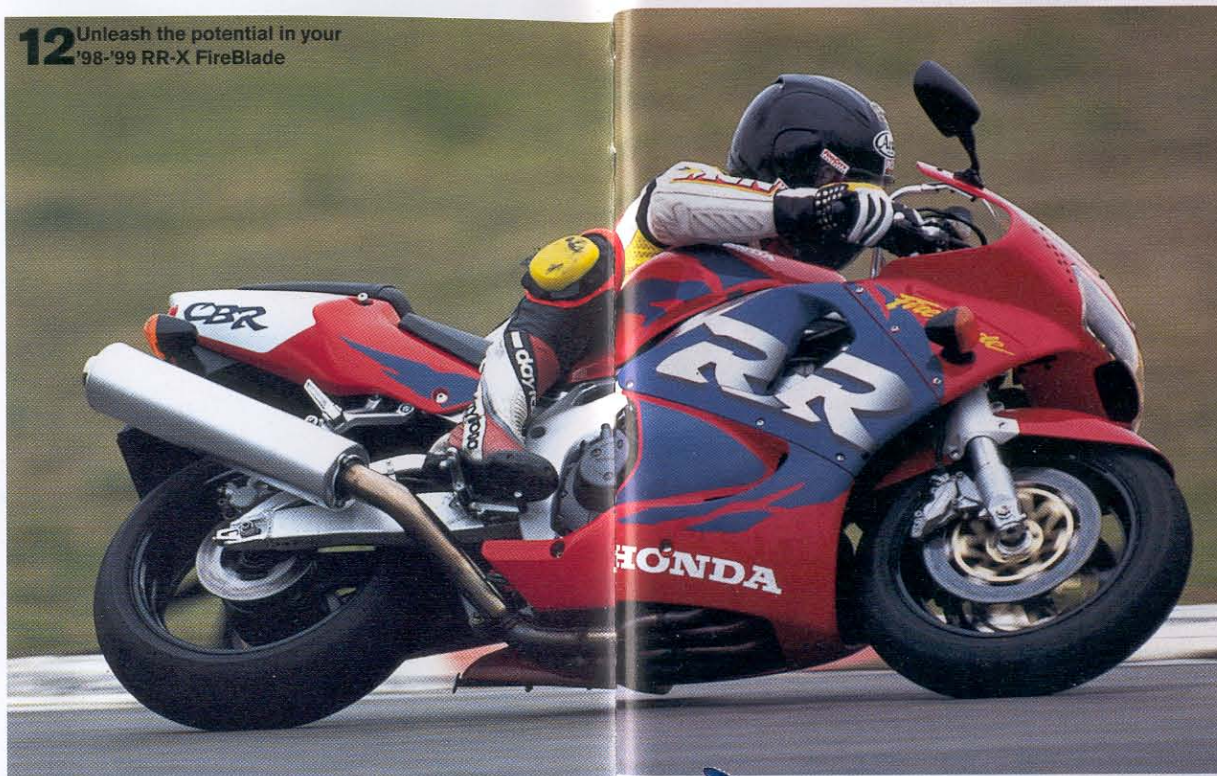
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Suzuki GSX-R1000

Five years after the demise of the GSX-R1100 in 1996, Suzuki came up with this mad thing

Suzuki had been suspiciously quiet in the big bike sector for a firm with a reputation for mentalist missiles, so it was with some relief that we welcomed the GSX-R1000 in 2001.

A stunning return to form with a bike that quickly (ballistically quickly) went to the top of the litre bike class. Three short years later and the Thou has some pretty stiff competition in the lunatic rankings, but it can behave just as badly as its contemporaries with a few modifications.

Suzuki found an extra 3bhp for the K3 model over the 143bhp K1/K2. But should sir wish to exploit acceleration potential to its full, a tooth less on the front sprocket will have the required effect. A race can well yield a couple of brake – choose whichever you like, but the best yields (around 8bhp) come from a full system.

Even without any extra power, brakes are not the strong hand of any Thou, so consider non-flexing braided lines for all models, a 19mm Brembo master cylinder and GSX-R750Y/K four-pot calipers on the K1/K2.

While you're on, consider an adjustable steering damper to replace the hard-working non-adjustable original. Stock suspension ain't bad, but the picky/supremely talented may wish to upgrade.



KAWASAKI ZX-9R

OTHER MODELS



GSX-R1000 K1/K2
2001-2002
988cc, 143bhp
@ 10,500rpm

TUNING BITS

TUNING

■ STAGE 1 – GEARING

The simplest way of improving acceleration is to lower the gearing with a 16-tooth front sprocket. The bike will wheelie like there's no tomorrow or break traction, so be warned – or be prepared.

■ STAGE 2 – RACE-CAN

A race-can will free up a couple of bhp, while looking better and sounding pretty horny too. Micron, Remus, Yoshimura and Arrow are a good bet. Power Commander not required, but get a set-up run on a dyno to adjust the fuelling to suit.

■ STAGE 3 – FULL SYSTEM

A good full system like an Akrapovic, Yoshimura or Ti-Force will release around 8bhp. Expect to pay over £800. You'll

need a free flowing airfilter, like K&N, a Power Commander and some dyno time to get the power curve and fuelling perfect.

■ STAGE 4 – NITROUS

Spend £850 with Straightline Racing and you can get 40bhp at the touch of a button with a nitrous kit. A two pound bottle gives two minutes of boost.

■ STAGE 5 – ENGINE WORK

£2000
Get the engine apart and fit some Piper or Yoshimura cams with higher lift and longer duration; skim and gas-flow the head and beef-up the valve springs and retainers. Should be good for another 10bhp whilst remaining reliable.

■ STAGE 6 – BIG BORE

TTS do a ride-in ride-out 1070cc JE big bore kit with high-compression pistons for £1762.50, including re-plate the bores. It should give 20-25% more power without affecting reliability.

■ STAGE 7 – BSB ENGINE

Crescent will build you a full-on engine to the same spec as their BSB racebikes knocking on the door of 190bhp. It doesn't come cheap, the gearbox costs £2500, the alternator cover £2000, conrods are £1000 and so are the pistons. Along with all other parts and labour it comes to over £10,000. At this level of tune, the motor will need regular rebuilds every 2500-3000 miles, but there won't be many more powerful engines around.

HANDLING

■ STAGE 1 – PB SET-UP GUIDE £2.50

We've done the hard work for you. An easy guide to sorting suspension out if you don't already 'own the racetrack'. Call 01733 468099 to order yours.

■ STAGE 2 – STEERING DAMPER

The GSX-R comes with a steering damper fitted as

standard, but it's not adjustable. An adjustable one like Ohlins or Sprint will help keep the bars composed on your favourite bumpy road.

■ STAGE 3 – SUSPENSION REBUILD

The stock suspension is good but is designed to suit a wide range of rider weights. Starting from £250, K-Tech do a 'tune up kit' to improve the front forks and rear shock and tailor it to your needs.

■ STAGE 4 – NEW REAR SHOCK

Although pretty good, the stock shock is built to a budget to help keep the bike affordable. An aftermarket shock like Technoflex, Nitron, Maxton or WP can be custom-built around riding style and usage, and rider weight. The range of adjustment will be bigger, with enough feedback to make you feel like a GP rider. Alternatively, an off the shelf Ohlins will be an

improvement over stock, and they always look nice and yellow.

■ STAGE 5 – WHEELS

Lightweight wheels not only look good but serve a purpose to reduce unsprung weight. This makes it easier to flick the bike from side-to-side and loft the front out of corners. Dymags, OZ, BST and Marchesini's are all top shelf porn.

■ STAGE 6 – ADJUSTABLE YOKES

Billet aluminium yokes are not only lighter than standard ones, but offer adjustment that stock items don't have. Harris and Crescent ones use eccentric adjusters to change the steering offset 1mm at a time. By altering the bike's trail it changes the steering characteristics. Turn baby turn.

■ STAGE 7 – FRONT FORK

For the same reasons as changing the shock. Better quality forks will have more adjustment and give better

feedback than the stock ones. Ohlins cost £1673.78 and R&T forks from Harris are more than capable of the job, but don't look as good as the original black ones from the K3.

■ STAGE 8 – SWINGARM

Harris can modify your swingarm for any requirements. They can beef it up for extra stiffness, add a quick release wheel facility for endurance or just cosmetically change it, so your bike'll look unique. Costs £264.

STYLING

■ SCREENS

Double-bubble screens are a blessing for those who don't

like too much wind blast on their sports rocket. Ermax, Skidmax and MRA all come recommended.

■ TAIL TIDIES

The stock numberplate bracket easily unbolts from the K3 allowing you to fit something less bulky

■ **CARBONFIBRE GOODIES**
Evolution Composites have carbonfibre versions of nearly every part of the GSX-R1000. Prices start from £49.35.

■ UNDERTRAYS

The sexiest undertray we have seen for the Thou (pictured right) comes from Bikestyle. It has built in LED lights, indicators and numberplate bracket

■ REARSETS

Fully adjustable Arrow rearsets from B&C Express come in black or silver, made from the finest aluminium. A snip at £339.

■ TOP FAIRING

Replacement top fairing by JMV keeps the original look but loses the Busa style headlight, replacing it with halogen projection lights. Available from Rhencullen, starting from £395.

■ PAINTJOB

The best way to make it stand out. Try Motorcycles Bodyworks (01606 45359), Dream Machine (0115 9736615) or Extreme Paint & Design (01933 441999).

CONTACTS

Avon 01225 707050
B&C Express 01522 791369
Bikestyle 01425 629039
Bridgestone 01926 488500
BSD 01793 223377
Carbontek 01737 789878
Crescent 01202 820179
Evo Comp 01890 622355
Harris 01992 532500
Hul 01392 811601
Holeshot 0113 2876644
K-Tech 01530 810625
Performance Parts Ltd 01788 869100
PFM 01624 829419
Rhencullen 01455 890345
Straightline Racing 01553 811855
TTS 01604 636363



Kawasaki ZX-9R

The 9R was in Kawasaki's range for nearly ten years, so there's plenty of tuning expertise around

The 9R was introduced in 1994 as a response to the all-conquering Honda FireBlade. No-one could deny it was a big, fast motorcycle, but it was no match for the Blade, although its imposing size and relative comfort made it popular with those who were interested in road-biased performance.

In 1998 the B-series machines were replaced with the C1. Here at last was a bike which could hold a candle to the FireBlade, but by now the world had rotated again with the arrival of the mental R1. Weight was down to 183kgs and power was a respectable 123bhp, but the 9R was developing a reputation as the 'sports-tourer' option of the Big Four's range-topping sports bikes. E-series and 'F' models continued to be built until 2003, but these were largely facelifts of the earlier bike, with power even dropping on later models due to toughening emissions laws.

Geared for a theoretical 190mph, a cheap boost to acceleration comes from knocking a tooth off the front sprocket. Akrapovic full systems will yield significant top-end gains, but make sure to get fuelling adjusted properly on a dyno, with a Dynojet or Factory kit. After that big bores and the like up the spec. An aftermarket shock will improve handling no end, as will Ohlins forks.



HONDA CBR600F

OTHER MODELS



ZX-9R C1/C2
1998-1999
899cc,
123bhp @
11,000rpm



ZX-9R E1/E2
2000-2001
899cc,
125bhp @
11,000rpm

TUNING BITS

ENGINE TUNING

FOR £16.47
Dead easy this one. Your ZX-9R is geared for a theoretical 190mph plus. Do you need that top end? Standard gearing is a 16-tooth front sprocket, 41-tooth on the rear. The C1 through to E2 model run 530 chains, the F2 copes on a 525. Knock a tooth off the front, or put a couple on the rear and you may lose some fuel economy and have to adjust the chain, but you'll gain third gear lofting and brain-squelching acceleration. Speak to B&C



Express to order yours.

FOR £150

Carbs can be fun, honest. The ZX-9R's are made by Mikuni with a diameter of approximately 40mm, they're quite sensitive to change and the Factory settings are made for EU pollution limits, not whupping R1s down the bypass. You'll be wanting a jet kit then, and we'd choose the Factory kit over the Dynojet one. The DJ one ain't bad on power output, it's just that they've been known to wear out the emulsion tubes after a few thousand miles. Carbontek will sell you the Factory item for £92 or the Dynojet

power output, it's just that they've been known to wear out the emulsion tubes after a few thousand miles. Carbontek will sell you the Factory item for £92 or the Dynojet

for £106. A proper bit of rolling road set-up will cost between £25 and £75 depending on time – and you don't really need to replace your oe airfilter either, just give it a proper good suck with the Hoover.

FOR £500+

The next logical step is to look at that dustbin-sized exhaust. There's little doubt the best exhaust upgrade on a 9R will always be a full system. A slip-on can free up a little noise, but not many horses, if any at all. Whatever you do, don't consider a slip-on without spending the £150 mentioned on fuelling, or you'll suffer a rough, hunting idle, fluffy throttle

response and a lack of midrange at the very least. As standard, the fuelling's running quite close to the edge already, make it too lean and you could actually cause some damage.

It's hard to recommend a particular end-can because none of them really stand out as exceptional. Build quality will vary, but as far as power output goes, it's a dead heat. As one industry insider put it: "Pick a colour, brand and price that you like. It'll only ever make a 1bhp difference anyway. Don't tell anybody I said that either."

FOR £1000+

Now we're into big figures – both cash and horsepower. As much

as we'd love to tell you of a little-known exhaust maker who provides the best system for the 9R, we can't. Akrapovic are the Kawasaki daddies, beyond question. Their full systems providing the best dyno results across the land. There are two different systems, one for the C and E models, one for the F. The 4-1 Sport Production system for the C and E models uses stainless headers with the choice of either a stainless mid-section or a pillion peg-eating titanium high exit jockey. That's £700 for the stainless, or £824 for Ti-high-exit. However, the F2 was found to respond better to a conical 4-2-1

system, available in either stainless or full titanium. Prices on application, but expect something over £1000, and don't forget your Factory jet kit and dyno setup.

FOR £2000+

So with a genuine 130+bhp at the rear wheel, yer ZX-9R is now putting out near R1-equalling power with a 100cc deficit. Richard Albans at top tuners TTS says: "If it was my bike, I would then jump straight into the engine. A gas-flow and skim and cam re-time will give



good all-round gains to the tune of 10-12bhp all through the rev-range. We're talking a genuine 145bhp." And why not go for a new set of Piper cams for another 5-6bhp? £150 to re-grind yours, or over £450 new.

FOR £3000+

923cc kit from Holeshot Racing. The ride-in/ride-out service costs £1920 on top of your exhaust and re-jet costs, and includes a stronger clutch. TTS ride-in/ride-out 998cc conversion for £1500 (E model), £2000 (C model). 160bhp and 85lb-ft torque with a broad spread. 1040cc

Superbike Bill kit. Speak to Justin Reiss and get yer credit card polished.

FOR £7000+

Done all that? Time to bring out the big guns. That'll be a £3420 Mr Turbo kit, bumping power to anywhere between 230bhp and 300bhp. Phew.

CONTACTS

Apex: 01772 635213
Piper Cams: 01233 500200
TTS: 01604 636363
Holeshot Racing: 0113 2576644
Performance Parts: 0870 2402118
B&C Express: 01522 791369
NWS: 01992 501285
Oxford: 0870 9909620
Justin Reiss: 07775 644600
Harris Performance: 01992 532501
Born To Be Wild: 01684 291625
K-Tech: 01530 810625

Honda CBR600

The CBR600 is a benchmark of refinement – but a few mods will unleash its sportier side

For years Honda's CBR600 laughed in the face of its rivals. None could match the CBR's near perfect blend of performance and comfort. But towards the end of the 1990s the ol' girl was beginning to look a bit tired and the ZXs, GSX-Rs and YZF's of the time were giving it more than the odd slap round the chops.

Time for a rethink. In '99 Honda gave the world the very first ally beam-framed CBR6. It had a revvier, lighter, shorter-stroke mill that was as comfortable hanging with R6s on the track as it was bumbling round town. The chassis was short, squat and business like, but had lost none of its continent-crushing comfort of old.

Not everyone gives a toss about practicality though, hence the race homologation FS model of 2001. Built to flick a middle digit at GSX-Rs and R6s on track, the FS came complete with a single style seat, trickier suspension, close-ratio 'box and a host of engine mods.

Trick as it was, the FS still wasn't a mini FireBlade. But with the amount of race-proven bolt-ons and trick-as-ya-like bits available for the CBR6, making your very own miniature Blade is a real possibility.



SUZUKI GSX-R750

MODELS

	BR600FX 1999 96bhp @ 12,550rpm, 46.5ft-lbs
	CBR600FY 2000 96bhp @ 12,550rpm, 46.5ft-lbs
	CBR600F1 2001 92bhp @ 12,400rpm, 41.3ft-lbs
	CBR600FS-1 2001 92.5bhp @ 12,750rpm, 41.6ft-lbs
	CBR600FS ROSSI REP 2001 As above
	CBR600F2 2002 92bhp @ 12,400rpm, 41.3ft-lbs

TUNING BITS

CHASSIS TUNING BODYWORK

Harris Performance (01992 532500):

- Carbonfibre hugger ('99-'00 models), £119.59
- Fibreglass hugger, from £79
- Fibreglass race fairing, £257.80
- Fibreglass race seat unit, from £123.07
- Race front fairing brackets & race clocks, £110.25

Skidmax (01305 780808):

- Fibreglass race fairing, from £199.75
- Fibreglass race seat unit, from £105
- Screens, standard, flip-up and coloured, from £35.90
- Fibreglass single seat cowls, from £86.95

- Fibreglass rear hugger, £60
- Carbonfibre rear hugger, £109.95
- Fibreglass front mudguard, £47
- Carbonfibre front mudguard, £95
- Carbonfibre clock surr. from £17.35
- Fibreglass undertray, from £80

- Dzus quick release bodywork fasteners, from £9.25 for eight

- Double-bubble screen, £39.95, Buster's (08702 412040)
- Fibreglass single seat cowls, £39.95, Buster's (08702 412040)
- Harris race style filler cap, £68, Demon Tweaks (01978 664474)

- Topline undertray (retains original rear light), £94, (www.hrenchell.co.uk)

- QB carbon fairing, £703, Lite Year Racing (01526 321165)

- QB fibreglass fairing, £362, Lite Year Racing (01526 321165)

REAR END

- Aluminium race rear subframe '99-'00, £58.80, Harris Performance (01992 532500)

- Carbonfibre heel plates, £42.50, Skidmax (01305 780808)

- Alloy numberplate bracket, £10, Skidmax (01305 780808)

- Harris factory swingarms, £POA, Harris Performance (01992 532500)

- Maxton rear shock, £425, Maxton Engineering (01928 740531)

- Ohlins rear shock, from £546, Harris Performance (01992 532500)

- Penske racing shocks, from £532.05, Demon Tweaks (01978 664474)

- WP fully adj. racing shock, £POA, Ten Kate (www.tenkatemotoren.nl)

REARSETS

- Aluminium CNC machined footrest relocators, £59.95, Buster's (08702 412040)

- Gilles adjustable rearsets, £249.95, Buster's (08702 412040)

- Arrow rearsets, £222.74, Demon Tweaks (01978 664474)

- LSL fixed rearsets, £198.10, Demon Tweaks (01978 664474)

HANDLEBARS

- Coloured/carbon-look levers, £14, Buster's (08702 412040)

- Harris GP clip-ons, £117.50, Demon Tweaks (01978 664474)

- Arrow ally clip-ons, £124.12, Demon Tweaks (01978 664474)

- GP Tech folding billet levers, from £89.57, Demon Tweaks (01978 664474)

STEERING DAMPERS

- LSL steering damper, £127, Demon Tweaks (01978 664474)

- Sprint top-mounting steering damper, £259.90, Performance Parts Ltd (01788 869100)

- Goldline steering damper, £125.84, Harris Performance (01992 532500)

- Ohlins rear shock, from £546, Harris Performance (01992 532500)

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- Demon Tweaks (01978 664474)

- GP Tech thumb brakes, £516.48, Demon Tweaks (01978 664474)

- Standard thumb brake, £265.55, Demon Tweaks (01978 664474)

- PFM Supersport upgrade discs, £175 each, Demon Tweaks (01978 664474)

- Carbonfibre Lorraine A3 road pads, £17.95 per pair, CPK (01788 540606)

- Carbonfibre Lorraine SBK3 race pads, £24.95 per pair, CPK (01788 540606)

- PFE 95 race compound pads, £26.42 per pair, PFE (01280 843393)

- EBC organic and Kevlar pads, £13.50 per pair front, £12 rear, Lite Year Racing (01526 321165)

- EBC 'HH' and Carbon pads, £17.50 per pair, Lite Year Racing (01526 321165)

- EBC brake rotors, £108 front each, Lite Year Racing (01526 321165)

- ABE way front discs, £260 front per pair, £70 rear, Lite Year Racing (01526 321165)

- Braided hoses, complete set, £66, BSR Aerotek (01386 849060)

- Braided hoses, set, £33, BSR Aerotek (01386 849060)

- Braided hoses, front, £79.99, Verhill (01306 885111)

- Braided hoses, rear, £39.99, Verhill (01306 885111)

- Goodridge oil line kits, from £61.69, Demon Tweaks (01978 664474)

- Stage three Frank Wrathall tune including blueprint, skimmed and flowed head, cut valve seats and complete set-up, from £1500, FW Developments (01995 600680)

- Elliot race tachometers, from £124, Harris Performance (01992 532500)

- Foam clock panel, £8,

- Demon Tweaks (01978 664474)

- GP Tech thumb brakes, £516.48, Demon Tweaks (01978 664474)

- Standard thumb brake, £265.55, Demon Tweaks (01978 664474)

- Harris Performance (01992 532500)

- Flush mounting teardrop indicators, £8.95 per pair, Buster's (08702 412040)

- Technitronics LCD Race Dash, £495, Demon Tweaks (01978 664474)

- Technitronics quick shifter, £295, Demon Tweaks (01978 664474)

- SPA LCD speedo, £191, Demon Tweaks (01978 664474)

- Translogic quick shifter, from £299.99, Demon Tweaks (01978 664474)

- Stainless paddock stand bobbins, £6, BSR Aerotek (01386 849060)

ENGINE TUNING ENGINE

- EBC clutch plates, £38 per set, Buster's (08702 412040)

- Clutch springs, £7.95 per set, Buster's (08702 412040)

- EBC Kevlar clutch plate kit, from £82.28, Demon Tweaks (01978 664474)

- K&N oil filter, £9.99, Demon Tweaks (01978 664474)

- Earls high performance oil-cooler kit, £171.61, Demon Tweaks (01978 664474)

- Goodridge oil line kits, from £61.69, Demon Tweaks (01978 664474)

- Stage three Frank Wrathall tune including blueprint, skimmed and flowed head, cut valve seats and complete set-up, from £1500, FW Developments (01995 600680)

- Elliot race tachometers, from £124, Harris Performance (01992 532500)

- Foam clock panel, £8,

- Demon Tweaks (01978 664474)

- GP Tech thumb brakes, £516.48, Demon Tweaks (01978 664474)

- Standard thumb brake, £265.55, Demon Tweaks (01978 664474)

- PFM Supersport upgrade discs, £175 each, Demon Tweaks (01978 664474)

- Ten Kate complete WSS tune, £POA, Ten Kate (www.tenkatemotoren.nl)

BIG BORES

- TTS 639cc Wiseco big-bore, £POA, TTS (01327 858212)

- Hardracing 618cc conversion, £POA, Hardracing (www.hardracing.com)

- K&N airfilter, from £43.91, Demon Tweaks (01978 664474)

- K&N panel filter, from £35.50, Lite Year Racing (01526 321165)

- PIPercross, (01604 494945)

- Ram Air, (01684 822279)

- BMC, (01553 811855)

- ITG, (02476 305386)

- TKR high-flow airfilter, £POA, Ten Kate (www.tenkatemotoren.nl)

- NCR racing alternator cover, £95.90, Harris Performance (01992 532500)

- Stainless steel engine bolt kit, £9.50, BSR Aerotek (01386 849060)

- Power Commander, 2001-2003, £284.35, BSD Engineering (01733 223377)

- HRC wiring harness, £POA, Ten Kate (www.tenkatemotoren.nl)

- TKR generator covers, £POA, Ten Kate (www.tenkatemotoren.nl)

- TKR radiator and hoses, £POA, Ten Kate (www.tenkatemotoren.nl)

- TKR oil-cooler kit, £POA,

- Ten Kate (www.tenkatemotoren.nl)

- TTS 639cc Wiseco big-bore, £POA, TTS (01327 858212)

- Hardracing 618cc conversion, £POA, Hardracing (www.hardracing.com)

- K&N airfilter, from £43.91, Demon Tweaks (01978 664474)

- Ten Kate (www.tenkatemotoren.nl)

IGNITION

- TFI control box, £176.50, TTS (01327 858212)

- TFI control box, £177, Demon Tweaks (01978 664474)

- Timing retard eliminator, £59.95, Demon Tweaks (01978 664474)

- DID Extreme chain and sprocket set, FX-FY, £133.99, M&P (08705 703030)

- EK chain, £58, M&P (08705 703030)

- Afam chains, from £60, Demon Tweaks (01978 664474)

- Oval carbon Remus end-can, from £315, Demon Tweaks (01978 664474)

- Akrapovic slip-on carbon or titanium can, £318.50, Lite Year Racing (01526 321165)

- Akrapovic carbon exhaust bracket, £60, Lite Year Racing (01526 321165)

- Yoshimura RS-3 oval end-can in stainless, carbon and titanium, from £309.50, Lite Year Racing (01526 321165)

- Yoshimura Tri-oval, dual tip, titanium high-level can with stainless duplex headers, from £1579, Lite Year Racing (01526 321165)

- Arrow high-level full system with oval carbon can, £553.25, Lite Year Racing (01526 321165)

- Yoshimura RS-3 oval end-can in stainless, carbon and titanium, from £309.50, Lite Year Racing (01526 321165)

- Yoshimura Tri-oval, dual tip, titanium high-level can with stainless duplex headers, from £1579, Lite Year Racing (01526 321165)

- Bos T-Six ally oval end-can, £259.99, Fowlers (01179 770466)

- Bos hi-level race-can bracket, £39.99, Fowlers (01179 770466)

- Miv carbon oval end-can, £149.99, Bykebitz (01252 870900)

- Remus full systems, from £482, Performance Parts (01788 869100)

- DID Extreme chain and sprocket set, FX-FY, £133.99, M&P (08705 703030)

- EK chain, £58, M&P (08705 703030)

- Afam chains, from £60, Demon Tweaks (01978 664474)

- Oval carbon Remus end-can, from £315, Demon Tweaks (01978 664474)

- Akrapovic slip-on carbon or titanium can, £318.50, Lite Year Racing (01526 321165)

- Akrapovic carbon exhaust bracket, £60, Lite Year Racing (01526 321165)

- Yoshimura RS-3 oval end-can in stainless, carbon and titanium, from £309.50, Lite Year Racing (01526 321165)

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- Yoshimura Tri-oval, dual tip, titanium high-level can with stainless duplex headers, from £1579, Lite Year Racing (01526 321165)

- Bos T-Six ally oval end-can, £259.99, Fowlers (01179 770466)

- Bos hi-level race

Suzuki GSX-R750

The original and for many the ultimate sports bike, the GSX-R still has room for improvement

Number one in what is now a class of one, the GSX-R750 is still the weapon of choice for the headbanger who likes litre-bike ridding power, in a 600-like chassis. And plenty of litre bike riders can still be humbled by the 750. After all it's not the dog in the fight, it's the fight in the dog, as Mark Twain put it – and he was wise on many recreational matters including golf, which he rightly referred to as a good walk spoiled. Obviously it's also a waste of a Sunday morning when you could be riding a GSX-R750.

A reputation for an exciting if sometimes flighty ride has its roots in the 1996 WT model's geometry, culled from the RGV500 GP bike. So you'll be needing a trick steering damper. Sporty types can enjoy even quicker steering by connecting shorter rear suspension dog bones to raise the ride height. While we're at the back, the K models' Showa shocks are good but not necessarily worth rebuilding, whereas the Kayaba's on earlier bikes are. Up front, the forks are good, with the USD units on the Ks working well with the revised chassis. Any shortcomings can be sorted with a revalve. Stick with stable rubber.

Only known transmission trouble is for a small screw on the selector shaft on early Ks to work loose.



MODELS

	GSX-R750WT 1996 749cc 110.2bhp @ 11,750rpm
	GSX-R750WW 1997 749cc 110.2bhp @ 11,750rpm
	GSX-R750 1998 116.1bhp @ 12,250rpm
	GSX-R750WX 1999 116.1bhp @ 12,250rpm
	GSX-R750K1 2000 All new. 118.5bhp @ 12,500rpm
	GSX-R750K2 2001 118.5bhp @ 12,500rpm

TUNING BITS

CHASSIS TUNING

- Harris Performance (01992 532501)
- Carbonfibre front mudguard, WT-WX £88.06, K1/K2 £130.10 (£148.61 vented)
- Carbonfibre hugger, £99.57
- Carbon frame protectors, £78
- Fibreglass undertray, £141
- Fibreglass fairing, WT-WX £257.80, K1/K2 £278.30
- Fibreglass seat unit, WT-WX £150.11, K1/K2 £130.11
- Flip up screen, from £30.84
- Demon Tweaks (01978 664474)
- Carbonfibre front mudguard, £106.64 WT-WX, £116.34 K1/K2
- Carbonfibre hugger, £106.64
- Undertray/fairing, £55 WT-WX, £96.24 K1/K2
- Hugger, unpainted black £79.64, colour matched £102.70, two colour fade £124.70
- Quick-release tank catches, £15, BSD Engineering (01793 223377)
- Double-bubble screen, £49.99, Motrax (01933 418414)
- Lite Year Racing (01526 321165)
- LYR fibreglass fairing, K1/K2, £150, LYR fibreglass seat unit, K1/K2, £50
- CB Carbon vented mudguard, K1/K2, £131.50
- CB Carbon factory fairing, K1/K2, £703
- CB Carbon factory seat unit, K1/K2, £264

- Harris clear indicator lenses, £16 per set
- Twin light undertray, WT-WX from £123.37, Emax (01522 697007)
- SRAD flip-up screen, £67.06, Emax (01522 697007)
- Double-bubble screens £47.00, NWS (01992 509900)

REARSETS

- Arrow footrest kit from £222.74, fully adjustable kit (K1/K2 only) £339, B&C Express (01522 791369)
- Carbon heel plates, £44.85
- Harris Performance (01992 532501)
- Adjustable footrest kit from £252.92, Harris Performance (01992 532501)
- LSL fixed rearsets £178.87, adjustable £270, Demon Tweaks (01978 664474)
- Carbon heel plates, £26.34 WT-WX, Demon Tweaks (01978 664474)
- Yoshimura adjustable footrest kit, K1/K2, £438.90, Lite Year Racing (01526 321165)
- Adjustable footrest, £245, BSD (01793 223377)
- Edison rearsets £292.00, NWS (01992 509900)
- Footrest jack-up plates, £49.95, NWS (01992 509900)
- EBC replacement discs: front, £139.90; rear, £92.83, B&C Express (01522 791369)
- EBC brake pads from £14.89, B&C Express (01522 791369)
- AP rear caliper conversion, £125,

- Harris Performance (01992 532501)
- Thumb operated rear brake, £352, Harris Performance (01992 532501)
- PVM 6-pot calipers, £637.84, Harris Performance (01992 532501)
- PVM 4-pot radial caliper fork bottoms, £1087, Harris Performance (01992 532501)
- PVM Evo front discs, £303.29, Harris Performance (01992 532501)
- ABE wavey discs, £260 a pair, £70 rear, Lite Year Racing (01526 321165)
- Brembo master cylinder kit, £243.73, Lite Year Racing (01526 321165)
- Wave discs front each £176.00, £198 carbon centre, NWS (01992 509900)
- Rear wave discs £69.09, NWS (01992 509900)

HANDLE BARS

- Alloy clip-ons, from £117.50 a pair, Harris Performance (01992 532501)
- Rental grips, £6.50 a pair, Harris Performance (01992 532501)
- Anodised bar-end weights, £5.73, Demon Tweaks (01978 664474)
- Gilles adjustable bars, £185, Demon Tweaks (01978 664474)
- Race Products clip-ons, £35.16, Demon Tweaks (01978 664474)

FORKS/YOKES

- Triple bolt adjustable yokes, £673.40, Harris Performance (01992 532501)
- Ohlins forks, £1555, Demon Tweaks (01978 664474)

- Fork compression kits – springs, oil, shim stacks, compression adjusters, £270.25 fitted, BSD Engineering (01793 223377)

REAR END

- Factory spec swingarm, £POA, Harris Performance (01992 532501)
- Ohlins shock, from £585, Harris Performance (01992 532501)
- Penske shock, from £532.05, Demon Tweaks (01978 664474)
- Swingarm bobbins, £20, BSD (01793 223377)
- Dog bone suspension linkages, £50, BSD (01793 223377)

STEERING DAMPERS

- Arrow steering damper, WT-WX, £230.72, B&C Express (01522 791369)
- Arrow front mounted steering damper, K1/K2, £210.83, B&C Express (01522 791369)
- Ohlins steering damper, from £299, Harris Performance (01992 532501)
- LSL damper kits, from £127, Demon Tweaks (01978 664474)

CRASH BUNGS

- Arrow fairing protectors, WT-WX, £29.45, B&C Express (01522 791369)
- BSD crash bungs, from £41.99, BSD Engineering (01793 223377)
- Frame/fairing protectors, £52.87, Harris Performance (01992 532501)

- LSL crash pads, £32, Demon Tweaks (01978 664474)
- Crash mushrooms, £24.99, Motrax (01933 418414)

ENGINE TUNING

- Jet & Set, WT/WV, £120, BSD Engineering (01793 223377)
- Ride-in, ride-out gasflowed head, set-up & full Arrow system, £1700, BSD Engineering (01793 223377)
- Stage Two – cams, flowed/skimmed head, can or full system, £1800-2300, TTS (01327 858212)
- Stage Three – as above with JE pistons, Canillo rods, titanium valve spring retainers, higher limit ignitor box and full system, £4300, TTS (01327 858212)
- Stage Four – as above with 800cc high-comp JE piston kit, £4875, TTS (01327 858212)

RE-JETTING

- K&N jet kit, WT/WV, £89, B&C Express (01522 791369)
- Arrow jet kit, WT/WV, £89, B&C Express (01522 791369)
- Jet & Set, WT/WV, £120, BSD Engineering (01793 223377)

TRANSMISSION

- AFAM 520 chain and sprocket set from £109.75, depending on model, Bike Torque Racing (01373 464252)

- Rental 14-16 tooth front sprocket for WT/WV, £10.57, B&C Express (01522 791369)
- Rental 15-16 tooth front sprocket for WV/WX/K1/K2, £11.93, B&C Express (01522 791369)
- Rental 40-46 tooth rear sprocket for WT/WV, £26.43 – 30.66, B&C Express (01522 791369)
- Rental 44-48 tooth rear sprocket for WV/WX/K1/K2, £26.32 – 28.01, B&C Express (01522 791369)
- AFAM chains, from £64.66, Demon Tweaks (01978 664474)
- Heavy-duty clutch diaphragm spring, £763, Debben Performance (www.debben.co.uk)
- airfilters
- K&N WT/WV/WX/K1/K2, £41, B&C Express (01522 791369)
- K&N K1/K2, £41.45, B&C Express (01522 791369)
- Pipercross, (01604 404045)
- Ram Air, (01664 822279)
- BMC, (01553 811855)
- ITG, (02476 305368)

PARTS

- Camshaft exchange, WV-K2, £300, BSD Engineering (01793 223377)
- Power Commander, £284.35, BSD Engineering (01793 223377)
- Stage One camshaft set, K1/K2, £748.36, Lite Year Racing (01526 321165)
- NGK race plugs, £35.54 per set,

- Lite Year Racing (01526 321165)
- Billet camchain tensioner, £31.82, Debben Performance (www.debben.co.uk)
- Titanium valve spring retainers, £122.50, Debben Performance (www.debben.co.uk)

BIG BORES

- JE piston kits, 770 & 791cc, £410.95, Debben Performance (www.debben.co.uk)
- 792cc big bore (WT-WX), £1100, TTS (01327 858212)
- 812cc ride-in, ride-out big bore, K models, £1750, TTS (01327 858212)

IGNITION

- Yoshimura ignition/fuelling remapping, £50, Lite Year Racing (01526 321165)
- Adjustable ignition advance, £88.55, Debben Performance (www.debben.co.uk)
- Timing Retard Eliminator, £59.95, Demon Tweaks (01978 664474)
- TFI control box, £177, Demon Tweaks (01978 664474)
- TFI control box, £176.50, TTS (01327 858212)

WHEELS

- PVM wheels, from £1200 a pair, Harris Performance (01992 532501)
- Dymag wheels, from £1082 a pair (magnesium), £2956 (carbonfibre), Harris Performance (01992 532501)

- BST carbon five-spokes, £2461.98, HPS (0870 7747740)
- exhausts
- Arrow silencers from £303.97, B&C Express (01522 791369)
- Arrow full systems, WT-WX, from £486.70, B&C Express (01522 791369)
- Arrow full systems, K1/K2, from £668.28, B&C Express (01522 791369)
- Harris race-cans – alloy/carbon/titanium, from £233.18, Harris Performance (01992 532501)
- Akrapovic silencers from £344, Harris Performance (01992 532501)
- Akrapovic full systems from £623, Harris Performance (01992 532501)
- Micron full systems, from £499.95, Demon Tweaks (01978 664474)
- Micron Beta race-cans, from £199.95, Demon Tweaks (01978 664474)
- Yoshimura Tri-oval end-cans from £372.98, Lite Year Racing (01526 321165)
- Yoshimura RS-3 full systems from £714, Lite Year Racing (01526 321165)
- Harris alloy exhaust bracket, WT-WX £56.01, Ks £38.25, Demon Tweaks (01978 664474)
- Exhaust can hangers, polished aluminium £39.95, black anodised £47.95, NWS (01992 509900)

Honda FireBlade RR-X

By 1998 the mighty Blade was playing second fiddle to the R1, but there's loads of potential

Originally conceived as a 750, the party really got going when Honda's designers realised they could build a much larger capacity lump compact enough to fit in a tiny frame. The RR-X was the fourth incarnation and last of the original line before the Blade went fuel-injected for 2000. While the RR-X lived very much in the shadow of the R1 as top sportsbike, there's plenty you can do to make this fine road sports bike a bit more focussed.

Power-wise, the cheapest fixes are the ubiquitous end-can and/or full system, but don't forget to get the carbs set up to suit or it'll be all top end and noise with a non-existent middle. Not good. After that you're into headwork. Expensive, but these models thrive on it. A cheap and effective acceleration boost comes from a one tooth smaller front sprocket.

Balance the price differential between a capable OE shock with a very capable Ohlins. Basically good front forks respond well to revalving. The RR-X got excellent four-pot Nissins which will continue to deliver with regular fluid changes and some braided lines. OE pads seem to work best with stock discs, but EBC HH come very close for less dosh.

Gearboxes can call time if they receive too much ham-footed abuse. Keep an eye on the cush drive too.



MODELS



CBR900RR-X 1998
918.5cc,
114.7bhp @
10,000rpm



CBR900RR-X 1999
As above,
except for new
paint schemes

TUNING BITS

CHASSIS TUNING

BARS, FOOTRESTS AND STUFF

HARRIS (01992 532500)

■ Harris footrest kit, polished or anodised, £252.99

■ Harris polished aluminium exhaust bracket, £38.25

■ Harris race spec front fairing bracket and race clocks incorporates top fairing stay and steering damper bracket £65.06

■ Harris GP clip-on handlebars, £117.50

■ Harris race footrest kit, £262.00

(Liteyear Racing (01526 321165))

LSL (0115 9499055)

■ LSL beautiful aluminium rearsets, £210 fixed, £275 adjustable

■ Gilles adjustable rearsets, £285, Performance Parts Limited (01788 869100)

■ Gilles multi-adjustable handlebars, from £184, iser kits are £60, Performance Parts Ltd (01788 869100)

■ Valtor Moto adjustable rearsets from £115, PDQ (01753 730043)

■ Haynes Definitive Guide to the FireBlade £17.99, Tran Am (01425 620580)

■ Micro fuel filter, £9.99, Motrax (01933 418414)

■ Pre preg tank shields in carbonfibre, titanium weave or ally weave £29.99, Motrax (01933 418414)

■ Indicators all shapes, sizes and finishes, £14.99, Motrax (01933 418414)

■ Magic Mushrooms, black, red or blue, £24.99, Motrax (01933 418414)

Motrax (01933 418414)

R&G (01252 377600)

■ R&G crash protectors, (fit direct to engine mounts, requires drilling), in black or white, £49

■ R&G toe guard, available in several different finishes, £25

Liteyear Racing (01526 321165)

■ Lyr glassfibre seat unit, £50.00,

Liteyear Racing (01526 321165)

■ Pyramid Plastics white or black hugger

£66.00; red £71; carbonfibre £99.50,

Liteyear Racing (01526 321165)

+HH brake pads £29.99, Tran Am

(01425 620580)

■ Venhill brake hoses, stainless steel

with self-aligning swivel heads and rub-

ber guides, £39.99 (front) £39.99 (rear)

Venhill (01306 885111)

■ Goodridge braided lines, from £22.33,

kits £70, Demon Tweaks (01978

663035)

■ HEL lines from £21, kits £67,

HEL (01522 888444)

■ ABE Wavey front brake discs

£260.00 pair, Liteyear Racing (01526

321165)

■ Arrow steering damper £263.34, B&C

Express (01522 791369)

■ Sprint steering damper kit, £259.90,

Performance Parts Ltd (01788 869100)

■ LSL from £150,

Merlin: 0115 9499055

ENGINE TUNING

FUELLING

■ Stage one Dynojet kit £106.80,

PDQ (01753 730043)

■ Barnett racing clutch, £80 for friction

plates, £35 for steel,

PDQ (01753 730043)

■ Barnett heavy duty clutch springs £12

for a set, PDQ (01753 730043)

silencer, £310.27, B&C Express

(01522 791369)

■ Devil Ovo full power, ovoid-shaped

race-cans, aluminium £287, carbonfibre

£330; road legal aluminium £310,

carbonfibre £345, Automotif (01617

439370)

■ Remus Revolution, road legal silencers

with removable baffles, carbonfibre,

titanium or stainless, from £270,

Performance Parts Limited (01788

869100)

■ Remus Grand Prix bolt-on race silenc-

ers, carbonfibre, titanium or stainless,

from £228, Performance Parts Limited

(01788 869100)

■ Remus full stainless steel race sys-

tems, from £502 (add £25 for road legal

versions), Performance Parts Limited

(01788 869100)

■ Harris standard level titanium oval slip-

on race can, £265.26, Harris (01992

532500)

■ G-Force, race-can, available round or

oval in stainless, carbon, titanium and

tri-coloured titanium finishes, Merlin

(0115 9499055)

■ Laser Hotcams, tri-oval shaped can

in carbon or titanium and road or race

spec. Race-cans come with decibel

killers (ain't that the point though?)

Merlin (0115 9499055)

■ Leo Vinci cans and systems

Tran Am (01425 620580)

■ Leo Vinci oval race cans in alloy

£199.99, carbon £269.99 or titanium

£269.99, Leo Vinci E-marked oval can

Suzuki SV650

Suzuki's budget V-twin has a reputation as a girl's bike - but it's possible to make it hardcore

An unlikely candidate for tuning? Not a bit of it. That's the real joy of the SV650 - build yourself a street sleeper. Key to it is the fact that the basic motor is so over-engineered where it counts - at the bottom end - that there's plenty of scope for tuning. We proved all this with our own SV a couple of years back, going from a trifling 66bhp up to 87 horses. The recipe included a 700cc big bore kit (800cc is comfortably attainable too), hotter cams, higher compression, an ignition advancer and a full system with fuelling tweaks.

Pre-2001 models benefit from later model second gears and a stronger detent spring and, in extreme cases, clutch springs.

Chassis wise the standard shock's shite so you'll want an aftermarket job and some shorter wishbones for more ride height. Don't go too mad, though, or things can get twitchy. The standard front end is basic, and serious SV fettlers opt for a GSX-R1000 front end (requires engineering work). You'll net fully adjustable usd suspension and Tokico four-pots in the process, in place of non-adjustable legs with sliding calipers. 2002 models got some preload adjustment and this can be retrofitted as part of a revalve.

The SV benefits greatly from rearsets or jack-up plates to end peg-scrapping woes (or heroics, depending on your view).



SUZUKI GSX-R600

MODELS



SV650
1999-2002
645cc 90°
V-twin, 67.2bhp
@ 9000rpm



SV650/S
2003
As above with
new frame and
sharper looks

TUNING BITS

CHASSIS TUNING

BODYWORK

Ermax 01522 697007

- 2003 model undertray, £117 painted, £82.70 unpainted
- SV nose screen, 18 colours to choose including five stain finishes and carbon look, £59
- Hugger for 2003 model, colour matched with SV logo, £102.70
- Banditmania 01522 871600 or Banditmania.com

- SV650 solo seat cowl. White and ready for painting, £78
- SV650 solo seat cowl, colour coded, £99 n SV650 '99-'03 bellypan with halogen running lights. Plain for painting, complete with fixing kit, £170
- Pyramid 01427 810473
- Hugger, £55.02
- Undertray from £81.55
- Solo seat conversion from, £80.55
- Bellypan, £63.62
- Skidmax 01305 780808
- Fainting lowers, fits under the nose on the S model to give a full-fairing look, £100

- Standard screen, £35.78
- Double bubble screen, from £47
- Headlight covers from £21.15
- Hugger, pre-coloured complete with stainless fittings, £60
- Bellypan pre-coloured complete with stainless fittings, £90
- Powerbronze

Demon Tweaks (01978 664474)

- Standard screen £37
- Airflow screen, £45
- Lens shield, £17
- Hugger, £55
- Tailguard, £55
- Seat cowl inc seat pad, £70.19
- Bellypan, £49.50
- Airblade iridium double bubble screen, £54.99 Demon Tweaks (01978 664474)

- 2wheeljunkie www.2wheeljunkie.com, Busters (08702 412040)
- Full race and road fairings, £700
- 2wheeljunkie radiator cowls, £100
- 2wheeljunkie single seat unit, £200
- Ballistic iridium double bubble screen, £55

- Full race and road fairings, £700
- 2wheeljunkie radiator cowls, £100
- 2wheeljunkie single seat unit, £200
- Ballistic iridium double bubble screen, £55

FORKS

- Titanium nitride coated fork stanchions, £220
- JHS Racing (0117 9712966)
- Complete GSX-R1000 transplant, pos (£1200+), JHS Racing (0117 9712966)
- Progressive fork springs, £55, Busters (08702 412040)
- Hyperpro fork springs from £55, www.hyperpro.com or JHS (0117 9712966)

REAR END

- Technoflex rear shock with remote adjustable high and low speed damping plus ride height adjustment, comes with five-year warranty, £425, from JHS

- Racing (0117 9712966)
- Suspension link plates, for 25mm extra ride height, £22.50 JHS Racing (0117 9712966)
- Ohlins fully adjustable rear shock, £426, Demon Tweaks (01978 664474)

REARSETS

- Alloy rearsets by Rossmoto of Italy, £175 JHS Racing (0117 9712966)
- Gilles fully adjustable rearsets (seven position adjustment). Titanium or gold finish, £285, Performance Parts Limited (01788 869100)
- Multi-position jack-up plates, £59, ER Racing, Busters (08702 412040)
- Robby rearsets available in two positions, £175, Busters (08702 412040)
- Motrax coloured pegs in various colours Motrax (01933 418414)

- Multi-position jack-up plates, £59, ER Racing, Busters (08702 412040)
- Robby rearsets available in two positions, £175, Busters (08702 412040)
- Motrax coloured pegs in various colours Motrax (01933 418414)

STEERING DAMPERS

- Hyperpro top mount, £289 JHS Racing (0117 9712966)
- Sprint sidemount, £185 JHS Racing (0117 9712966)
- Sprint top mount, fully adjustable and rebuildable, choice of colours, £290 Performance Parts Limited (01788 869100)

HANDLE BARS

- Rental streetfighter bar, choice of colours, from £25
- B&C Express (01522 791369)

- Motocross bars, various colours, £16 from Busters (08702 412040)
- Robby sports clip-ons, £95, from Busters (08702 412040)

CRASH BUNGS

- BSD, £35.25, BSD (01733 223377)
- Mushrooms, £25
- Busters (08702 412040)
- ER Racing, £36, Busters (08702 412040)

BRAKING

- Goodridge lines, from £22.33, kits £70, Demon Tweaks (01978 663035)
- HEL lines from £21, kits £67, www.helperformance.com (01522 888444)
- EBC Double-H racing pads, £19 per pair front, £20 rear, EBC (01604 583344)

WHEELS

There aren't lots of aftermarket wheels for SVs, due to the comparatively small width.

- Dymag, magnesium three-spoke or five-spoke, from £504 front, £774 rear complete with sprocket cush drive, Dymag (01249 655481)
- Dymag carbonfibre five-spoke wheel £1213 front, £1410 rear, Dymag (01249 655481)
- Marchesini forged magnesium ten-spokes, £673 front, £777 rear, sprocket carrier £103
- Harris Performance (01992 532500)

- Marchesini forged aluminium ten-spoke, £409 front, £508 rear, sprocket carrier £98
- Harris Performance (01992 532500)
- Marchesini cast magnesium five-spokes made for racing, £449 front, £517 rear, sprocket carrier £103
- Harris Performance (01992 532500)
- PVM magnesium five, six or ten-spokes £1200 including sprocket carriers, Harris Performance (01992 532500)
- RC Component alloy wheels, £1175
- Big CC Racing (0118 977 6744)

ENGINE TUNING

When it comes to tuning SVs, there are few people on this planet who can boast more knowledge or direct experience than James Holland at JHS Racing (0117 9712966).

Starting with his own SV back in '99, James has taken them from 650cc to 800cc and beyond, extracting anything up to 96bhp from Suzuki's supposedly soft, "first big bike". There are now nine complete tuning packages on offer. Prices are shown as for a roll-in, roll-out curves for each online at: www.jhsracing.co.uk

- Option 1 - 650cc with timing upgrade, £30
- Option 2 - 650cc with breathing improvements, £799
- Option 3 - 650cc with breathing improvements and cams, £1299

- Option 4 - 700cc kit, £450
- Option 5 - 700cc with breathing improvements, £1170
- Option 6 - 700cc with breathing improvements and cams, £1520
- Option 7 - 750cc with breathing improvements, £2549
- Option 8 - 750cc with breathing improvements and cams, £2899
- Special Option, for serious race use only - 800cc built to order, £POA
- Keihin FCR39 41mm flat slide carbs, £935 JHS Racing (0117 9712966)
- Big CC Racing (0118 9776744)
- Have been tuning engines for years and can make your engine as mental as you want. They have a range of options to turn your mid-mannered SV into anything from a fitter than average thumper, to a full-blown rorty lightweight sportsbike - and even a nitrous kit for that cigarettes and Special Brew dragstrip flavour.
- Big CC tune up. Racing jet kit, performance airfilter, all set up on the dyno. Make sure you have a race-can or full system if you do, £205, Big CC Racing (0118 9776744)
- Nitrous oxide two cylinder kit with a boost limit of 30bhp to keep things safe, £558, Big CC Racing (0118 9776744)
- Big CC Racing big bore. 677cc conversion, gas flowed and ported head, re-bore of barrel, bigger forged pistons, cam reground for "hot streak", adjustable slotted cam timing sprockets, £1408
- Big CC Racing (0118 977 6744)

BIG BORES

Sizes start from 81mm high compression.

- 84mm, 694cc (700);
- 87mm, 744cc (750)
- 90mm, 796cc (800)
- All use forged pistons
- Piperscross performance airfilter, £45.24 Demon Tweaks (01978 664474)
- K&N panel airfilter, improves air flow and performance, £52.71 Performance Parts Limited (01788 869100)

PARTS

Used on their own, they don't amount to much, get them fitted by JHS, Crescent or Straightline and you'll see real improvements. All available through JHS.

- JHS Machined alloy clutch cover £120
- Full Barnett clutch kit £117
- Adjustable camchain sprockets (x4), £385
- JHS manual camchain adjusters, £44
- 2mm oversize exhaust valves (27mm) or 1mm oversize inlet valves (32mm), both £24.67 each
- Carrillo racing conrods, £484
- Racing valve springs, £134
- Keihin 41mm carb kit, £935 (pair)
- Needle roller main bearings, £129.99 pair
- Cometic head gasket sets £82.95
- JHS cylinder head studs/nuts set, £49

IGNITION

- Offset Woodruff key gives 4° of ignition advance, £18.00, JHS Racing (0117 9712966)
- Nikko G Pack. Plugs into your CDI and advances ignition easy as plug and play. Fast and doesn't require any electrical knowledge. Thanks to compatible pins it fits in a few minutes on the original wiring, between the connectors and the ignition box (CDI), without any changes or modifications. Equally, it can be disconnected in a moment and your bike restored to its original configuration. G-Pack is active on the second gear between 2700 and 8200rpm and on the third between 2100 and 8200rpm (it's French, you see!) It operates on ignition advance and ensures optimum engine exploitation, £98.87
- JHS Racing (0117 9712966)

TRANSMISSION

- Factory Pro bearing detent arm, along with a slightly heavier detent spring to decrease shift mechanism friction for the quickest shifting, £85 JHS Racing (0117 9712966)
- EBC clutch, £16.92
- Demon Tweaks (01978 664474)

RE-JETTING

- Dynojet stage one kit, £82.50
- Demon Tweaks (01978 664474)

Suzuki GSX-R600

Suzuki aimed the GSX-R at the performance end of the 600 class, but there's always more...

Want a real race rep? The little Gixer has World and British Supersport titles to its credit. But if buying secondhand, look out for road-rehabilitated race track dogs. It's pedigree you're after, chum.

The first GSX-R6 was the R-V of 1997 and it went straight to the top of the tree. From 1998 to 2000 it was all about detail changes, albeit useful ones to the engine, gearing, discs and forks, until the all-new, even sharper, fuel-injected bikes for 2000.

Motors have a justified reputation for being bulletproof. Suzuki were the first to deliver a 600 with a genuine 100bhp, and PB came within a few tenths of 170mph at Bruntingthorpe on a K2.

End-cans and full systems carry the usual warnings about fuelling. On carb models you can disconnect the emissions solenoids, blank of the pipes and rejet to release a few bhp. It has to be done right though.

Early K models can have a problem with an Allen bolt on the selector drum that can leave the bike stuck in or out of gear. You can try a one tooth smaller front sprocket for more acceleration at the expense of top speed and fuel consumption.

Early models benefit from stronger springs and fork oil, and brake calipers and master cylinders from larger Suzuki siblings.



HONDA HORNET 600

OTHER MODELS



GSX-R600RV
1997
599cc,
94.7bhp @
12,000rpm



GSX-R600
RW/RX/RV
1998-2000
Engine, brakes,
susp. tweaks

TUNING BITS

CHASSIS TUNING

BODYWORK

- Carbonfibre single seats, £299.62, QB Carbon (01159 894468)
- Glassfibre single seat, from £100, Skidmax (01305 780808)
- Endurance racer-style seat, £345-£389, Performance Composites (01202 482891)
- Fairing to make SRAD look like K, £290, Performance Composites (01202 482891)
- Rear hugger, carbonfibre, £116.49, Pyramid Plastics (01427 810473)
- Rear hugger, £79.84-£102.70, Ermax (01522 697007)
- Race Products race/trackday fairing, from £200.91, Demon Tweaks (01978 664474)
- Race Products race/trackday seat, £100.46, Demon Tweaks (01978 664474)
- Skidmax replacement road bodywork, from £264.38, Skidmax (01305 780808)
- Pyramid carbonfibre front mudguard, £106.83, Pyramid Plastics (01427 810473)
- Ermax twin light undertray for SRAD, £123.37-£141.58 (01522 697007)
- Ermax twin light undertray for K, £111.56-£141.27 (01522 697007)
- Clear rear light £65, Performance Motorcycle Parts (01796 482507)

BARs, FOOTRESTS AND STUFF

- Gilles adjustable handle bars, £185, Demon Tweaks (01978 664474)
- Harris adjustable handle bars, £117.50, Harris (01992 532501)
- Race Products clip-ons, £35.16, Demon Tweaks (01978 664474)
- Gilles adjustable rearsets, £275, Demon Tweaks (01978 664474)
- Arrow rearsets, £339, B&C Express (01522 791369)
- Edison rearsets, £288, NWS (01922 501285)
- Harris rearsets, £252.92-£296.10, Harris (01992 532501)
- Crescent rearsets, £280, Crescent (01202 820170)
- Motrax top block pegs, £39.99, Motrax (01933 418414)
- Motrax frame protectors, £79.95, Motrax (01933 418414)
- Motrax magic mushrooms, £24.95, Motrax (01933 418414)
- BSD, £35.25, BSD (01733 223377)
- R&G crash bungs, £49, R&G (01252 377600)
- LSL crash pads and balls, £50 and £16, Merlin (01159 499055)
- R&G fork protectors, £22.50, Performance Motorcycle Parts (01796 482507)
- R&G swingarm protectors, £36, Performance Motorcycle Parts (01796 482507)

BRAKES

- Genuine Suzuki pads, £40, P&H (01293 413301)
- Brembo radial master cylinder, £199, Grand Prix Racewear (01908 324902)
- Goodridge brake switch banjo bolt, £18.60 single line or £24.58 dual line, Demon Tweaks (01978 664474)
- Braided lines, HEL (01392 811601), Earl's (01803 869850), Goodridge, Demon Tweaks (01978 664474)
- AP racing kit, six-pots, discs, pads, lines, brake fluid, £1289.89
- PFM Kit £999 (01624 829419)
- Nissin six-pot calipers £202.99 each, discs £146.99 each, Fowlers (01179 770466)
- Braking wave discs, £176.02, pads £13.98, NWS (01992 501285)
- EBC discs, £139.83 each, EBC (01604 583344)

SCREENS

- Many companies do screens for the Gixer, in all colours and shapes.
- Ermax, from £67.06-£94.31, Ermax (01522 697007)
- Pyramid, from £36-£55, Pyramid Plastics (01427 810473)
- Skidmax, from £30.84, Skidmax (01305 780808)
- Iridium screens, £65, Performance Motorcycle Parts (01796 482507)

FRONT END

- Maxton re-valve and re-spring, £258.50, Maxton (01928 740531)
- Yoshimura fork kit. Replaces internals with race spec springs, damper rods, shims. The choice of racers, £1200, Crescent (01202 820170)
- K-Tech fork upgrade. Rebound and compression pistons, a rebound piston holder, a flow control needle, up-rated 0.9kg springs and it takes the compression adjustment flow control needle down from 3mm to 1.5mm, £435, K-Tech (01530 810625)
- GSX-R750/1000 conversion. Forks from its bigger brothers will fit on. You need the triple clamps but can keep stock wheel, mudguard and discs. £2000, if they have some there. Crescent (01202 820170)

REAR END

- A K-Tech re-valve costs £76, and a re-spring tailored to your individual weight is £475.00, K-Tech (01530 810625)
- Maxton will give your original item a new lease of life with a re-valve and re-spring, from £147, Maxton (01928 740531)
- Maxton also make a bespoke rear shock with preload, rebound and compression adjustment, £558.12, Maxton (01928 740531)
- Ohlins rear shock, £545-£647, Performance Motorcycle Parts (01796 482507)

482507)

- Penske rear shocks, from £532.05, Demon Tweaks (01978 664474)
- Bike Torque shorter tie rods to replace originals and raise rear ride height, for quicker steering, £50, Demon Tweaks (01978 664474)
- Bike Torque racing top shock nut to adjust ride height, £50, Demon Tweaks (01978 664474)

ENGINE TUNING

IGNITION

- Adjust your fuel injected GSX-R600 with one of these electronic trickery boxes
- TFI box, £176.20, TTS (01327 858212)
- Yoshimura EMS, £465.02, Phoenix (01782 569800)
- Dynojet Power Commander, £284.35, Dynojet UK (01995 600500)
- Timing retard eliminator, £65, Performance Motorcycle Parts (01796 482507)

ENGINE

- Crescent (01202 820170). These

AIR FILTERS

- Piperross, (01604 494945)
- K&N, (01788 869100)
- Ram Air, (01664 822279)
- BMC, (01553 811855)
- ITG, (02476 305386)

EXHAUSTS

- Crescent (01202 820170). These

guys help the GSX-R600 SRAD and K series win three British supersport titles in the hands of John Crawford and Karl Harris. They can tune your bike in varying stages, depending on your budget.

- Manual camchain tensioners £104.50.
- Power Commander and Yoshi full system all set up on the dyno, £1200. Should be good for an extra 'useable' 10bhp.
- Set of race cams, gas flow the head and set the squish, up-rate valve retainers with titanium versions, £1500-£1800. For 5-6bhp on top of the above tune.
- According to Crescent's Ashley Pearson it should: "Pull like a class of school boys." Whatever that means.
- TTS (01327 858212). TTS assisted Crescent with their SRAD race bikes. They know a thing or two about engines.
- Track day tune. Get more air to it by opening up the airbox, fit shorter belmouths and fit a race can, rejettied (on carb bikes) to suit. Should give 8-10bhp more at peak rpm, in return for sacrificing a little below 6000rpm, £350.
- Full engine tune. Cams ground for a Supersport race profile, adjustable cam sprockets fitted and dialled in for the right timing. Cylinder head gas flowed, skimmed and squish clearance set to optimise compression, £1000.
- Big bore. 640cc big bore conversion. Bigger pistons, barrels honed out and re-plated, new head gaskets. Gives 12%

more power, £1000.

TRANSMISSION

- Yoshimura shift shaft support, beefs up the gear shaft, £124, Crescent (01202 820170)
- Yoshimura kit box, £1996, Crescent (01202 820170)
- Renthal 15-tooth front sprocket, £8.77, B&C Express (01522 791369)
- Renthal 47-tooth rear sprocket, £24.64-£28.01, B&C Express
- Tsubaki 525 gold chain, £88.62, B&C Express (01522 791369)
- AFAM chain and sprocket set, from £96.75, Bike Torque racing (01373 464252)
- EBC heavy-duty clutch springs, £7, EBC (01604 583344)

FUELLING

- Quick action throttle, cammed for progressive throttle, made from aircraft alloy, £258, Crescent (01202 820170) exhausts

EXHAUSTS

- Yoshimura race can, £318-£556, Phoenix (01782 569800)
- Yoshimura stainless full system £945, Phoenix (01782 569800)
- Arrow can, carbon or titanium £303.97-£314.25, B&C Express (01522 791369)
- Arrow full system, £668.28-£692.13, B&C Express (01522 791369)

- Akrapovic end-can, £334, Performance Parts Limited (01788 869100)
- Akrapovic full system, £584-£797, Performance Parts Limited (01788 869100)
- Akrapovic carbonfibre exhaust hanger, £68, Demon Tweaks (01978 664474)
- Harris polished aluminium exhaust hanger, £38.25-£56.01, Demon Tweaks (01978 664474) wheels

WHEELS

- BST carbon five-spokes, £2461.98, HPS 0870 7747740
- OZ £1211 pair, five/six-spoke, black, gold or silver, Harris (01933 532000)
- Dymag three-spoke magnesium £1273, Dymag (01249 655481)
- Dymag five-spoke carbon fibre £2623, Dymag (01249 655481)
- Quick shifters

QUICKSHIFTERS

- Pro-shift electronic powershifter. Clutchless, full throttle gearshifting, £1295 (fitted) Pro-Shift (01332 294994)
- Translogic QS4. LCD dash features gear indicator, shiftlights, rpm indicator and a lap timer, £399, Translogic (01202 623404)

Honda Hornet 600

Take one low-tech 600, create its own race series and watch as the tuning culture flourishes

The Hornet's a Honda, so reliability has never been an issue, and that makes it an ideal candidate for tuning. Honda raided the Obsolete Parts Bin for the Hornet, 'retuning' a 1997 CBR6 motor for more midrange and hanging it from a steel spine frame running on old FireBlade wheels (17in front from late '99 on), plus a few carb tweaks. From 2000 there was a slightly heavier and more expensive half-faired Honda 600.

Standard downpipes are quite good, so you can get away with just a can. But a full system will help shed more of the Hornet's 172kg dry weight. Micron sponsored the Hornet Cup and put a lot of R&D into their systems. Arrow are good too. You'll need some carb work, though. Early Hornets have a pronounced flatspot at 5500rpm, from 1999-on carbs and needles were changed. Get rid of the emission control air bleed into the exhaust, re-jet and fit a new filter. Standard 34mm carbs are restrictive so consider a CBR6 head with 36mm carbs. FireBlade carb needles help too.

A tooth off the front or two on the back sprocket are useful, as is the stronger CBR6 clutch. Similarly, CBR6 pads and braided lines will help the brakes. Stiffer springs and thicker oil help the front forks and BSD (01733 223377) can modify the damper units. Replacement is the only way to a better rear shock.

KAWASAKI ZX-6R

MODELS



CB600F
1998-onwards
599cc,
80.5bhp, steel
spine frame



CB600FS
2000-2002
3kgs heavier,
£400 more.
Discontinued



TUNING BITS

CHASSIS TUNING

FRONT END

BSD have been involved in the Hornet Cup since its inception and are responsible for prepping many of the top racing Hornets, including 2002 Hornet Cup champion Johnny Glendinning's bike. Loads of R&D went into their front fork conversions and for £211.50 they'll do it for your bike too.

Mark Brewin says: "We remanufacture the damper assembly using our own seals. It involves removing a damping valve from the bottom of the leg, machining a circlip groove into the bottom of the leg to re-fit the valve, making new sealing rings, then altering the size of the holes in the damper rod. You then need to work out what rate spring to use, the amount of oil and its viscosity. Then, you tailor the airgap to how much and how quickly you want the fork to compress. Another trick... in the base of the fork leg, the bump stop covers some of the holes in the damper rod - we machine it back so the damping actually works. You gain 5-10mm fork travel too."

■ Kais fork conversion with Öhlins springs and oil and a damping rod mod, £164.50, Kais Suspension Services (01942 896366).

■ WP shock, 5mm longer than oe unit, plus ride height adjuster, £444.74, WP Suspension (01507 327509).

■ Öhlins bespoke rear shock, £499, BSD (01733 223377).

BODYWORK

■ BSD body kit, as used by Hornet Cup racers, includes nose cone, bellypan, single seat unit, £235, BSD (01733 223377).

French companies JMV and Espace do a selection of tasty parts for the Hornet. You can get their stuff through UK distributor Rhencullen (01455 890345).

■ JMV nose cone with twin halogen projector lights, styled on Hornet cup nose cone, £292 unpainted.

■ JMV undertray, with twin round lights built in, £179 unpainted.

■ Topline undertray with revised lights and indicators, £189 unpainted.

■ Topline radiator fairing panels, £125 unpainted.

■ New bellypan from Espace. Aluminium front plate with Hornet logo cut out, £162 unpainted. Also available with mini halogen lights fitted, £198 unpainted. Pyramid Plastics (01427 612536) do an assortment of trick bodywork.

■ Seat cowl with a real carbon centre and black sides, £74.94.

■ Twin can conversion. Rear tail shell, side panels and all pipework and brackets needed, not supplied with end cans, £255.

■ Huggar: gloss black £65.35, carbon £104.60, colour-matched £111.86. Full protection to rear shock/linkages.

■ Fenda extend: extra protection for the rad, £18.29.

■ Bug Spoiler screens, light tint, £39.93; Raptor screens: light tint £39.95, dark smoke £42.50 and carbon £54.95.

■ NWS Hornet Tail Tidy £49.95, carbon and black or white plastic, £34.95, NWS (01992 501285).

■ Ward Racepaint, as used by Hornet Cup racers. Design of your choice, £200. Ward Racepaint (01733 349229).

SWINGARM

■ Metnax ally swingarm. Longer than stock to prevent unintended wheelies and has more bracing than the Eiffel Tower. Metnax (01773 836241).

■ Crash bobbins

■ Bike Design crash bobbins - used in Hornet cup racing, black or white £38 per pair, Rhencullen (01455 890345).

■ BSD crash bungs, race £49.35, road £41.12, BSD (01733 223377).

REARSETS AND HANDLEBARS

■ DBR aluminium rearsets for the Hornet, from £245, Rhencullen (01455 890345).

■ BSD jock-up plate, to use with original rearsets, £150, BSD (01733 223377).

■ BSD plates, to use with any rearset on the market, £69, BSD (01733 223377).

■ Rental handlebars: £24 standard, £25 coloured, B&C Express (01522 791369).

ENGINE TUNING

BSD HORNET ENGINE TUNE (01733 223377)

BSD has successfully fettled Hornets for the Hornet Cup and built a number of road-going Hornet specials. BSD's Mark Brewin doesn't recommend a full race tune: "Rather than ultimate peak performance, you should be looking for driveability. By using race cams you can bring the power up to 100bhp but you'll ruin everything the bike stands for."

■ Ported, gas-flowed and skimmed head (BSD recommend using the CBR600 cylinder head with 36mm carbs), matched inlet tracts, CBR600 cams, BSD-modded jetting and K&N filter. BSD recommend adjusting the throttle position to advance ignition for a livelier feel. £763.75 plus parts.

MIKE SMITH TUNING (020 8660 0939)

Mike's son Gary is 2001 Hornet Cup champion. Father and son carry out the following engine tunes for the Hornet 600:

■ Dynojet, airfilter and end-can/full system, +5bhp with smooth power delivery, £280 exhaust not supplied. Carried out by Gary Smith at the St Albans Dyno Centre (01727 839627).

■ Full engine race tune. Work includes: blueprint to improve manufacturer's toler-

ances, race camshafts, ported cylinder head, altered cam/ignition timing, increased compression, improved squish area, balanced and altered shims and inlet and exhaust valves (round exhaust valves to back angle the inlet valves to help it breathe better), move the valve seats. £900 plus parts, total around £1300. 105+bhp with peaky power characteristics; needs to be stripped once a year.

■ Full road tune with big bore. As above, but with softer road cams, bored-out cylinders and Honda +1 pistons. Mike also strengthens the conrods to better cope with bigger pistons. Estimated 110bhp with strong, healthy midrange, needs stripping every 40,000 miles.

PISTONS

■ Honda +1 pistons £44.85 each (you need four), rings £26.63 a set (you need four sets), £400 fitted, Mike Smith Tuning (0208 6600 939).

■ Wiseco +2 pistons, £517 including rings for four pistons, £600 fitted, Mike Smith Tuning (020 8660 0939).

Transmission

■ Rental Hornet 14-tooth front sprocket, £16.17, B&C Express (01522 791369).

■ Rental Hornet 45-tooth rear sprocket, £23, silver alloy or hard anodising, £26.32, B&C Express (01522 791369).

■ Rental 520 chain, from £47.19, B&C Express (01522 791369).

■ EBC heavy-duty clutch springs, £8.23, Demon Tweaks (01978 664474).

■ MIL quickshifter, shift light and gear position indicator, £416.18, MIL (01455 250220).

BRAKES

Carbon Lorraine SBK3, £21.95 per set, Demon Tweaks (01978 664474).

EBC Kit pads, £35.25 per set, EBC Brakes (01604 583344).

Honda CBR600 pads, £15-22 pair, Bransons (01935 474998).

Braided lines. Choose from Goodridge (01392 369090), HeL (01392 811601), Earl's Performance (01803 869850).

PFM six-pot caliper kit, includes caliper, cast discs, brake lines and pads £999, Demon Tweaks (01978 664474).

AP Racing fully-adjustable master cylinder and lever, from £368, Demon Tweaks (01978 664474).

Exhausts

Micron end-can, £300 oval carbon, £300 oval titanium, BSD (01722 223377).

Micron stainless downpipes, £279.95, Demon Tweaks (01978 664474).

Arrow end-can, £253.80 round, £305.50 carbon oval aluminium, BSD (01733 223377).



Kawasaki ZX-6R

Typically strong Kwak engine, with typically soft suspension make the 6R a tuning delight

A true jack of all trades as a sportsbike and an occasional master of one – the 600 class. When Kawasaki eventually tired of the cut throat world of 600s, it made the bike 636cc. Whatever, the ZX-6R is a great bike in all its incarnations. A long-standing favourite of PB.

From the first F1 model Kawasaki meant business, building an instant CBR6 beater, with close on 95bhp (and close to 100bhp from the later G model). Then as the 1990s closed the ZX-6R began to be viewed as a softer option.

Exploit that oomph a little more low down with a tooth off the front sprocket. Ditching the standard system in favour of a race systems is a good move too, but get the fuelling sorted to match. There's plenty of flesh on the bone of the cylinders if you want to go big bore, but then it's already done for you with the 636.

Early bikes suffered from warped brake discs, but from 1998 on a different, peerless set up with six-pot Tokicos was fitted. Braided hoses and regular pad and fluid changes are all that are needed here to keep them tip-top.

Rear shocks are average but can be rebuilt, or better still replaced with aftermarket units. Front end ain't bad, but go for a revolve if you can't set it up to suit you.



HONDA SP-1

MODELS



ZX-6R F1 - F3
1995 - 1997
95bhp and 160mph



ZX-6R G1 - G2
1998 - 1999
Class leading light chassis



ZX-6R J1 - J2
2000 - 2001
Branded the all-rounder

TUNING BITS

CHASSIS TUNING BODYWORK

- Top and bottom fiberglass race fairing, £135, PRF (0151 5200 110)
- Glassfibre race seat unit, £80, PRF (0151 5200 110)
- BSD crash bungs, from £35.25, BSD (01733 223377)
- Race Products crash bobbins, £36.84, Demon Tweaks (01978 664474)
- NRC engine covers, £186.85 a pair, Demon Tweaks (01978 664474)
- Rear hugger, £67.46 colour matched, £62.75 gloss black, Pyramid Plastics (01427 612536)

CHASSIS

- Valtor Moto rearsets, from £115, PDQ (01628 667644)
- Valtor Moto clip-ons, from £110, PDQ (01628 667644)
- Gilles rearsets, £275, Performance Parts (01788 869100)
- BSD rearsets, from £250, BSD (01733 223377)
- Footrest jack-up plates, from £49.95, NWS (01992 501285)
- Harris GP clip-ons, £117.50, Harris Performance (01992 532500)
- Gilles adjustable clip-ons, from £184, Performance Parts (01788 869100)
- Race Products clip-ons, £35.16, Race Products (01673 842704)

- JMC swingarm, units for both road and race, made from high strength aluminium alloy, for all versions of ZX-6R, from £380, JMC Engineering (0151 546 0604)
- WP 916-style steering damper, £279 WP (01507 327509)

FORK LEGS

- Front fork conversion, replace springs, pistons, valve assembly and shim stacks, £329, Performance Techniques (01462 673030)
- K-Tech 25mm Superbike cartridge, £1057, MSS-Performance (01255 863939)
- Maxton front fork conversion, including spring bump stops and damping needle, £146.80 (01928 740531)

REAR SHOCK

- Service standard shock, £70.50, Performance Techniques (01462 673030)
- Rear spring – around £55.22, Performance Techniques (01462 673030)
- Maxton bespoke rear shock, £480, Maxton (01928 740531)
- WP competition rear shock, £564,

- WP Suspension (01507 327509)
- Fully adjustable Ohlins monoshock, revalved by K-Tech, £709, MSS Performance (01255 863939)

WHEELS

- Three-spoke racing magnesium Dymag wheel, £438 front, £624 rear, Dymag UK (01249 655481)
- Five-spoke sport magnesium Dymag wheel, £459 front, £672 rear, Dymag UK (01249 655481)
- Three-spoke Carbon composite Dymag wheel, front £1337, rear £1619, Dymag UK (01249 655481)
- Three- or five-spoke magnesium Marchesini front wheel, £560, rear wheel, £770, Harris Performance (01992 532500)

BRAKES

- PFM Supersport front disc, £175, Demon Tweaks (01978 664474)
- Wave brake disc, £176.02, Demon Tweaks (01978 664474)
- AP Racing six-piston caliper, £350.36, Demon Tweaks (01978 664474)
- Spiegel eight-piston calipers for all versions of ZX-6R. Kits include new discs, hoses and mounting plates. £1200, PDQ (01628 667644)
- Bendix brake pads, from £18.39 a

- pair, Demon Tweaks (01978 664474)
- Ferodo brake pads, front £15.23 a set, rear £14.10, Lintek Gleave (01522 888444)
- Braided lines, choose from a variety of materials, looks and fittings from Earl's Direct (01803 869850), HEL (01392 811601) or from Goodridge (01392 369090)

ENGINE TUNING TONY SCOTT RACE TUNE

Tony squeezed 123bhp (claimed) out of top Irish racer Ryan Farquhar's ZX-6R and for £2165 he'll do the same for your bike. Tony says: "FIM rules dictate what you can and cannot do to the engine. All the work is in the head – you can't touch the bottom end. So I gas flow the head, raise compression, machine the valve seats back, slot in the kit cams [Tony will re-profile the kit camshafts to his own specification], and fit my own valves and retainers. What you get is a very reliable, strong little engine."

If you don't have to comply to FIM rules, Tony says the correct way to do it is to machine the pistons and piston pockets rather than the valve seats (01772 423614). That won't be so expensive either, so just imagine what power you could coax out of a 636. Your mates would struggle to keep up on litre class tackle...

NICK MORGAN ENGINE TUNE

Nick Morgan is the UK's top ZX-6R tuner. He's responsible for setting up the British Supersport Kawasaki team bikes (see trick bikes). By using Kawasaki kit parts, his race bikes kick out anything between a claimed 118-122bhp, and he'll do the same for your bike.

Tuning work includes: race oil pump kit, gas flow head, re-cut valve seats, race cams, valve spring set, head gaskets to raise compression, Akrapovic Evo full system. Around £1000 plus parts. Call Nick at MSS Performance on 01255 863939 to discuss a combination of parts and labour to suit your bike and needs.

KAWASAKI KIT PARTS

You can get hold of a factory race kit with some choice stuff for top end power boost and chassis tuning. Kit parts include: race cams (£465), valve springs (£141), carb internals (£305), head gasket, tensioners and cam wheels (£235), ignition system (£629), clutch springs kit (£17), close ratio gearbox (£1015).

All parts available from MSS Performance (01255 863939). Replica kit parts are also available from Kawasaki tuners.

TTS TUNING

Tuning specialists, TTS (01327 858212) perform various stages of a road tune

(resulting power measured on dyno without airflow):

- Stage one. Dynojet, K&N filter and race can/full exhaust system. Expect 5-6bhp gain (around 100bhp, depending on engine model), but main benefit is throttle response and a smooth power curve. £293.75.
- Stage two. All the above plus gas flowed head and full race exhaust. 106+hp. £900. For an additional £235, TTS will regrind the standard cams to a race kit profile.
- Stage three. TTS fit American made, JE 654cc big bore kits. Bore standard liner to 654cc for JE high compression piston kit, plus all of the above. Expect around 118bhp (dyno without airflow); TTS saw this power output on a Y2K ZX-6R with a full Yoshimura exhaust system. £1500.

BREATHE EASY

- Dynojet kit, £89, B&C Express (01522 791369)
- K&N airfilter, from £58.69, B&C Express (01522 791369)
- Pipercross airfilter, £58.16, Pipercross (01604 494945)

RADIATOR

A tuned engine will always run hotter than standard – this means loss of power and a potential blow-up. Pace Products make an aftermarket, oversized radiator to keep the temperature down.

It'll also accept the standard fan. £481.75. They also do an oil cooler for £193.80, Pace Products (01440 760960)

END CANS AND FULL SYSTEMS

- Akrapovic factory Evolution full titanium system, £1233, MSS Performance (01255 863939)
- Akrapovic titanium end can, £334, Performance Parts Ltd (01788 869100)
- Yoshimura titanium full system, £998.51. Titanium end can only, £443.47, Phoenix Distribution (0870 220 3700)
- Devil end can, from £256, Automotif (0161 743 9370)
- Micron race end can, alloy round, £169.95, carbon round, £239.95, Feridax (01384 413841)

TRANSMISSION

- Heavy duty clutch springs, £11.75, TTS (01327 858212)
- Renthal front sprocket, from £16.16, B&C Express (01522 791369)
- Renthal rear sprocket, from £17.97, B&C Express (01522 791369)



Honda SP-1

The SP-1 was built to see off Ducati in WSB, and it remains a highly tuneable HRC jewel

If racetrack success translates to showroom sales success, then Honda bosses must have spent some time looking somewhat bemused at boardroom flipcharts. WSB success has done little to make the SP a big seller.

What the Honda is, is a classy HRC-loaded superbike, and there's plenty of potential there for the determined and discerning rider. Straight out of the crate you've got nearly 122bhp from an engine that revs higher and faster than any of the V-twin competition of its day. With a slip-on can a Power Commander and freer-flowing airfilter you'll get 128bhp. Set up right you'll also go a long way to curing glitchy fuelling.

A notchy box won't improve with age, but good oil changed often will keep the clutch at its best. Lowering the final gearing will mean you have to give the clutch less punishing slip on take off.

SP-1s tend to use a lot of oil, perhaps down to big pistons in ceramic bores, so keep an eye on the level.

Biggest criticism is reserved for the suspension, which really needs to be reworked or replaced to suit the rider for the road.



HONDA VFR400/RVF400

TRICK SP-1s



Yanky SP-1
134bhp
Sato system
PVM wheels
HRC pistons



Stealth SP-1
146bhp
153kg wet
HRC engine
all-carbon



Race SP-1
155bhp
Moriwaki tuned
HRC kit parts
Penske shock

TUNING BITS

CHASSIS TUNING

THORSTEN DURBAHN
■ German enthusiast Thorsten knows his stuff when it comes to VTR1000 SP-1s. He's engineered special one-off parts for the bike, some of which are listed here. Check out www.hondarc51.de

BODYWORK

- Crash bungs, £67.50, PDQ (01628 667644)
- Centre-mounted crash protectors, £56.89, Thorsten (0049 4120 708991)
- Rear hugger, £132.50 carbon, £82.95 colour, NWS (01992 501285)
- Glassfibre fairings, £175, Race Products (01673 842704)
- Glassfibre single-seat unit, £75, Race Products (01673 842704)
- HRC fairing re-designed to fit stock RC51, £250, Thorsten (0049 4120 708991)

FORKS

- Front fork tune, complete revalve and respring to suit rider, £265, Revolution (07970 915259)
- Oilins front fork revalve and respring kit, £277 fitted, Harris Performance (01992 532500)

REAR END

- Fully adjustable bespoke Revolution/Penske rear shock, as used by race

- teams, £490, Revolution (07970 915259)
- Fully adjustable Maxton shock, supplied to suit rider, £558, Maxton (01928 740531)
- Full competition bespoke WP shock, £564, WP Suspension (01507 327509)
- Moriwaki race linkage, £285, Revolution (07970 915259)

BRAKES

- Braided steel brake lines – choose from Goodridge (01392 369090), Spiegler (PDQ, 01628 667644), HeL (01392 811601) and Earl's (01803 869850)
- For two-line brake system: two steel hoses with protective covering, including all fittings, £52.28. Rear brake line kit: £25.20. Earl's (01803 869850)
- OE Honda pads, £22.82 per pair, Bransons (01935 474998)
- Bendix brake pads, £18.49, Bransons (01935 474998)
- Carbone Lorraine brake pads, £24.95 per pair, PDQ (01628 667644)

CHASSIS

- Adjustable Moriwaki rearsets, £295, Revolution (07970 915259)
- Adjustable Gilles rearsets, £275, Demon Tweaks (01978 664474)
- CTS Quickshifter for RC51 SP-1, Thorsten (0049 4120 708991), £353
- Moriwaki clip-ons, £140, Revolution

(07970 915259)

- PHD Race Products clip-ons, £166.13, Demon Tweaks (01978 664474)
- Gilles clip-on handlebar kit, £184, Demon Tweaks (01978 664474)
- Adjustable Scotts steering damper kit, £420, Rheencullen (01455 890345)
- Oilins steering damper complete kits, £382, Harris Performance (01992 532500)

WHEELS

- Dymag Sport five-spoke magnesium, £1214, Dymag UK (01249 855481)
- Dymag three-spoke custom carbon £1719, (carbon rim and magnesium centre), Dymag UK (01249 855481)
- PVM racing six-spoke wheel, £1198.50, Demon Tweaks (01978 664474)
- Marchesini five-spoke magnesium, £1300.30, Harris Performance (01992 532500)
- Marchesini 10-spoke forged aluminium, £1350, Harris Performance (01992 532500)

Chain and sprockets

- Rental front sprocket, 16/40 teeth option, £16.17, Demon Tweaks (01978 664474)
- Rental rear sprocket, 40/42 teeth option, £23.07, Demon Tweaks (01978 664474)
- DID lightweight chain and sprocket kits, £109.77, Demon Tweaks

(01978 664474)

ENGINE TUNING

HRC subcontracted Moriwaki to do most of the R&D work on the RC51. But with R&D now focusing on the V5s in Japan, development on the RC51 has come to a halt. As far as SP-1 tuning goes, Revolution's Roger Ditchfield (pictured) is the man. He's been involved in racing for more than 30 years and has built RC51 race bikes that are used all over the world. The most he got out of a stage three tuned SP-1 is 155bhp from the rear wheel (the bike was stolen, so work was never completed). Parts used comprised a combination of HRC and Moriwaki, many of which are available only to a selection of race teams. Moriwaki squeezed 162bhp at the rear wheel out of the RC51 raced at the Suzuka 8 Hour.

Alternatives to HRC and Moriwaki kits are scarce – few aftermarket firms bothered with the SP-1 because of the low numbers sold and its dubious future. Roger says Moriwaki developed the most successful aftermarket tuning parts. You can get hold of a selection of high compression pistons, conrods and airboxes. After this, it's the HRC fuel injection parts you want – but they cost a mint and come with a heavy maintenance schedule.

■ Stage one: road and trackday use –

135bhp-138bhp at the rear wheel (with slip-on or full system). Moriwaki stage one camshafts fitted into ported and gas-flowed cylinder heads, polished valves and top end blue print, £1450. ■ Stage two: dedicated trackday bike, twins racer and endurance racer – 147bhp-150bhp at the rear wheel. This tune carries a maintenance and parts replacement schedule. Moriwaki stage two camshafts fitted into ported and gas-flowed cylinder heads. Polished valves and full engine blue print including crankshaft lightening and balancing. Moriwaki valve spring kit, HRC H/C pistons, Moriwaki air funnels, Moriwaki C/F front air scoop and pressurised airbox, Moriwaki mapped PC3R, Moriwaki full exhaust, £6500. Parts for the ST2 tune are available separately but are less beneficial when fitted in isolation. The ST2 tune is a concept that needs careful balancing to reach its full potential.

■ Stage three: superbike race spec throughout – 162bhp at the rear wheel. Carries intensive maintenance and parts replacement schedule. Price on application by well-funded race teams!

Roger will develop a parts package to suit the way you use your bike and your budget. Revolution (07970 915259)

FUELLING TWEAKS

- Power Commander IIIr, supplied not fitted, £335, PDQ (01628 667644)
- Power Commander IIIr supplied and

fitted, £310. Fitting only, £25. Revolution (07970 915259)

■ Fuel pressure equaliser: you need a £2.50 one-way valve plumbed into the top of your petrol tank, and a pipe fitted to the snorkel pressurising the fuel from the intake. £15 fitted, Revolution (07970 915259)

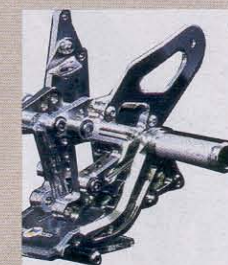
■ SP-1 specialists recommend Thorsten's airbox. It's a well-thought out solution and one of the best for increasing air capacity. Available glass/carbon/Kevlar with airfilter, from £236 (0049 4120 708991)

EXHAUSTS

- Moriwaki slip-ons, £595, Revolution (07970 915259)
- Moriwaki full system, £995, Revolution (07970 915259)
- Akrapovic titanium oval slip-on, £793, PDQ (01628 667644)
- Akrapovic full race system, £1209, PDQ (01628 667644)
- SR-Racing RC51, two-in-one full exhaust system, made in Germany, £549, Thorsten (0049 4120 708991)

COOLING

- HRC front rad conversions, £2600, Revolution (07970 915259)
- Thorsten front rad conversions, £1200, including new oil coolers and lines. Thorsten (0049 4120 708991)
- Moriwaki cooling fins, £220, Revolution (07970 915259)



Honda VFR/RVF400

Track tools in the right hands, Honda's mini superbikes can amaze with a few simple mods

If good things come in small packages, then the VFR400R NC30 and RVF400 NC35 are the finest repackaging exercises of all time, based on the RC30 and RC45 V4 superbikes.

A few NC30s were officially imported to the UK, but their high quality meant high cost and it was down to the parallel market to bring them in at the right price. When the RC30 was replaced by the RC45, the NC30 was superseded by the NC35. The newer bike had usd forks and handled better, but to meet Japanese legislation the carbs were smaller, cams were different, compression lower and consequently performance was down.

It's a lot easier to make an NC30 handle better than it is to make an NC35 go faster. You can get some of the power back by fitting NC30 carbs and fuel lines or an HRC kit, but tuning work is expensive and tricky on either bike. Your best of is for an extra 3-5bhp from an end-can and re-jet. Restricted models can be sorted with an aftermarket black box or the more expensive HRC one.

Shocks are too short, soft and close to the exhaust. Go aftermarket. Early NC30s (up to 1990) benefit from later internals. NC35s need a revalve and the forks will not fit on NC30s. RVFs will take SP-1 calipers and Firestorm discs will fit. Braided hoses are good on either and an easier fix.



SUZUKI BANDIT 1200

NC35/TRICK ONES



RVF400 NC35
1994-1998
Evolved to look like an RC45



HARVIEK
Fastest Honda in the BMCRC Supersport 400 Cup



FORTUNA
Nathan Buck's NC30 had modified everything



OLIVER NC30
ZXR400 usd forks, 6-pots, Koni shock, 70bhp

TUNING BITS



CHASSIS TUNING

- Double bubble screen, clear or tint £39.99, coloured £44.99
- Carbon yoke and instrument covers £26-£20
- Longer mirrors (which let you see past your elbow), £30
- Magic Mushrooms crash bungs, £19.99
- RP alloy rearsets, machined billet, £205, all via Elliott M/Cs, 01793 751752
- Carbon clock surround, £18.61, NC30 Owners Club, 01424 215566

BRAKES

- Goodridge hoses front 2 line, £36.43
- Goodridge hoses rear 1 line, £18.80
- EBC double H, £18.99 per pair
- Armstrong HH racing pads, £15 per pair
- EBC Proline brake disc, £127
- Goodridge brake disc, £146.82
- Nissin 6-pot calipers, £295
- Harrison 6-pot calipers, £295
- Wavy brake discs, £160 each front, rear coming soon, all via Elliott M/Cs, 01793 751752

BODYWORK

- Single seat unit, fibre glass with foam seat, £190
- Single seat unit, carbon fibre, £380
- Dual seat unit, fibreglass road type, £190

- Rear hugger, carbon fibre, £129.99
- Woven fibreglass 3 piece, £315, all via Elliott M/Cs, 01793 751752

REAR SUSPENSION

- If you are happy with your steering geometry as standard, MH Racing can service shocks using genuine Showa parts and uprate spring & damping for £182, MH Racing, 01225 811583
- Elliott M/Cs re-build NC rear shocks when knackered. They also make a new damper rod for it as part of the rebuild, so you can have a longer one made up to alter the ride height. £150. Elliott M/Cs, 01793 751752
- Maxton rear shock, £475, Maxton Engineering, 01327 858212
- WP rear shock with adjustable ride height, £582, MH Racing, 01225 811583

FRONT SUSPENSION

- Front fork conversion, £252, Maxton Engineering, 01327 858212

CARBON FIBRE

- Yoke cover, £1720
- Clock surround, £19.86
- Tank protector, £23.80
- Frame protectors, £59, all via Elliott M/Cs, 01793 751752

ENGINE TUNING

Want the ultimate engine job? Honda tuning guru, Tony Scott, is your man. He fettled the TT-winning NC30s of Carl Fogarty and Steve Hislop and squeezed 75bhp out of an NC30 with a range of HRC racing kits. Not bad for a 400. "The NC30's V4 is very awkward to work on, but it's also the most reliable engine in 400cc racing," he says. "Build quality is excellent. But if you want any significant gains from tuning you're gonna have to spend some serious money."

Tony says you should either go the whole hog with a full tune and blueprint (which will set you back £2,115 and give 68-70bhp) or not bother at all - anything less and you won't get your money's worth. He reckons over 70bhp is only achievable with the full HRC power up kit, which is no longer available.

Tony Scott, 01772 423614.

SPARK PLUGS

If you're using your bike as a track tool, change the plugs from ER9EH to ER10EH. NB: The tiny 8mm plugs are pricey, rare and need a special long-reach spanner (an 8mm tube spanner will do).

- Spark plug spanner, £13.11
- Spark plug NGK ER9-EH, £13.05
- Spark plug NGK ER10-EH, £14.85.

All available from the NC30 Owners

Club, 01424 215566

DERESTRICTORS

- Unleash an instant 16mph.
- HRC type speed derestrictor, £93.41
- Mechanical speedo converter and derestrictor, £29, incl. MPH dial, both Elliott M/Cs, 01793 751752.
- M-Max, £50 including fitting, Bat Motorcycles
- Speedbooster, £44.99, NC30 Owners Club, 01424 215566

ROAD ENGINE TUNE

- Stage 1: Carb mods and race can, £90 carb kit, £150-£300 for the can, £50 set-up and dyno time. Result: 64bhp and improved mid-range
- Stage 2: Heads ported and flowed, valve seats recut, combustion chambers modified to increase compression. £500-£600 if you send in the heads. Add £500 for ride-in ride-out. Result: stronger power curve, peaking at 68bhp-68bhp
- Stage 3: Camshafts reground. Cost £350-£400 exchange, plus a small charge for fitting. Result: more top-end. 68-70bhp, but at 13,500rpm instead of 12,000rpm
- Stage 4: 444cc big bore kit. Cost: £470 for pistons plus around £200 reboring work and the usual £400-£500 to rebuild the engine. Result: More power throughout peaking at 75bhp. Probably. All quotes from Stan Stephens

Performance Centra, 01732 760337

ENGINE KITS

- HRC Ignition Kit. A larger unit with a modified advance curve and higher rev limit replaces the standard black box and requires a special race wiring harness. It's designed to work with engine racing mods and supply is hit and miss. £90 and £350 respectively
- HRC jet kits, NC30/35, £130
- HRC velocity stacks, £40 for RVF, £60 for VFR
- HRC replica jet kits, NC30/35, £74.50
- HRC velocity stacks, £40 for RVF, £60 for VFR, all via NC30 Owners Club, 01424 215566
- FI International jet kit, £77.95, Elliott M/Cs, 01793 751752
- Carb jet kit, £89.99, NC30 Owners Club, 01424 215566
- Factory Pro Jet Kit, £83.44, NC30 Owners Club, 01424 215566
- Carb tuning kits, £77.94, Elliott M/Cs, 01793 751752

AIRBOX

- HRC style air box, £140
- HRC style air tray, £45
- UNI foam filter element, £15.
- Maximum flow air filter, std or HRC style airbox, coming soon, all via NC30 Owners Club, 01424 215566
- K&N used to make an airfilter, but the OE Honda item is so good that when

the big H dropped its prices from £80 to £20 K&N stopped making it. The NC30 Owners Club will supply an aftermarket airfilter if you want a washable item

REGULATOR/RECTIFIER

- Regulator/Rectifier, £50, Electrex, 01491 682369
- Regulator/Rectifier, NC30 Owners Club, 01424 215566. £85.80
- Regulator/Rectifier by Newtronics as converted by Rick Oliver, 01603 720387 (for a quote). Part supplied by M&P for £55, 06705 703030

CLUTCH

- HRC clutch plates, £78.68
- NC30 EBC friction plates, £41.60
- NC35 EBC friction plates, £39.75, all via NC30 Owners Club, 01424 215566

EXHAUST SYSTEMS

- Scorpion anodised race can, £196.15
- Scorpion titanium race can, £328.90. Both via NC30 Owners Club, 01424 215566
- MIG alloy race silencer, £268
- Art alloy silencer, £110
- Art carbon fibre silencer, £175.
- Over full race system, imported from Japan, £735. All via Elliott M/Cs, 01793 751752
- G-force road stainless, £155, Demon Tweaks, 01978 664474



Suzuki Bandit 1200

**Cheap to buy and cheap to sort
– tuning a Bandit 12 rewards
small outlays with huge grins**

Cheap, cheerful and with a bastard big motor nicked from the GSX-R1100M, the Bandit 12 has long been a favourite of home tuners and stunt monkeys. Look for signs of the abuse that the bike tends to encourage, but treated reasonably they're good for at least 50,000 miles without major problems.

There are big gains to be made from a can and air filter on early models – 10bhp with next to no effort or spend. Time on the dyno to sort fuelling will obviate any flatspots.

Overheating of the air/oil cooled motor can be a problem, but an extra fan or larger oil cooler will cure it. Scour breakers for a cooler and hoses from a 2001 model if yours is older.

Low gearing as stock lends the Bandit much of its brisk acceleration/wheeling character, the only thing you might want is a beefed up clutch diaphragm and springs.

Chassis is budget but the short wheelbase and wide bars mean that steering ain't bad. The soft rear shock will quickly have the Bandit dragging its arse on the floor like a spaniel bitch on heat. Bin and replace with something better. Soft forks dive under braking and compromise steering, so stiffer springs combined with a revalve, or at the very least thicker oil, are the order of the day. Half-faired S Bandits need this even more.



DUCATI 916

TRICK BANDITS



PHIL WOOD TURBO

First into PB's 200mph club with 201.3mph



HOLESOT TURBO

Turbo'd 1277cc Bandit with 265bhp



MRO BANDIT

Ohlins suspension, Renthals, can and filter

TUNING BITS



CHASSIS TUNING REAR END

- Maxton fully adj. shock £475.87, Maxton (01928 740531)
- Maxton fully adj. shock with remote reservoir & high/low speed compression (race only) £545.87, Maxton (01928 740531)
- Ohlins remote reservoir shock for 1996-2000 models: adj. compression & rebound, remote hydraulic preload £524, Harris (01992 532500)
- Ohlins piggyback shock for 2001 model: adj. compression & rebound, adj. ride height, remote hydraulic preload £611, Harris (01992 532500)
- Maxton linkage kit: raises ride height 25mm £35.25, Maxton (01928 740531)
- Fully adj. Penske shock. Two versions: a two-way adj. compression & rebound shock, mainly for road/light track use £490, or a three-way adj. for race only, high/low speed compression & rebound £695, Demon Tweaks (01978 664474)

FRONT END

- Ohlins fork springs inc. oil £28.41, Demon Tweaks (01978 664474)
- Race Tech fork springs £78.71, PDQ (01753 730043)
- Race Tech DIY revalve kit £114.55, PDQ (01753 730043)
- Hyper Pro Upgrade Handling Com-bikit, inc. fork springs & high viscosity fork oil £150, Performance Parts Direct (0114 2581 151)

- Maxton fork conversion: revalve & respring to suit rider £252.60, Maxton Suspension (01928 740531)
- Sprint steering damper: £52 fitting kit, £129.95 damper, Demon Tweaks (01978 664474)

BODYWORK

- Carbon hugger with chainguard £98, Harris (01992 532500)
- Carbon front mudguard £86, Bike Torque Racing (01373 464252)
- Head bumpers (crash protectors): 'Sausages' £49.50, 'Doughnuts' £24.75, NWS (01992 501285)

BRAKES

- AP superbike brake kit, includes 320mm front disc (standard Bandit 12 disc is 310mm), six-pot calipers, brake lines and fluid £1289.90, Demon Tweaks (01978 664474)
- PFM superbike kit, inc. the above £999, Demon Tweaks (01978 664474)
- Harrison Billet six-pot calipers £608, Demon Tweaks (01978 664474)
- Braided steel brake lines: choose from Goodridge (01932 369090), Spiegler (01753 730043), HEL (01932 811601) & Earls (01803 869850). Prices start at around £20
- Carbon Lorraine SBK pads £49.89, PDQ (01753 730043)
- Performance Friction pads £61.34, PDQ (01753 730043)
- EBC HH front & rear brake pads £14

each, Holeshot Racing (0113 2576644)

CHASSIS

- Harris adj. rearsets, polished or anodised £252, Harris (01992 532500)
- Gilles adj. rearsets, gold or titanium £275, Performance Parts (01788 869100)
- Jack-up plates, brushed £49.95, polished £57.45, NWS (01992 501285)
- Renthal 'Ultra Low' ally anodised bars £41.85, NWS (01992 501285)
- Anodised nuts and bolts for engine, fairing and fuel tank kits. Oil filler cap £10.50, sprocket nuts and bolts £12.99, fuel cap kits £5.60, engine kits £20, anodised brake reservoir caps £20, Demon Tweaks (01978 664474)

WHEELS

- Marchesini forged 10-spoke mag £1937.50, cast five-spoke £1562.75, Harris (01992 532500)
- Dymag three-spoke mag £1163.25, three-spoke carbon £2994, Harris (01992 532500)
- PVM six-spoke cast ally (track only) £1198.50, forged five- or 10-spoke ally £1821.70, Demon Tweaks (01978 664474)

ENGINE TUNING END CANS

- G-Force titanium round £240, oval £275, AR Motorcycles (01502 516055)
- Micron, alloy round £169, oval titanium

£299, Demon Tweaks (01978 664474)

- Ixi carbon round £179, Ixi Titanium round high level £279, Demon Tweaks (01978 664474)
- Devil tuning double: Devil carbon, two cans on one side £497, Automotif, (0161 7439370)

FULL SYSTEMS

- Expect around 22+bhp with a properly set-up full system exhaust (including Dynojet kit + K&N filter)
- Akrapovic full system, titanium and carbon oval £529, AR Motorcycles (01502 516055)
- Yoshimura full system, oval stainless £695, Demon Tweaks (01978 664474)
- Micron stainless steel headers, choice of silencers, fits all makes £241, Demon Tweaks (01978 664474)

TUNING

- High lift cams, 130bhp, 82ft-lbs torque £380. What you'll get: exchange high lift cams, labour to strip and rebuild, dial in cams, set valve clearances, fit clutch, Holeshot Racing (0113 2576644)
- Gas flowed head, cams: 140bhp, 85ft-lbs torque £935. What you'll get: gas flowed head including three angle cut seats and skimming, exchange high lift cams, slotted cam sprockets, gaskets, heavy duty clutch diaphragms, billet cam chain tensioner, labour to

- strip and rebuild, dial in cams, set valve clearances, fit clutch, Holeshot Racing (0113 2576644)
- 1216cc big bore, gas flowed head, cams, 150bhp, 92ft-lbs torque £1300. You'll get: Wiseco 1216cc piston kit, cylinder block boring and honing, gas flowed head including three angle cut seats, exchange high lift cams, gaskets, heavy duty clutch diaphragms, labour to strip and rebuild, dial in cams, set valve clearances, fit clutch, Holeshot Racing (0113 2576644)
- 1277cc big bore, gas flowed head, cams, 160bhp, 95ft-lbs torque £1800. You'll get: Wiseco 1277cc piston kit; Wiseco oversize cylinder liners; new liners and cylinder block boring and honing, crankcase mouth boring, gas flowed head including three angle cut seats, exchange high lift cams, gaskets, heavy duty clutch diaphragms, labour to strip and rebuild, dial in cams, set valve clearances, fit clutch, Holeshot Racing (0113 2576644)
- 1340cc big bore, gas flowed head, cams, 170bhp, 100ft-lbs torque £2000. You'll get: Wiseco 1340cc piston kit, Wiseco oversize cylinder liners, fit new liners and cylinder block boring and honing, crankcase mouth boring, heavy duty cylinder studs, gas flowed head including three angle cut seats, exchange high lift cams, heavy duty valve springs, gaskets, heavy duty clutch diaphragms, labour to strip and rebuild, dial in cams, set valve clearances, fit clutch, Holeshot

Racing (0113 2576644)

CLUTCH

- EBC heavy duty clutch kit (SRC) £92.65, Demon Tweaks (01978 664474). Plates only.
- Heavy Duty Clutch Diaphragms £25, Holeshot Racing (0113 2576644)
- Barnett clutch conversion £150, Dynospeed Developments (020 8500 5770)

NITROUS OXIDE

A one-stage progressive nitrous will give instant 290bhp to a Bandit that's had only minor fuelling tweaks to fit £1200, including the Barnett clutch conversion, a necessary mod. Alternatively, try the simple single stage one nitrous kit: £750 will give 210bhp at the back wheel. Dynospeed Developments (020 8500 5770)

TURBO

A blow-through turbo will give a Bandit 1200 300bhp at 18psi boost, at a ride-in, ride-out cost of £2800 + £700 labour. Turbo kit includes: turbo to suit individual models, intercooler, full exhaust system with manifold headers and exit pipe work, Akrapovic titanium or carbon end can, pressurised airbox, air filter, all hoses, boost gauge, adjustable wastegate, fuel pump, fuel regulator and dump valve. Holeshot Racing (0113 2576644)



Ducati 916/996

Ducati's beautiful 916 formed the basis of their race ambitions – and is no stranger to tuning

Stunning the world takes some doing. But Ducati did it with the 916 in 1993.

Promises of racetrack performance from the 8-valve V-twin and steel trellis chassis came true on its eventual release in '94. The last model to be produced was the 998. Seeing as Ducati produced so many Limited Edition models, the rarest model is probably a standard one that's never had an electrical fault (!). So check you're not about to buy a Biposto that's been converted into a Ltd Ed machine boasting Termignoni cans and a single seat... The front end is superb and only spoiled by a lack of steering lock. A steering damper was fitted as standard, non-adjustable on standard Bipostos, Ohlins on others, so take note. The later high spec 998 came with titanium nitrided forks.

The finish of a Ducati is no different to Japanese tackle, the paint's thick, body panels don't split and fastener coating only comes to grief if the bike's uncared for.

Early engines were criticised for poor reliability and tuning is expensive. Blue smoke from the pipes usually means worn rings/bores. Misfires can be electrical but are sometimes blown head gaskets. Tuning options are available though, lots of them.



KAWASAKI ZX-7R

MODELS



TECMOTO996
The parts alone on Tecmoto's special cost £12,998



MONSTER S4
Another Ducati special using the 916 motor. 108bhp. Nice



BAYLISS REP
After taking the WSB title in 2001, Ducati produced these

TUNING BITS

CHASSIS TUNING REARSETS

■ Ducati Performance adjustable: £359.65, (0845 1222996 for stockists)
■ Harris adjustable: £296, (01992 532500)
■ Promach Engineering adjustable: £340, (01455 213233)
■ Gilles adjustable: £290, Performance Parts (01788 869100 for stockists)
■ Robby non-adjustable: £175, Busters (08702 412040)
■ Valter Moto non-adjustable: £115, PDQ (01753 730043)

FRONT SUSPENSION

■ Revolve/respring: £252.62, Maxton (01928 740531)
■ Ohlins springs: £70, revolve kit: £213, labour: £130, Harris (01992 532500)
■ RaceTech springs: £78.71, revolve kits: £114.55, PDQ (01753 730043)
■ Springs: £49.93, revolve: £76.37 (not inc. parts), K-Tech (01530 810825)
■ Revolve/respring: £293, MH Racing (01225 811583)
■ WP springs: £70.50, WP Roma USD 43mm road forks, fully adj. inc. yokes: £1410, WP 50mm race forks with radial brake mounts: £4112.50, WP UK (01507 327509)

REAR SUSPENSION

■ Respring: £58.75, Maxton shock: £558.12, revolve: £88.12, Maxton (01928 740531)

■ Ohlins spring: £36.42, shock: £404, Harris (01992 532500)
■ Fully adj. Penske shock: £489, Demon Tweaks (01978 664474)

■ Spring: £49.93, Technoflex shock: £448.50, K-Tech (01530 810825)
■ WP spring: £56.75, shock: £564, WP UK (01507 327509)
■ Fully adj. shock: £560.37, Hyperpro (01392 444465)

■ Revolve: £185, spring: £75, shock: £410, MH Racing (01225 811583)

WHEELS

■ Marchesini 5-spoke: £1329 (x2), Harris (01992 532500)
■ Magnesium 3-spoke: £1135, 5-spoke: £1184, carbonfibre 3-spoke: £1689, Dymag Racing (01249 655481)
■ PVM 5-spoke mags: £1006, Demon Tweaks (01978 664474)
■ OZ forged alloy: £1259.60, BSD (01733 223377)
■ Marchesini 10-spoke: £1350, TecMoto (01708 726588)
■ Marvic Penta 2 5-spoke: £1075, QB Carbon (01159 894468)

STEERING DAMPERS

■ Ohlins: £242, Goldline: £123, Harris (01992 532500)
■ Toby: £180, Busters (08702 412040)
■ Sprint: £129.95, Perf. Parts (01788 869100)
■ WP: £176.25, WP (01507 327509)

■ Hyperpro: £153.69, (01392 444465)

BODYWORK

■ Carbon headlight bracket: £274, TecMoto (01708 726588)
■ Fibreglass race fairing: £378.30 (road: £288.30), carbon race seat: £220.16 (road: £240), Harris (01992 532500)
■ Corse-style GRP fairing: £190 (white) or £250 (col), race seat £85/150 (white/cols), Replica
■ GRP body kit with screen and all decals £599 (road version £650), Vimori Racing (01422 242222)
■ Corse-style carbon fairing: £797.82 (GRP red/yel: £411.25), race seat: £269.49 (GRP: £159.50), carbon airbox: £336, QB (01159 894468)
■ Race Prods race fairing: £217, seat: £100, Demon Tweaks (01978 664474)
■ Powerbronze double-bubble cl/tint: £39.95 (col: £44.95), Busters (08702 412040)

BRAKES

■ PFM six-pots: £999.99, Perf. Parts (01788 869100)
■ AP Racing six-pots: £1258.43, Harris (01992 532500)
■ Spiegler eight-pots: £830, PDQ (01753 730043)

SWINGARM

■ Magnesium swingarm including full

hub assembly: £1390, TecMoto (01708 726588)

ENGINE TUNING

We all want more, don't we? It seems not in 916-world. Of all the 916-998 owners we spoke to 76% would be quite happy with a set of cans (Termignoni of course) and a fuel upgrade chip for the ECU. This should get you 5-8bhp on a 916, 8-11bhp on a 996. But other goodies you could have include:

FUEL TANKS

■ 24-litre alloy tank: £599, Harris (01992 532500)
■ Carbon/Kevlar pre-preg fuel tank: £1100, TecMoto (01708 726588)

END CANS

■ 916/996 Termignoni carbon complete with 50mm intermediate pipes: £1043.70, 916 45mm carbon: £704.50, Ducati Performance (0845 1222996) –
■ Akrapovic carbon or titanium slip-ons: £735, Performance Parts (01788 869100)
■ Sil Moto 45/50 titanium or carbon: £550, TecMoto (01708 726588)
■ Shark oval carbon, dual-outlet end-cans: £599, modded fuel chip: £60, Performance Parts Direct (0114 2581151)

FULL SYSTEMS

■ 998S 54mm full race system with carbon cans: £1961.90, Ducati Performance (0845 1222996)
■ 916-996 Akrapovic titanium Evolution 2-2 conical full system: £1547, Performance Parts (01788 869100)

CLUTCHES

■ Barnett Kevlar clutch kit: £158, PDQ (01753 730043)
■ Oversize clutch slave cylinder: £105.75, STM slipper clutch: £640, 48-teeth clutch plate set: £125, STM Racing clutch: £956, titanium clutch plate set: £206, TecMoto (01708 726588)

AIR FILTERS

■ ITG race air filters: £64.63, BSD (01733 223377)
■ Pipercross free-flow filter: £38.50, Demon Tweaks (01978 664474)



Kawasaki ZX-7R

A mid-90s icon and still a fine bike today, the 7R can hang with modern stuff if tweaked

Kawasaki have knocked out ZX-7Rs since 1996 and there's still a few no-milers in showrooms today. While everyone else busied themselves updating their models year-on-year, Kawasaki quietly set about selling shedloads of 7Rs – a hardcore, cutting-edge, three quarter litre class leader in its heyday, now sadly being shown a clean pair of heels by modern 600s.

So why the enduring attraction? The 7R is proper fast in the right pair of hands and can still mix it with modern tackle due to its all-conquering front end. The single most effective tweak for the 7R is to fiddle with the ride height adjuster on top of the rear shock. As standard, it's wound down as low as it can go, but raising it 8mm or so transforms the steering.

Standard pads work best for all-round use. Carb icing is the 7R's arch enemy. A fuel additive like Silkolene's ProFST solves the problem. The engine, clutch and transmission are widely regarded as bombproof. Adding a tooth or two to the rear sprocket should freshen it up a little. If you're worried about weight, the over-engineered Kwak can shed a few pounds by fitting a full race system, lightweight wheels and race bodywork.



YAMAHA YZF-R1

SPECIAL 7Rs



2000 WSB
Yanagawa's bike had 168bhp, Ohlins, Brembo



TT RACER
Bob Jackson's 1996, Tony Scott-tuned IOM race bike



2002 WSB
Chris Walker's WSB bike had a factory motor, Akra, Ohlins



PDQ SPECIAL
Carbon bodywork & wheels, Ohlins, Dynmag Spiegler brakes

TUNING BITS



CHASSIS TUNING FORKS

- Ohlins fork springs: £71.40, Harris (01992 532500)
- Race Tech fork springs: £78.71, PDQ (01753 730043)
- Race Tech DIY revalve kit: £122.19, PDQ (01753 730043)
- Complete revalve and respring to suit rider: £230, Maxton (01928 740531)

REAR END

- Respring standard shock: £58.75, Maxton (01928 740531)
- Revalve and respring standard shock (for earlier ZX-7Rs): £146.86, Maxton (01928 740531)
- Fully adjustable Ohlins shock with remote preload adjuster: £583.99, Harris (01992 532500)
- Fully adjustable Penske 8981 series shock: £490, Demon Tweaks (01978 664474)
- Fully adjustable Maxton shock, supplied to suit rider: £558, or £705 with remote preload adjuster, Maxton (01928 740531)

BRAKES

- Braided steel brake lines – choose from Goodridge (01932 369090), Spiegler (PDQ, 01753 730043), HEL (01932 811601) and Earls (01803 869850). Prices start at around £20 a line, depending on choice of fittings.
- Afam race/track day/fast road use

pads: £24.92 a pair, Bike Torque Racing (01373 464252)

- Performance Friction brake pads. BSB and WSB Championship winning pads: £35.84 a pair, PDQ (01753 730043)
- PFM superbike conversion kit: £999, Demon Tweaks (01978 664474)
- Spiegler (say it "Shhppeegler") brake conversion kit with 8-pot calipers: £875.66 retaining standard discs, £1242.65 with Spiegler's own ductile iron discs, PDQ (01753 730043)
- AP Racing brake conversion kit: £1258, Harris (01992 532500)

CHASSIS

- Frame alignment check: £40-50, Python Motorcycles (01733 205552)
- Footrest jack-up plates: £66, NWS (01992 509900)
- Adjustable rearsets, polished or anodised: £252.92, Harris (01992 532500)
- Gilles adjustable rearsets: £265, Performance Parts Ltd (01788 869100)

WHEELS

- Dynmag sport magnesium 5-spoke wheels: £918 a pair, Harris (01992 532500)
- PVM Racing 8-spoke cast magnesium wheels (for track use only): £1198.50 a pair, Demon Tweaks (01978 664474)
- Marchesini 3 or 5-spoke wheels: £1329.99 a pair, Harris (01922 532500)

- Pair of Dynmag Custom Carbon 3-spoke wheels with carbon fibre rims: £1585.99 a pair, Harris (01992 532500)

BODYWORK

- Crash bungs: £52.86, Harris (01992 532500)
- Fabbri double-bubble screen: £49.95, Motrax (01933 418414)
- Lightweight exhaust hanger bracket (bye bye pillion pegs): £38.25, Harris (01992 532500)
- Colour matched tail guard: £55, Powerbronze (01903 783222)
- Carbon hugger with chainguard: £125, NWS (01992 509900)
- Race Products race/track day seat unit: £108.83, Demon Tweaks (01978 664474)
- Carbon front mudguard: £119.59, Harris (01992 532500)
- Harris race seat unit: £120, Harris (01992 532500)
- Race Products race/track day fairing: £234.41, Demon Tweaks (01978 664474)
- Harris race fairing: £257.80, Harris (01992 532500)

ENGINE TUNING END CANS

- Bil round aluminium race can: £129, Demon Tweaks (01978 664474)
- Devil oval aluminium race can: £287,

Automotif

- (0161 743 9370)
- Micron oval carbon Beta race can: £299.95, Demon Tweaks (01978 664474)
- Leo Vinci oval race can in carbon or titanium: £371, Tran Am (01425 620580)
- Tweak the fuelling and set-up on dyno: around £90, BSD (01733 223377)

FULL SYSTEMS

- Expect around 8-10bhp extra with a properly set-up race pipe. You'll need to invest in some dyno time though
- Micron Zeta race system with round carbon can: £539.90, Demon Tweaks (01978 664474)
- Arrow full race system with carbon can: £575.25, B&C Express (01522 791369)
- Akrapovic Sports Production stainless system with titanium can: £584, Performance Parts Ltd (01788 869100)
- Hindle stainless race system with titanium oval can: £600, PDQ (01753 730043)
- Akrapovic Race Conical stainless system with titanium can: £689, Performance Parts Ltd (01788 869100)
- Leo Vinci full race system with carbon or titanium can: £784, Tran Am (01425 620580)
- Akrapovic Evolution full titanium

system, for use with full-on race motors only: £1375, Performance Parts Ltd (01788 869100)

- K&N high-flow air filter: £52.73, PDQ (01753 730043)
- Pipercross full-flow foam air filter: £275.00, Pipercross (01604 494945)
- Dynojet kit: £88.64, PDQ (01753 730043)
- Fit Dynojet kit and set-up on dyno: around £120, BSD (01733 223377)

TUNING

- After bolt-ons and fuelling tweaks, you'll be wanting a spot of proper tuning.
- Gas flow the head and up compression, for a handy 8bhp boost: £388 (plus £588 to drop, strip and rebuild the motor if you don't fancy it yourself), TTS (01327 858212)
- Bore standard liner to 770cc, for high compression piston kit: £1175 for ride in, ride out fitting, TTS (01327 858212)
- As above, but with gas flowed head higher lift cams fitted: £1960, TTS (01327 858212)
- With a bit of work, the old ZX7R's motor can be dropped in to the 7R's cases, and the longer stroke (along with a thicker head gasket) ups capacity to 793cc. What you've got there is a ZX-8R. With different cams and a bit of gas flowing, you're up to 130bhp at the wheel. Around £1900 all-in, depending on final engine spec. Ray Stringer Racing (01455 213455)
- The big one: bore out standard liners

and fit ZX7R50 crank, upping capacity to 836cc, gas flow head, fit 'fast road' spec cams. The result? 145bhp at the wheel, with everyday usability. Around £2700, depending on final engine specification, Ray Stringer Racing (01455 213455)

CLUTCH

- EBC heavy duty clutch springs: £8.23, Demon Tweaks (01978 664474)
- EBC SRC Kevlar series heavy duty clutch springs and plates: £90.63, Demon Tweaks (01978 664474)

NITROUS OXIDE

- Somehow, the idea of fitting nitrous to a ZX-7R doesn't seem quite right. It'd probably be a hoot, though. If Nos appeals to some warped facet of your mind and you fancy having a go, you'll find a ride in, ride out service available for around £850 from Dynospeed Developments (0208 5005770).

TURBO

- We've never seen a turbo'd 7R before – again, it doesn't seem like quite the right thing to do to a 7R. However, if you fancy taking the less conventional route to big bhp, Holeshot Racing do offer a comprehensive ride in, ride out service for around £3500 (0113 257 6644).



Yamaha YZF-R1

1998 saw the R1 unleashed. When we'd all got used to the idea, we started tuning them...

Yamaha launched the R1 with one intention: to rock Honda's boat and knock the FireBlade off the sports bike top spot. And it did. R1's rule; they're lairy, hairy and not a little scary. That's why we love them.

Early bikes were subject to several factory recalls for problems with sidestand switches, radiator hose clamps, clutches, sprocket carriers and brake pads. Check the work has been done – the dealer will dot-punch the headstock near the chassis number after carrying out the work. If you're unsure, Yamaha UK (01923 358000) will happily check your bike's recall history.

The front end on an R1 is near spot on. The brakes are fantastic and don't need obvious improvement, the used Kayaba forks benefit from a respring and a revalve to make the bike turn-in quicker and stop it running wide. The engine is a peach and the gearbox gets better in the later models – it's known for the detent springs on the selector fork to break, making selection of first and second gears difficult. Replacing the spring is cheap and easy. If you fit a full system you'll have to junk the Exup valve, losing around 4bhp low down – but expect an easy 10bhp on the top end with a full set-up.



HOW TO CLEAN YOUR BIKE RIGHT

SPECIAL R1s



QB Carbon R1
Featured in *PB* May 1999, Kevlar tank, Marvic wheels



TTS R1
Also seen in *PB* May 1999, the TTS bike made 150bhp



V&M R1
TT winner in 1999. 170kgs, 175bhp



Holshot Turbo R1
Schwitzer turbo helped it make a mere 203bhp

TUNING BITS



CHASSIS TUNING FORKS

- Ohlins fork springs: £72, Harris Performance (01992 532500)
- Race Tech fork springs: £79, available in different weights to suit rider preference, PDQ (01753 730043)
- Race Tech D1V fork revalve kit: £115 (compression) and £107 (rebound), PDQ (01753 730043)
- Complete revalve and respring to suit rider weight and riding style: £230, Maxton (01928 740531)
- Ohlins 916-style, across the yoke steering damper and fitting kit: £300, Harris Performance (01992 532500)
- Ohlins, 43mm 'Road & Track' forks to fit standard yokes: £1550, Harris (01992 532500)

REAR END

- Fully adjustable Maxton shock, to suit rider: £476, (01928 740531)
- Maxton suspension tie bar, lifts rear end of the bike by 25mm to aid turn-in: £89
- Fully adjustable Ohlins shock: £570, Harris (01992 532500)
- Fully adjustable Penske 8981 Series road/race shock: £490, Demon Tweaks (01978 664474)

BRAKES

- Braided steel brake lines. Goodridge are the obvious choice (01932 369090), but don't forget Spiegel

(PDQ, 01753 730043), HEL (01932 811601) and Earl's (01803 869850). Prices start at around £20 for a single line with stainless fittings. You'll need two.

- Afam race pads for fast road work, trackdays and racing: £25 a pair, Bike Torque Racing (01373 464252)
- Performance Friction brake pads: £29 a pair. Racers' favourite finally gets full-time UK distributor. PDQ (01753 730043)
- PFM Superbike conversion kit: 320mm discs, 6-pot calipers, pads and Goodridge hoses, £999, Demon Tweaks (01978 664474)
- AP Racing conversion kit: 310mm discs, 6-pot calipers, pads and hoses, £1259, Harris (01992 532500)
- Braking Brake Rotor on Rim: pair of ultra-thick, 420mm discs mounted to the rim of a specially-developed Marchesini wheel. Complete with pair of underslung, 4-pot calipers to fit original mountings, £1413, Talon Engineering (01935 471508)

WHEELS

- Dymag: sport magnesium 5-spoke wheels, £918 a pair, Harris Performance (01992 532500)
- Marchesini: 3 or 5-spoke wheels, £1330, Harris (01992 532500)
- PVM: Racing 6-spoke cast magnesium wheels, £1349 a pair, Demon Tweaks (01978 664474)
- Dymag: custom carbon 3-spokes. Car-

bombfire rims with mag spokes, £1586 a pair, Harris (01992 532500)

BODYWORK

- Crash bungs: £36, BSD (01733 223377)
- Double-bubble screen: £47, Skidmark (01305 780808)
- Airblade indium double-bubble screen: £55, Busters Accessories (0870 240 2118)
- Tail guard: £55, Demon Tweaks (01978 664474)
- Carbon fibre front mudguard: £130, Harris (01992 532500)
- NRC H-D engine covers: £196, Bike Torque Racing (01373 464252)
- GRP race/trackday fairing: £170 (plain), £220 (coloured), Vironi Racing Products (01422 242222)
- Fibreglass race fairing: £243, Demon Tweaks (01978 664474)

CHASSIS

- Frame alignment check: £40-50, Python Motorcycles (01733 205552)
- Footrest jackup plates: £66, NWS (01992 501285)
- Gilles adjustable rearsets: £290, Performance Parts Ltd (0870 240 2118)
- ER Racing reduced offset yokes: £495, Busters Accessories (08702 412 040)
- Harris adjustable offset yokes: £573, Harris (01992 532500)

ENGINE TUNING END CANS

- More noise please, we're British: ■ Jai round carbon race can: £199, Motrax (01933 418414)
- Micron carbon oval race can: £300, Demon Tweaks (01978 664474)
- Harris titanium oval race can: £365, Harris (01992 532500)
- Akrapovic titanium race can: £380, Performance Parts Ltd (0870 240 2118)
- Genuine Yamaha Technology Racing (GYTR, if you prefer) race can: £440, Performance Parts Direct (0114 272 0199)
- Yoshimura stainless Tri-Oval race can: £497, Phoenix Distribution (0870 220 3700)
- Tweak the fuelling and dyno setup: around £90, BSD (01733 223377)

FULL SYSTEMS

- For a healthy 10bhp boost at the top end, stick on some shiny new pipework. But you'll want a Dynojet kit to get the best out of it: ■ Micron Zeta race system, stainless pipework, oval carbon or titanium can: £540, Demon Tweaks (01978 664474)
- Akrapovic stainless full system with titanium race can: £735 (all-titanium system £1080), Performance Parts Ltd (0870 240 2118)
- Arrow 'Road & Track' full system with titanium road and race cans: £827, B&C Express (01522 791369)

- Yoshimura stainless full system with Tri-Oval titanium can: £999, Phoenix Distribution (0870 220 3700)
- Dynojet jet kit: £89, Dynojet UK (01995 600500)
- Pipercross full flow foam air filter: £39, Demon Tweaks (01978 664474)
- Fit Dynojet kit and set-up on dyno: around £120, BSD (01733 223377)
- Forced-induction airbox with a Dynojet kit and dyno set-up time nets you an extra 8-12bhp – that's as much as a gas flow without even opening your engine: around £500 all-in, from TTS (01327 858212) or Holshot Racing (01132 576644)
- Gas flow the head and up compression for another 8-10bhp: £388 for the head work plus £588 to drop, strip and rebuild the motor, TTS (01327 858212). Holshot (01327 858212) offer a similar spec for the same sort of money. About 155bhp with that little lot.
- TTS's stock-in-trade is big bores. They'll take your motor out to 1056cc by boring and re-plating the standard liner (£530) and fitting new pistons (£517). Add to that the £588 to drop, strip and rebuild the motor.
- A 1080cc conversion means re-lining the barrels. That's £705 – pistons and rebuild as above.
- V&M are the daddies when it comes to fettling R1s. Tuning options from mild tinkering in your cylinder head, up to a

full-on stage three tune with 160bhp at the back wheel. That'll set you back around £1760 in labour alone, plus parts to your spec. A full-on, TT lap-record (as it was) spec motor chimes the toll at around £4110 plus parts, but gives 175bhp at the back wheel. V&M are on 0161 654 0011.

CLUTCH

- EBC heavy duty clutch springs: £9, Demon Tweaks, (01978 664474)
- EBC SRC Kevlar series heavy duty clutch springs and plates: £70, Demon Tweaks (01978 664474)
- Billet clutch hub with strengthened backplate: £323, TTS (01327 858212)

NITROUS OXIDE

- Push-button lunacy will set you back around £250 fitted, set-up and ready to go, plus around £28 to refill your bottle. And refilling it will need, regularly, once you've got the nitrous habit. It is, quite literally, a gas. Dynospeed Developments (0208 500 5770)

TURBO

- Ride in, ride out intercooled, blow-through turbo package. Everything you need to go bonkers mental at the slightest touch of the throttle. Will 200-plus bhp and off-the-throttle wheelies in top gear do? All for around £3500. Holshot Racing (0113 257 6644).



Clean your bike right

Get to know the most intimate crevices of your pride and joy with a

proper scrub down

There are two distinct classes of rider: those who dread cleaning as much as Christmas with the in-laws, and conversely, a set of soap foam fetishists who keep their bikes shipping-crate fresh. Whichever camp you find yourself in, there are reasons for cleaning your bike that go far beyond maintaining its resale value. Some of the most fastidious bike cleaners are race mechanics. They're looking for cracks and dings to wheels and frame and loose components that could give rise to dangerous problems. A good clean is one of the best forms of preventative maintenance for your bike.

You can find most of the gear you need to do the job tolerably well under the kitchen sink. But a truly professional job demands some inexpensive dedicated bike kit.

CLEANING KIT



- ☐ Bucket of water
- ☐ Detergent
- ☐ Cleaning cloths/sponges
- ☐ Brushes
- ☐ Silicone spray
- ☐ Contact cleaner
- ☐ Brake cleaner
- ☐ Polish
- ☐ Degreaser
- ☐ Allen keys for fairing fasteners
- ☐ Kettle, tea bags, mug, milk



1 For stubborn stains

Ah, high summer in England and millions of flies kill themselves softly on the front ends of a thousand sportsbikes. The only problem is getting the buggers off again. A dousing in household polish is often enough to soften the rascals and wipe them off. Bracelet Man is using a dedicated bike detergent, called Muc-Off (X-Lite: 01202 767400). Being safe on rubber and vinyl makes products like these preferable to detergents of unknown provenance. Be safe and follow the instructions, tho'



2 Arse wipe

Last time we saw an arse with nastier sticky deposits than these was in a 'gentlemen's interest' video. Break out the degreaser and some soft cloth. You could use petrol, but paraffin or degreaser are safer and less likely to attack plastics and rubber. Be sure to rinse it off quickly. A deft, gentle touch combined with the fact we used a soft cloth means the grit attracted by the chainlube hasn't scratched the R6's pristine undertray. Makes the yet-to-be-cleaned numberplate hanger look positively secondhand



6 Engine clean

It's not really a proper clean if you don't get under the fairing to sort the engine out. Short sportsbike front mudguards are particularly good at letting crud get lobbed into the fairing and hence the motor. Once clean, use silicone spray to help keep it that way. Don't use penetrating oil as the sticky film tends to hold dirt



7 Shock fresh

Don't let 'out of sight' be 'out of mind'. It's all too easy to forget the shock linkages. They want to be clean and grit-free, but don't be too overzealous because you don't want to wash all the grease out. That's why indiscriminate use of jetwashers is such a bad idea. At least once a year strip, clean, check and regrease the whole shebang



3 Chain fling

Ah yes, chainlube. Although going by the rust on those sideplates, you could be forgiven for thinking that the bike had rarely seen any. The wheelrim tells another tale. Al, whose long term this was in 2003, is of the camp that believes lube should only be applied to the centre run of the chain. Use the degreaser again, but not so much that it can run into wheel bearings as you rotate it to clean it



4 Rimming

No, that's not some S&M double penetration enthusiast's sex toy. Although we did have one lying around earlier. It is in fact a special brush from the house of Muc-Off (they do bike cleaning sets) for accessing awkward nooks and fannies, sorry, nooks and crannies. Ideal for working round things like the raised bit that goes round the centre of the rim. We used our dedicated detergent again, which has to be rinsed off after half a minute



5 Shifting the muck

Brake dust can be a sod to shift. It's not so bad if it's reasonably fresh, but older deposits seem to be baked on. Use a dedicated brake cleaner such as this one from Silkolene. It won't attack the piston seals when you spray up inside the calipers. An old toothbrush is a useful aid to dealing with the more stubborn brake dust cack



8 Inside job

While you've got the fairing lowers off, give them a good clean inside to get rid of the ton of grit and shit that invariably finds its way into the bellypan. Then spray with silicone. This grit-laden cloth is going straight in the bin after this before someone uses it to wipe the screen or polish the tank



9 Electrical care

Any electrical connectors that could be subject to ingress of water might benefit from a squirt of contact cleaner. Be absolutely sure that you use the type that is safe on plastics. Not all of them are and they can make the plastic around connectors brittle. Finish the job off with a light smear of vaseline on the metal part of the contact



10 Buff it up

Finally the finishing touch. A rub down with silicone polish. The silicone helps resist dirt build-up. Use paint restoring polishes sparingly - they're abrasive. In this case we've used a grubby asylum seeker to give the R6 a final polish. He did it for a cup of tea and a packet of boursbons. Alternatively you could drape your semi-naked wife over it and accidentally take lots of photos...

Track day prep

Make the most of your big day out ripping up the tarmac with our

How we love a trackday. So much so in fact that on any given day in any given week there's usually at least one member of the *Performance Bikes* team making a nuisance of themselves on some circuit or other.

An hour or two spent checking your bike over for track worthiness, and removing and taping up bits as required will yield dividends, even if only peace of mind.

Don't forget to prep yourself too. That means preferably avoiding a major night on the sauce before a track day and ensuring that you've got plenty of energy-boosting snacks such as Fabulous Bakin' Boys flapjacks (slow energy release) and water or squash to replace the fluids lost as you sweat copiously into your leathers. Get along and enjoy now...

KIT CHECKLIST



- ☐ Driving licence
- ☐ Gaffer tape
- ☐ Food and drinks
- ☐ Clear and dark visors
- ☐ Cash and credit card
- ☐ Tools for suspension tweaks
- ☐ Disc lock
- ☐ Waterproofs
- ☐ Back protector
- ☐ Tyre gauge
- ☐ Earplugs
- ☐ Mobile phone



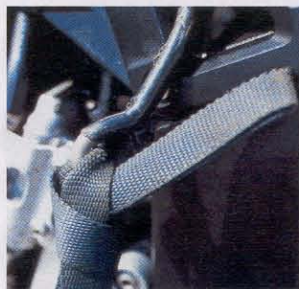
1 First things

We couldn't wait for you to start reading this bit, so we've already removed our numberplate, and mirrors. Here we're using a cable tie to hold the top fairing in place. Keeping your numberplate on can make you a target for the hardcore track day fans, but then it's curiously satisfying to overtake a slick-shod trackday bike on your obviously road legal machine. Either way, it'll be the first thing to smash if you low-side, so it's best to remove it



2 Chain check

Here we're checking the chain and sprockets. Luckily they're in good condition, what about yours? A splash of chain lube won't go a miss and it's best to adjust it slightly looser, rather than tight. Afterall, it's about to work very hard



6 Tied down

If you're going to be tying it down on a trailer or in a van, you'll need to make sure you've got the right straps. Plasticised hooks protect the paintwork and anodising. Some people prefer tiedowns that just have a hook at one end. Each to their own. The important thing is to use as many strong points on the bike as possible, cater for every possible angle of movement



7 Safety first

Here's the biggest tip going. Use a strong elastic band, or as we've done, a spent bicycle inner tube to hold the front brake on while in transit. Then stick the bike in gear and you're onto a winner

essential guide



3 Front end check

Be your own scrutineer. If something goes wrong and you could have sorted it you'll be gutted – and you might be in hospital. So check everything from the controls, to the condition of the levers. What about the head bearings? Any imperfections will be amplified on track. So instead of strutting around the pit lane eyeing up everyone else's tackle, make sure yours is sorted and ready to roll



4 Crash tactics

Ahh yes, crash bungs. The rule of sod dictates if you don't have them fitted, you'll probably drop it somehow. Fit the type that locate to the engine mount, rather than those ridiculous items that go on the fairing. We favour these from BSD (01733 223377), because quite simply, they work



5 Tape works

If you do bin it, you don't want to shower the track with glass. You won't be popular and your repair bill will be larger. Gaffer tape the headlight, indicators, brake light and blank off your speedo. You don't want to be seeing how fast you're going seconds before you miss your braking marker. Disconnecting your brakelight to make the guy behind outbrake himself is entirely optional, although we recommend it



8 Ready to roll

Here we are, about good to go. Ratchet straps around the bottom yoke make short work of compressing the front suspension. Putting your weight over the back compresses the rear suspension while you strap it down. Important, as you don't want the bike bouncing around on its suspenders and loosening the straps



9 Handy hints

Damaging plastics in a tumble is one thing, cracking or scratching them with a tiedown is another matter. A quite unforgivable one too. If you find no other way of fixing a strap without it rubbing fairing, then a cunningly placed cloth will save the fairing from being scratched



10 The van plan

Then it comes to a hire van. They've not got many tie-down points. Our VW transporter has a convenient metal loop in the corner, but we've forced hooks everywhere, including the ventilation louvres at the bottom of the bulkhead. The guy at the hireshop will never notice. Promise

Plastic weld

Just like welding sheet iron, but easier, cheaper and you can do it on the kitchen table

When we say plastic welding, we don't mean sticking with glue or epoxy. This is actual welding, the fusion of two pieces of plastic by knitting them to each other with a third rod of the same material. Done right, the join is stronger than before, and can be hidden by a lick of paint. You need a special plastic welding kit. Ours was supplied by Able Plastics (01206 272004). The main tool of the trade is a hot-air welding gun. This pumps out around 230 litres per minute of thermostatically-controlled air at temperatures of anything from a tepid 20°C to a scorching 700°C.

At between £199 and £1000 a kit, it's not cheap, and you get what you pay for. But one spill on the garage forecourt could crack panels costing over a grand, and this kit can be used over and over.

KIT CHECKLIST



- ☐ Snips
- ☐ Scraper (or old hacksaw blade)
- ☐ Bastard file
- ☐ One-handed clamp
- ☐ Pliers
- ☐ Wire brush
- ☐ Dremel-style tool with grinding and cutting head
- ☐ Leister Triac electric welding tool
- ☐ Plastic welding rods



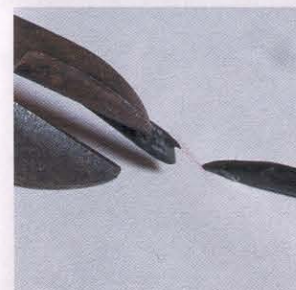
1 Starting points

This is what we're gonna fix up, a cracked and smashed Yamaha Fazer 600 top cowl. Note how the edges of the crack are rough as a dog's arse, and there's a section of plastic missing about the same size as said canine bung-hole. We don't worry about the minor scratches here, that's for the paint shop



2 Welding rods

The first rule of plastic welding is you can only weld like with like. You're looking for a code on the inside of the panel to match your welding sticks to. 90% of bike plastics are either ABS or PP (polypropylene). Your kit should come with anything up to ten different sample welding rods. Don't lose their labels, or you'll be left using trial-and-error to place their origin. New sticks are around £2 per foot. If only other 12 inch rods could be achieved for less than the cost of a pint



3 Prepare your rod

Once you're sure you've found the right stick for the job, you want to snip the end down to an angle, much like a fountain pen. This not only looks nicer, but gives you more control over the start of the weld. Bearing in mind that you snip a bit off, and need a bit to hold, 12 inches should weld ten inches of cracks



4 Correct plastics

To recap, the plastic welding rod has to be the same as the plastic you're trying to weld for it to work. To demonstrate this we're trying a bit of 'PP' on this panel, cos we know it's actually ABS we're working on. Set your welding tool to 350°C for PP, and when it's warmed up do this: smoothly force the welding rod down the nozzle as you force the tool down and along the welding area. As expected this stick didn't stick. So we move on...



5 Testing

You'll know you've found the right stick when your test weld looks like this. We recommend a test weld regardless of whether you find the code or not. Some materials like GRP (glass reinforced plastic) and PUR (polyurethane) can't be welded. If after a couple of minutes you can pull your rod off, it's not right



6 Scrape down

At last we're ready to do something about those cracks. Use your scraper, file, hand-held grinder or even wet and dry paper to clean off the cracks and loose material. You want to leave each face clean and angled at 45° to the flat surface, so when put together, there's a nice V-groove to lay weld into



7 Prepare your crack

Once your crack is nice and clean, hold it in position with either a clamp or some bulldog clips. Just don't force it anywhere it doesn't want to go, or it'll probably crack again at a later date. Next fit your tacking tool to the welder and gently melt the cracks into each other. It's not a strong bond, but it's ready to weld



8 Let's get welding

Lay your welding rod into the tacked-up cracks just as you did with the test weld. Always weld past the length of the crack - you simply snip off any excess. A good weld is a long, smooth, slightly raised bead which runs continuously and unstretched. It's hard to re-cut and re-grind a weld, so try not to cock it up



9 Stitching

When you've finished welding the inside you might consider 'stitching' your new welds. This means laying an extra weld across your two new ones just to lend it even more strength. Here we'd run parallel with the vertical edge on the left and perpendicular to the current welds



10 El finale

Et voilà! The finished repair, all ready for the paintshop and then re-fitting. A new Fazer top-cowl retails at over £300, but we've done it ourselves for a little bit less and invested in a kit that'll do us proud for any future repairs. And it's not just cracks or holes you can weld. Broken off fairing mounting lugs can be reattached and new lugs can be made from welding repetitively on top of each other

Rear overhaul

Bikes' back ends are a maintenance black hole. Ignore your arse-end at your peril

Back in the days of grease nipples and twin shocks, back end maintenance was as regular a part of the service schedule as putting air in the tyres. Nowadays it's all too easy to forget about the various bushes and bearings in your swingarm and shock linkages. But they need taking care of too.

They've got a hard job to do, and the grease that manufacturers tend to use is inadequate to say the least – it tends to give up and go at the merest mention of the words 'pressure washer'.

There's many an apparently mint bike that's failed its first MoT thanks to worn shock bushes, for example. It's a dirty job and might appear daunting, but an annual overhaul of the rear end pays dividends. Keep it all working smoothly and handling will stay on track. So it's out with the wrenches and Allen keys and have the grease tub at the ready.

KIT CHECKLIST



- ☐ Breaker bar and sockets
- ☐ Screwdrivers
- ☐ Ball peen hammer
- ☐ Rubber/hide hammer
- ☐ Pliers
- ☐ Selection of spanners
- ☐ Circlip pliers
- ☐ T-bar sockets
- ☐ Big fat roll-up
- ☐ Kit-Kat



1 Safety first

First make sure the bike is safe. A jack under the right peg and a couple of tie downs at the front are enough to keep the bike stable on its sidestand, while the back end is removed. The next job is to get the rear wheel out. Steady away now



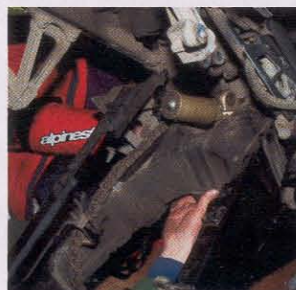
2 Swingarm removal

Now it all looks like a right dog's dinner but, things aren't that scary, honest. Once the wheel is out, you'll want to undo the swingarm spindle, having undone the shock's lower linkages. The special nut needs a peg spanner, although you could bodge this with all sorts of tools. Here we're using a punch and a hammer – to simulate the 'tightwad's toolbox' approach



6 Linkage overhaul

Knowing that we were going to replace the needle rollers in the linkage, we felt that we could muller them out with impunity, obviously taking care not to damage the casting. Dust seals often prove tricky but, with a little care we managed to get them out in a state good enough to reuse. We heated our casting in the oven and stuck the new bearings in the freezer. They slid in a treat, now for a good greasing



7 Back together

Time to start putting it all back together. The important thing to look out for is dirt. You don't want it to get into your linkages and bearing surfaces – that would scupper your hard work. Putting the swingarm in is a two man job, unless you're some kind of multi-limbed contortionist. We took a few minutes and a handful of expletives to relocate the swinger. We fitted the shock loose at this point too, in case it wouldn't go in with the swingarm bolted up



3 Bearing with us

Now here's the right tool for the job, properly used. Circlip pliers are infinitely preferable to clumsily used screwdrivers, especially against the soft alloy of your typical swingarm. If the circlip gets twisted or distorted, use a new one. Then drive the bearings out of the swingarm from the wrong side, ensuring that the swingarm is properly supported on a soft surface. When replacing bearings, we used a socket against the outer race, to drive the bearing into its new housing



4 Shock tactics

By fitting the shock's top bolt onto the bush, we were able to establish that there was no play and hence no wear. So all that was needed here was to clean the bush and treat it to a splodge of LM grease. But be careful where you put that grease – if it gets onto the bush's rubber, it'll perish



5 Linkage checks

Your shock's lower linkage is a busy old thing. This one on our ZX-7R has no fewer than four needle roller bearings. It's in a prime position for gathering up road muck too, so wear happens. Quickly



8 Mates allowed

Our bracelet-wearing hero isn't trying to have it away with our shock, he's helping to refit it. It's a lot easier to refit the shock and linkages with the help of a mate. If you don't have a mate, rent one. We did. It doesn't hurt to assemble things loosely at this point, but be sure that everything's double checked at the end of a job. Get your mate to check your work over too. Some shocks are easy to get back in, others are bastards. A dab of semi-permanent Loctite helps hold it secure



9 Wheel replacement

Replacing the wheel is another job where people with three hands excel. If you don't have three hands, get your mate to help out. Make sure you put everything back in, exactly as it came out. While the wheel was out, we hung the caliper on a bungee so the hose wasn't under stress. Or at least, we will next time



10 Taxing bits

A properly adjusted chain is more important than a tax disc. That's why we spent at least ten times longer checking for proper wheel alignment than we did waiting in a Post Office queue. Once you've adjusted the chain, check the swingarm for play. Last but not least, pump the back brake to check it works. You might need it. Now, about that tax disc...

Re-pack an end can

Aftermarket end-can getting a little too noisy these days? It could probably use a fresh set of packing materials. Here's what you do...

A number of can manufacturers offer a repacking service for their silencers. But it's a job you can easily do yourself armed with a few simple tools and repacking materials. In the case of our Micron oval can, the manufacturer thoughtfully offers repackaging kits for their entire range of rebuildable cans, making our needlessly complex lives just a little easier. All the packing needed is in the kit as well as new screws and silicone rubber end-cap seals. At a very reasonable £14.95, they're cheap too.

Thank you to Micron (01773 876300) for sending us the kit at five minutes notice, and to Mike's mate Andy Gurski for lending us the can, although I don't know why we're thanking him given he got his can packed for nowt.

KIT CHECKLIST



- ☐ Scissors
- ☐ Allen key/spanner/screwdriver
- ☐ Re-pack kit/materials
- ☐ Latex gloves
- ☐ Stiff brush
- ☐ Bucket
- ☐ Caustic soda
- ☐ Masking tape
- ☐ Drill
- ☐ Rivet gun/rivets
- ☐ First aid box
- ☐ Swear box



1 You can

Unsuspecting Micron oval can about to receive the ministrations of Bracelet Man – a mysterious home mechanic, with a penchant for jewellery – by appointment to *Performance Bikes* magazine. Note knuckles, intact and unbloodied. For now anyway...



2 Ingredients

Not an elephant's sanitary towel, but rather the contents of a typical Micron re-packing kit. Some cautionary words here. Glassfibre type stuff can play havoc with your skin. Wear latex gloves. Don't breathe above the material – lungs like it even less



6 Masking it up

Having made sure the inner packing is tightly wrapped, it's important to make sure the whole shebang doesn't fall apart like the plot of a poor B-movie. Masking tape around the outer packing holds the whole affair nice and tight – at least until it's inside the can when it will melt. But by then it will have done its job



7 Packing your shaft

This part is harder than it looks. And it looks hard. The flexible outer sleeve will make life as difficult as possible, as you try to stuff your shaft and wadding inside. Two pairs of hands are better than one, in this game



3 Removal

To unpack your end-can, first you'll have to figure out how to undo it. When you've done that, you'll need to slide out the contents but be careful not to rustle up a mini fibreglass storm. On with the latex gloves and off with the outer packing



4 Cleaning

Bracelet Man is combating the effects of carbon deposits. Carbon builds up on the perforated tube and can clog the holes, diminishing the effect of the acoustic packing. That would be a bad thing. A mild solution of caustic soda will help scrub off any black deposits. Still got those gloves on? Good



5 Tight wad

Time to wrap this thing up. Make sure it's dead straight and it won't cause you problems when you roll. The effect we want to achieve is one of a Mummy's boner – and, given the length and girth of the baffle, a particularly impressive one at that



8 Lubing up

Now, getting the end cap in can be hit and miss due to the awkward, tight fit. The best way to minimise a knuckle/wall interface where it slips out of line is to lube the inside of the sleeve. Fairly liquid will do as oil-based lubricants will cause the rubber to perish. Gently does it now



9 Can-tastic

You don't realise how much swearing went into this end result. Everything should fit snugly and a good shake should reveal nothing is floating around inside. The end-cap bolts should line-up with ease, which leaves you with one last thing to do...



10 The finale

You'll need all the bracelets you can muster, for this task. Once you've put them on, and found your Allen key, you'll be ready to tighten up the retaining bolt. A touch of thread lock comes in handy to help keep the end cap in place and stop you from blowing your wad all over the place

Wheel overhaul

Whether they just need new bearings and seals or a complete re-

Wheels and wheel bearings get a particularly hard time of it. After the tyres, the wheel rims are the closest things to the ground, and are first to cop road salt and other assorted shite. You can have all the power you like, but you don't want anything sapping power through rolling resistance. Apart from that, shot bearings send handling to shit. Not good, so pay some attention to your bearings now. With your bike on its centrestand (where fitted) or up on paddock stands, it's easy to check for sideplay by grabbing the wheels and attempting to rock them side to side. We elected to have the wheels on Si's Hayabusa refinished too. We went to Profile 7000 in Coventry (0247 668 3366) very trick they look too, for the reasonable sum of £47 each. Profile's MD, Dave Jones, set the firm up because he couldn't find reliable finishers for his own bikes, so he has a passion for what he does. We weren't disappointed.

KIT CHECKLIST



- ☐ Flat-bladed screwdriver
- ☐ Hammer
- ☐ Drift type thing
- ☐ Socket drive with Allen bits
- ☐ Allen keys
- ☐ Spanners
- ☐ Breaker bar and socket
- ☐ Big spanner for rear spindle



1 Salty mess

Salty white deposits have a time and a place. This is neither the time nor the right place. The visible rust on the PFM discs ain't a problem – that'll scrub off after a couple of hard applications of the brakes. Far more pressing is the road filth on the ally rims. Leave it too long and they may be past the point where cleaning can save them



2 Wheel removal

Loosen off the front end before jacking it up in the air. Supporting the wheel with one hand makes removing the spindle a whole lot easier. And even before this, undo the calipers. Once the wheel is out, it's best to sling the calipers back on, to stop undue pressure on the hoses



6 Removing bearings

We usually adopts this method for forced entry into houses but this time we're putting our skills to a less risky task. If you're careful and knock the bearings out by only applying pressure to the outer ring, there's a good chance you'll be able to reuse them. Remember, you're going in from the top but it's the bottom bearing you're working on right now



7 Paint works

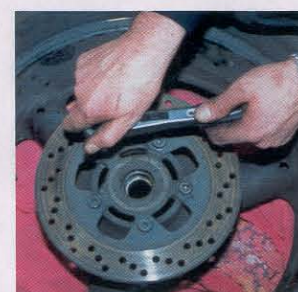
What a magical transformation. A few days have passed between this picture and the last one. Profile 7000 have worked their magic on our BSA wheels to transform them into the beauties you see here. Obviously, bearing areas were masked off and here we see the sprocket side, ready to be driven in

finish, there's no time like now to get your wheels sorted



3 Rear wheel action

Get the bike up on the rear paddock stand, and reach for your big spanner – it undoes the rear spindle. After that, loosen chain adjusters and screw them in so that the wheel can be pushed forward and the chain pushed off the sprocket. It's also worth loosening the brake torque arm so the caliper swings clear easier



4 Strip down

Wheels need to be stripped before they go to be refinished. It can be a load of fun and games getting the disc bolts out. They're often made of cheese and welded in. We got away with only rounding off one, which is a record in our books. Don't be too hasty, take your time lad



5 Save our seals

Now prise out the seals with a flat-head screwdriver. Work around in a circular fashion and they might just survive to be reused. This one looks like it won't see another day. If your screwdriver-wielding skills are in doubt, then order some new seals – it's a total false economy to reuse dodgy components



8 Bearing with us

When fitting bearings, the rules are: keep them square to the housing and use small taps around the circumference until each bearing is seated. It's best to use a soft metal drift to reduce the risk of damaging the races. Brass or aluminium bars are good. Another old trick is to use the old bearing concentric with the new one to drive the replacement in. Cush drive rubbers and the other bits and bobs can be refitted too



9 Bolt up

Brake disc Allen bolts must be located in. Use the heavy duty stuff. It's worth getting the torque wrench out at this point to ensure things are up tight enough, and to avoid stripping threads. Tighten bolts little by little and screw in opposing bolts to avoid any risk of warping the disc carrier



10 Final check

Refit the wheels. Assembly is the reverse of disassembly and all that. Make sure the spindles are up tight and chain adjusters are properly adjusted. Use a torque wrench on the front calipers' bolts, and on the spindles too if you're fussy. Remember to pump the brakes up before riding

Fit new brakes

For trickness and functionality, there's nothing like some aftermarket discs and calipers. Fit them quick, easy and right the **PB** way

Arguments in favour of aftermarket discs and calipers are pretty compelling. Not only do you get everyone in the pub car park pointing at them and looking longingly at your latest bolt-ons, you get superior stopping power and hopefully enhanced feel too. But they rarely come cheap. Ease the financial burden of better braking by fitting them yourself. But remember, if you have any doubts that you've done the job right, enlist the help of a professional. Of course, if you follow our step-by-step guide you won't need to do that. Remember that it can take quite a few miles before you start to feel the benefit of your spiffy new set-up. Pads and discs need time to bed in for optimum efficiency.



1 Magic tricks

We've enlisted the help of Paul Daniels; his minute form allowing him to get closer to the action. If you don't have a small magician to hand, you can always wear latex gloves. You'll need to get the front wheel off the floor and make sure it's secure. Once you've loosened off both calipers, undo the Allen pinch bolts at the bottom of the fork legs; and loosen the wheel spindle. To aid banjo release, bolt your calipers back onto the fork legs. Once you've cracked off your banjos, you'll need to catch the fluid. It can get messy



2 Master stroke

Remove the master cylinder using the right sized Philips screwdriver. Alternatively, use the wrong size and shag the screws, like they are on any second-hand bike we've ever owned. There's another banjo to crack off here, the third one in two minutes. Use a bit of kitchen towel to catch the mess, dispose of safely



3 Hubba Bubba

A clean hub is a good hub. Here we've used some brake cleaner on a rag to get rid of the shit that builds up on the hub. How does it get there? A mystery that's right up there with whether Simon Cowell off Pop Idol is gay and the fact you always need a shit just after you've put your leathers on



4 Disc-o-tech

Highlight of the job so far – time to fit the fancy new PFM discs. Make sure the carrier sits square and snug to the hub, which it should do if you've got the hub faces nice and clean. Make sure you get them the right way around. Use Loctite on each bolt to ensure it stays firmly in place



5 Tightening up

Both discs fitted? Orientated in the right direction? Then it's time to get the wheel back in. Lube the spindle up with some LM grease so it glistens like a toddler on the outstroke. Don't go too mad now, make sure the spindle is done up tight. Oh, and the pinch bolts. Don't forget them either...

KIT CHECKLIST



- ☐ Half and 3/8 ratchets
- ☐ 12mm socket
- ☐ Big bastard for spindle
- ☐ Latex gloves
- ☐ Phillips screwdriver
- ☐ 10, 12 and 14mm spanners
- ☐ Brake fluid and cleaner
- ☐ Bleed kit
- ☐ Rags



6 Line types

In the manner of any race bike worthy of the name, we're going for a two-line braided Goodridge set-up, instead of the one-into-two of the standard rubber system. Note that the banjos are angled like bananas. Just fit loosely until you're sure you've got the right one in the right place.



7 Caliper fitting

When you fit the new calipers to the fork legs, use a torque wrench to be exact and avoid stripped threads. Once they're tight, you can tighten the banjos at the caliper end too



8 Adding fluids

Out with the kitchen towel again to protect against unwanted splashes as we start to get new brake fluid in the system. DOT 4 is the stuff for regular road use. Race spec 5 is hygroscopic, which means it absorbs water, impairing efficiency – big time. If you must insist on using DOT 5, change it regularly. Actually, just don't use it in the first place.



9 Bleedin' brakes

We used a special brake bleeding pot. Six flicks of the lever and then crack the nipple. Another six flicks, then close it. Keep fluid topped up in the master cylinder. Repeat until you find stiffness in the hose. We had to flick for a while until our hose went stiff. By loosening off the top banjos and holding the lever in, we allowed air out the top of the system. Keep a rag handy, as spillage is likely



10 Job jobbed

And there we have it, the complete set-up. Hoses hard, banjos bolted tight and big calipers ready to bite into even bigger PFM discs. Check everything over and remove any errant brake fluid (there is always some). Remember to bed in the brakes but once they're ready, you'll be braking even later for the chippy

Re-valve forks

Finding the range of damping adjustment in your forks wanting?

Most standard bikes' suspension is built down to a price, so while it's pretty good for everyday riding, the deficiencies show when the pace hots up on road and track. Revalving makes the ride more compliant, offers a wider range of adjustability, and allows you to tailor the set-up for your individual needs. There are two ways to go: either send the forks off to a specialist or, have a go yourself with a kit like this here Race Tech example from PDQ. (01753 811060) We're fitting our kit to a GSX-R600 and we're also fitting new springs to suit our weight.



1 Fork off

First up, get the front wheel up, remove the calipers and hang them using bungees. Then measure the amount the fork legs protrude so you can fit them back afterwards. Loosen from the bottom yoke up and undo the top yoke bolts slowly so the fork leg doesn't crash to the floor. Then with the stanchion clamped in a soft-jawed vice, start disassembly. Turn the rebound adjuster concentric with the preload adjuster - fully in. Wind the preload adjuster - fully out.



2 Stage two

Get the fork lower in a soft-jawed vice. Our Suzuki needs an 8mm Allen key to remove the bolt and copper washer that holds the damper cartridge in the fork leg. You'll need to hold the damper rod which will be protruding out of the top of the fork. Hand pressure should be sufficient

You'll be needing a re-valve. Get in the shed and do this...



3 Clip removal

With the damper assemble undone, you'll find that there's still more oil to come out when it's removed. So make sure you're near the drain tray. Time to open up the damper cartridge itself. Use a pick to remove the spring clip that holds it in. Be careful not to damage the soft alloy of the cartridge body. This is almost inevitable if you try to muller it out with a screwdriver. Do it right and you can reuse the clip



4 Valve body

Remember that 8mm Allen bolt you took out of the bottom of the fork leg? Screw it a little way into the valve body and pull the body out. That's what we did and here it is. Give it a clean with some degreaser and a rag and we're ready for the next stage. The pros blow them off with an airline too



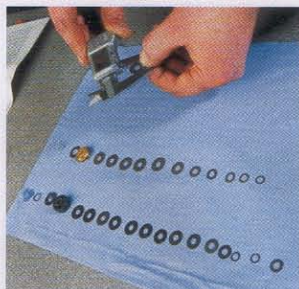
5 Body check

The soft-jawed vice is getting over worked preventing delicate components from damage. Here it is in action again as we set about disassembling the valve body. There's a 5mm Allen bolt holding the valve to the body itself. Take it slowly, or there'll be shims springs and spacers everywhere

KIT CHECKLIST



- ☐ 1/4in extension with 10mm socket
- ☐ 5mm Allen socket, 8, 4mm T-bar
- ☐ Steel rules
- ☐ 1/4, 3/8 and 1/2in socket drives
- ☐ 24, 12, 10 and 6mm sockets
- ☐ 24mm Allen socket for GSX-R spindle
- ☐ Torque wrench
- ☐ 14, 12, 10mm open-ended spanners
- ☐ Vernier caliper



6 Action station

Lay the component parts out on a clean piece of paper or cloth. Original kit at the bottom, new stuff at the top. Each kit comes with a Race Tech website access code. There's a form to fill in asking things like rider weight, type of riding, model of bike etc. You'll then be told which shims springs, oil and possibly Slim Fast shake to choose



7 Sizing the spacer

With our shims selected, we reassemble the valve, torquing the 5mm Allen bolt to the recommended setting. Reassembly from here is a reversal of disassembly, as they say in Haynes manuals. Here we're using a steel rule to assess what size the spacer above the fork spring needs to be



8 Altering the spacer

We have to reduce the spacer from our Suzuki's fork leg as per the Race Tech instructions. The pros do it on a lathe, but real men use hacksaws. Which ever way you do it, the main thing is to check there are no burrs on the spacer. File any that are there away



9 Adding the oil

With all springs, spacers and washers removed and the stanchion as far as it'll go down the leg, we set the air gap - the distance from the top of the oil to the top of the stanchion in the case of our RWU forks. This must be the same for each leg. Race Tech recommend an air gap of 125mm for our Suzuki. We slowly top the oil up, until we reach the desired level. All the time we're gently pumping the damper rod to make sure we've got all the air out



10 Cap it off

Before refitting the spring and spacer assembly, make sure the spring is the right way up. Then with the spring and spacer back in the stanchion, refit the fork cap and preload adjuster. If the 'O'-ring is sound, there's no need for replacement. Stick the forks back in from whence they came. Robert is your Milkman's brother. As my mum used to keep telling me...

Clip-ons

Choose a riding position to suit you with some clip-ons – the perfect complement to rearsets. Do it quick and easy the **PB** way

Clip-ons. Now they look like a good idea. And indeed they are, being a cheap and easy way to bring a little racer chic to your road bike. But they're about more riding position than looks. The right clip-ons will allow you to tailor your riding position to suit you, rather than the halfway house the bike's designer has saddled you with. But be aware that many clip-ons are designed for race bikes, which do not need such niceties as switchgear for indicators, horn and the like. So check with the manufacturer of your clip-ons that their product will fit road-going machines with all the stock kit fitted. You'll also need clearance between bar and tank and fairing on each lock as well, otherwise you won't pass an MoT.



1 Old versus new

Compare and contrast the above. The top bar is the standard Suzuki item and the lower is the luscious aftermarket bolt-on jobbie from our friends at NWS (01992 501285). The latter is much more adjustable than the original, which in fact is not adjustable at all. The NWS item is also guaranteed to make passers-by whoop with delight.



2 Preparation

To fit out new clip-ons, we have to first remove the old ones. That means the top yoke will have to come off. Use a snug-fitting socket to remove the lovely anodised top-nut without damaging it. The Suzuki safety boffins have been at work, adding another bolt on the underside – locating the clip-ons into the yoke. Sling them in the spares 'which will come in handy one day' box. It's a big bloody box that spares box



3 Pinch punch

The other thing holding the top yoke on is of course its pinch bolts. In the case of our GSX-R600, a 10mm spanner makes short work of loosening them. The brackets for the new clip-ons split, whereas the originals don't. If they did, we could leave the top yoke in situ and have to endure less messing around. Next it's off with the top yoke allowing the original clip-on to be removed. Get on with it then



4 Small problems

The brake reservoir can be a problem. We knew this, yet we still tried to wrestle it off. Fools never learn. It's best to unbolt it, to give yourself some slack. The problem with clip-ons is that they're designed with racing in mind, so switches etc aren't normally needed but brake reservoirs are. Our aftermarket clip-ons have no provision for our brake reservoir – but don't worry, we'll fix it



5 Smaller problems

Have you ever seen a stubbier screwdriver? It's perfect for getting into these compact spaces. Switchgear on most modern bikes has loacting pins, which means we're going to have to drill our aftermarket jobbies

KIT CHECKLIST

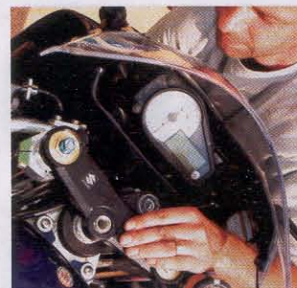


- ☐ Allen keys or bits
- ☐ Stubby Phillips screwdriver
- ☐ Relevant spanners
- ☐ Socket for top nut
- ☐ Semi-permanent threadlock



6 Loosely does it

We could fit our new clip-ons to the top yoke in place. But for now we're trying to establish what goes where and what will be comfortable. So put them on loosely, get the bars in the right place and figure out how to mount the switchgear so it will clear the tank and fairing



7 The ruling of sod

The immutable rule of sod will dictate that the fork legs will move in relation to the steering stem while the top yoke's off, making it a bugger to get back on. Jerking the front wheel backwards combined with copious swearing will soon see it reinstalled. Failing that, a few twats from the hide mallet will sort it



8 Drill nifty

When it comes to switchgear, measure twice, cut once is the rule to adhere to. Except you won't be cutting, you'll be drilling. So make sure you've got it exact before getting nifty with the drill. Remember to tighten up all the controls when they're back in position, as we're doing here with the clutch. Some semi-permanent threadlock is good on all screws and bolts



9 Final steps

NWS have thoughtfully provided some nylon bar-ends for their clip-ons, which, like the originals, work on an expansion principle, a captive nut spreading internally as the Allen screw is tightened. But wait, first you have to fit the grips. You have fitted the grips, haven't you? Use a bit of slightly soapy water to slide them on – other lubricants won't dry and will see the grips move around



10 Fine tuning

The whole reason for fitting clip-ons is to tailor them to suit your riding, so this is where the fun really starts. Lower bars make it easier to get behind the screen, higher bars can help comfort – perfect for cruising over to the continent. Crude masking tape notes stuck to the tank are purely optional

Rearsets

Inside a couple of hours you can have more ground clearance and a seriously trick place to park your feet

Whether you're fitting rearsets to get better ground clearance, improved comfort or simply because they're a bolt-on you couldn't live without, the good news is they're relatively easy to fit. You only need a handful of tools plus some semi-permanent threadlock. It's not compulsory but, a big fat roll-up can come in handy too. There's always a safety issue when it comes to messing around with controls. So double check your handiwork once the rearsets are on the bike to make sure everything is fitted right and done up tight. And there you have it; almost instant racer chic and the knowledge that if you deck your pegs now, the floor really isn't that far away.



1 Get it up

Get the bike up on the paddock stand. Your bike will be more stable and it will be easier to get the rearsets off on one of these. Once you've fitted your rearsets, it'll make the final check a lot easier.



2 Crack off the bolts

First you'll have to crack off the standard pegs, which will have been threadlocked at the factory. First undo the locknuts at the end of each gearshift rod. The gearbox end is most likely to be on a left-hand thread. Remember that and save valuable time wondering why you can't get the sodding thing to budge. Spin the rod off and throw it in the box marked 'stuff I won't be able to find when I come to sell the bike' to keep your standard numberplate and exhaust can company



6 Right on

Twirl this little anodised beauty up the master cylinder's threaded rod. It dictates the height that the rear brake pedal sits at, so we'll start off at around half way up the thread and see how we go when the job's back together. Can you smell that? That's the smell of nearly ready rearsets



7 Remounting

Here we see Bracelet Man remounting the master cylinder. It's not a hard task but be careful not to tug your brake hose. Make sure everything is nice and tight, the remount the brake light switch nut on its bracket ready to receive the switch itself



3 Take your time

The Gilles rearsets we fitted to our 636 needs spacers. If you don't use them, the gear lever will be at a funny angle. It took us hours to work that out – just so that you don't have to. A bit of threadlock goes down well here, you don't want to be losing anything now



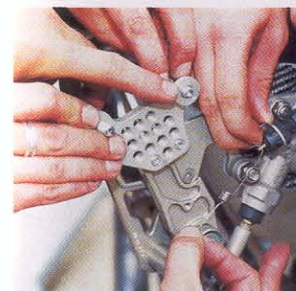
4 Fit the brake rod

Here we are fitting the new brake rod. It's worth greasing up the rose joints, certainly the new ones on the rearsets, just in case the manufacturer hasn't done it. Even if they have they rarely use enough. The rod's adjustment dictates the height of the gear lever. Get it where it suits your riding position



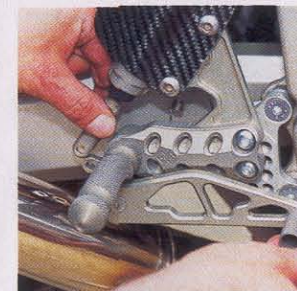
5 Halfway there

Now here's lovely. A fitted Gilles left-side rearset, with the gear lever positioned perfectly for the slickest of shifts. By turning the wheel and working through the gearbox, make sure that all the ratios you had before are still available. It's worth double checking the security of all fasteners at this stage. Stop gawping, it's time to get on with the brake side. There are additional complications here regarding the master cylinder and brake light switch



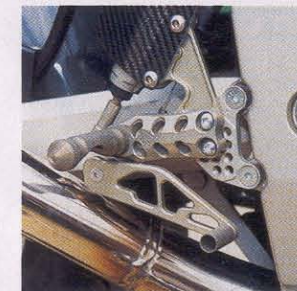
8 Brake light fun

Bracelet Man – being the freak that he is – has four hands. We don't, so enlisting the help of a mate might be useful. Bribe him with that roll-up you prepared earlier. Screw the light switch about halfway down. The Gilles kit comes with a new brake light switch return spring, as the original would be the wrong length to suit our higher-set pegs. Good old Gilles



9 Lining it up

Time to mate the master cylinder to the rear brake lever. A quick eyeball job will tell you if you're in the right ballpark. If not, screw it down to raise the lever, and up to lower it. In the case of multi-adjustable rearsets, check they're in the right position, so they don't foul the pipe when in operation. Last but not least, insert the split pin and er, split it



10 Perfection

And here we are. The footpeg now sits considerably further back and higher than the original. Even at standstill, you know you're faster. Remember to check the rearsets are the same height on each side. Otherwise it'll feel like you're riding Coco the Clown's comedy velocipede. That is, unless you're one of those types with different length legs, in which case fill yer odd-shaped boots, so to speak

KIT HEADLINE



- ☐ Socket drive
- ☐ Allen keys or socket drive bits
- ☐ Pliers
- ☐ Spanners
- ☐ Threadlock

Race exhausts

Buying a race exhaust system isn't cheap, but fitting it won't cost a

Junking a standard exhaust system in favour of a full race system is an effective route to more power and less weight. Fitting should be easy if you take your time. Tucked-in race pipework can be a snug fit around radiators and frame rails, although it may be necessary to drain and remove the radiator, so be prepared

Unlike men, not all full systems are made equal; some are supplied with all-in-one headers, others require complete assembly. This isn't normally a problem, if they're well made and instructions are provided by the manufacturer. Take your time to study them and make sure you've got all the tools you need before you get started. And factor into the cost of the exercise some dyno time to get the fuelling set up correctly.

KIT CHECKLIST



- ☐ Socket set with extensions and wobble bars
- ☐ Spanners
- ☐ Allen keys
- ☐ Screwdrivers
- ☐ Plastic or rubber hammer
- ☐ Paddock stand
- ☐ Bucket (if it's necessary to drain and remove the radiator)
- ☐ Spring puller or old wire coathanger
- ☐ Copper-based grease



1 Preparation

Don't attempt the job with the bike on its sidestand. Use a paddock stand, ideally on a workbench. "Next, remove the fairing," is a phrase you'll often hear banded about, and one that fails to do justice to the amount of twatting around with Allen keys, spanners and screwdrivers required to pull the bodywork off a modern sportsbike. Put the fasteners in a couple of old jam jars marked 'L' and 'R'. Or you could mark them with 'Left' and 'Right' incase you forget what L and R stand for



2 Out with the old

Remove the standard can, as this makes it easier to manhandle the headers and link pipe off later. If you're fitting a pipe to a GSX-R1000, late FireBlade or a big-bore, four-cylinder Yamaha, there'll be some kind of exhaust valve gubbins to disconnect. They're all pretty similar – basically a couple of cables running from a servo motor under the tank to the valve where the header pipes meet in the collector



6 Offering it up

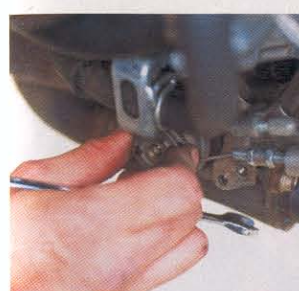
Offer the assembled header and link pipe up and jiggle it around until it fits the manifolds. Support the pipework from below so it doesn't drop on the ground and get scratched – we used two cases of photographic filters and a studio light when snapper Paul wasn't looking; you can use whatever is to hand. We usually use our trusty stash of jazz mags but Dale was seen with them, wandering in the general direction of the toilets



7 New can action

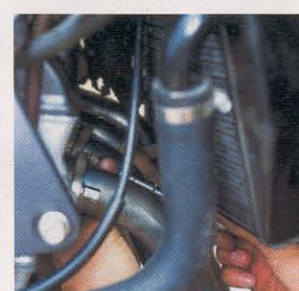
Slip the new can onto the link pipe and fit the mounting strap and bolt. Again, don't fully tighten anything, as you want to make sure it has all been put together properly. If things don't line up check the link pipe and collectors are pushed fully into place. If not, tap them home with a plastic hammer

penny. Not if you do it yourself, the **PB** way



3 Small problem

Our longterm FireBlade's H-TEV valve is accessed from the left side of the bike. Undo the five bolts holding the cover and cable guide on, remove the cover then undo the centre nut and pull the pulley clear. Lift the tank and remove the cables from the servo motor. Do not disconnect the wires to the servo



4 Tight fit

Undo and remove the radiator mounting bolts so the rad can be pulled forward to get better access to the header bolts. Undo the header pipe mounting nuts. If they're rusty, spray some WD40 on first and let it soak in. The outer ones are easy to get at, the inner ones less so. Undo and remove the outer mountings and let the flanges slide down the headers. You'll probably still need to use wobble bars and extensions to get to the inners



5 Nut removal

Undo and remove the rear mounting bolt (if there is one). If your bike is shiny and relatively new it will be a doddle. Ratty old mingers could prove more of a problem – you may need to soak the nut and bolt in penetrating oil or WD40 before undoing it, or risk rounding off the nut. Then you'll be buggered



8 Final screw

Tighten the manifold nuts then fit the mounting springs. Don't over-tighten them as they're mounted in soft alloy and tension from the springs keeps the flanges pulled against the manifold nuts. Fit the can-to-link pipe springs and tighten the can's mounting bolt(s). Refit the radiator and start the bike up, checking the exhaust isn't blowing by cupping your hand around all the joints. If you've refilled the rad check the coolant level after running the engine



9 Finished article

Refit the bodywork. If you were sensible you made a note of where all the mounting screws and bolts went, so putting the fairing back on will be easy. Have a look inside the fairing and check the new exhaust doesn't foul, particularly around the link pipe and the bottom run of the two outer headers



10 Not for what?

If your shiny new system has this stamped on the can, you now risk a tug by plod every time you ride on the road, got that? Don't say we didn't warn you. Now get on the blower and book yourself some quality dyno time to get the fuelling sorted and make the most of your fancy new full system. Job done

Chain and sprockets

It's a messy job but someone's got to do it. Save yourself a few quid by changing your own chain and sprockets

Replacing your chain and sprockets can be a daunting task, but there's nowt to be afraid of. Forewarned is forearmed and the key to hassle free fitting is in the preparation. It might be a good idea to do a dummy run, to make sure you've got everything you need. If your bike uses tab washers to keep the sprocket nuts in place, get some new ones before you start in case they get (or, indeed, are) mullered. And sort out a new splitpin for the rear wheelnut. Even better, replace it with an R-clip, for that true racer look. With all the tools to hand, the job should take just over an hour.



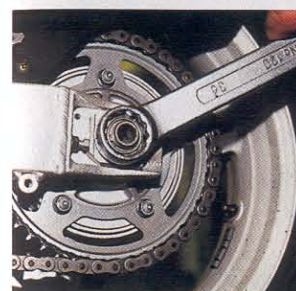
1 Preparation

Get the bike onto its centre stand, and up onto a workbench if you've got one. First you need access to the front sprocket, in the case of our GSX-R600, this means removing the left-hand fairing panel. Don't forget to lose some mounting screws so you can bodge it back with self tappers later. Next undo and remove the gearchange linkage clamp from its shaft. But before you do, make a mark on the clamp so you can line it up with the shaft later



2 Get at the sprocket

Now unbolt the sprocket cover and tie it out of the way with a bungee. Undo the GSX-R's speedo drive, which we did by getting our spare pair of hands to push on the rear brake pedal to stop the wheel turning. Make sure the bike is in neutral before you do this. Flatten the front sprocket's tab washer, then undo the centre nut. A 1/2 inch drive socket and a breaker bar work wonders



3 Slack in the rear

Get your mate to stand on the rear brake while you slacken the rear sprocket nuts. Now undo the spindle nut and the chain adjuster locknuts and wind the adjuster bolts in as far as they'll go. Push the rear wheel as far forward as it'll go, so the chain goes slack



4 Off sprocket

Here we're lifting the front sprocket clear of the output shaft and then pulling it off the chain. Replace it with a shiny new one, then hook the chain back over and locate the new sprocket back onto the shaft. Refit the nut then tighten it to the correct torque



5 The weakest link

Break the old chain using a proper tool – there's no other way around it. MPS and Demon Tweaks sell a range of chain breakers to suit – think of it as an investment for the future. Push the pins out a little at a time, swapping between each pin every few turns so the link is pushed out nice and evenly

KIT CHECKLIST



- ☐ Socket set
- ☐ Spanners
- ☐ Paddock stand (if no centre stand)
- ☐ Torque wrench
- ☐ Socket to fit front sprocket nut
- ☐ Chain-breaking tool
- ☐ Mole grips (if you're fitting an endless, rivet-link chain)
- ☐ Spare pair of hands



6 Trick tip

You'll like this trick. Get your new chain and temporarily join it to the old one. Use the old chain to pull the new one into place. Keep the chain tensioned as you pull, so the new one doesn't get coated in the shit that lurks around the swingarm pivot. Once in place, join the ends of the new chain together by slipping the joining link into the correct position



7 Pressing on

If the joining link's sideplate is an interference fit you'll need something to press-fit it. Special tools are available, but you can use a pair of mole grips and a washer. Put the washer over the hole, where the pin will appear. Then squeeze against the back of the pin to put the link into position. Secure the link by flattening the ends of the pins against the outer sideplate. We used a hammer behind the sideplate to hold it in place and another one to bang the ends of the pins into shape



8 Finished article

When finished, it should look like this. Make sure it does – if an ill-fitted link goes AWOL while you're flat-out down the local bypass, you'll be spending a lot of time in hospital looking at what's left of your left leg. Or should that be looking at what's right about your left leg?



9 In with the new

Next it's time to remove the rear wheel spindle, so you can pull the wheel out. Hook the chain around the end of the swingarm. Watch for your wheel spacers rolling across the floor – they're a bugger to find in a heap of sawdust. Then you've got to remove the sprocket retaining nuts. remove the old sprocket and chuck it out. Clean the hub so the new sprocket can sit flush, then pop the new one into place



10 Check it out

Refit the rear wheel, tighten the sprocket nuts and adjust the chain to the correct tension. Torque up the rear spindle and fit your shiny new R-clip in place of the rusty old paperclip you had masquerading as a split-pin. Refit the front sprocket cover and gear-change mechanism, using the mark made earlier, so you can position the clamp in exactly the right place on its shaft. Replace any bodywork, then take the bike off the stand and re-check the chain tension. Time for a cuppa

Perfect garage

Your garage should be a haven, the perfect place to work on bikes or even relax. Here's some of the essentials we think every garage should include

1 CLOCK

Adds a classy touch and good for telling the time with.

2 FAGS

For a well deserved break or for stress-relief when poo is introduced to the fan. Often needed after using item No 20.

3 TOWEL DISPENSER

The sign of a serious mechanic, plus your mate hasn't got one. Use for wiping hands or other messy tools (see mags).

4 COMFY CHAIR

A good place to ponder a knotty problem, to watch the TV or recline on when enjoying a job well done.

5 WORKSHOP STAND

This Abba stand comes on wheels enabling you to move it and the bike around as required.

6 PB CALENDAR

Twelve months' worth of beautifully photographed motorcycles and ladeez. And you can make jokes about using it to time your mates round Cadwell.

7 DANGLING LAMP

You don't want to be working in the dark, so let there be light where you need it with a ceiling-mounted dangler.

8 MINI FRIDGE

For keeping snacks, drinks and lubricating jelly nice and cool. The bigger the garage/person the bigger the fridge.

9 A PERFORMANCE BIKE

What's the point in having a sorted garage with a pile of two-wheeled shite in it? Get a proper bike.

10 BEAD BREAKER

For changing tyres in the comfort of your own gaff. Maybe one for the racers and trackday heads.

11 COMFY FOAM MAT

Surely you remember the song: "Look after your knees, you'll miss them when they're gone." No? Us neither...

12 BREAKER BAR

Having arms like Amie still might not help you get that wheel nut off. This will

13 VICE

For putting stuff in to drill, cut or just for some clamping. How many times have you wished you had one? So do it.

14 CONTAINER BOX

A box marked 'stuff I'll keep but never actually use'. It'll need to be a big box...

15 DECORATION

You have to add a personal touch to the walls. Posters, stickers, trackday photos or old bits of bikes will do the job.

16 VARIOUS LUBRICANTS

Lube, all types and makes are needed. Everything from WD40, to 3-in-1, to engine oil. Oh, and at least 27 different types of chain lube.

17 SOLID WORKTOP

Whether it's stripping parts, rebuilding engines or just for putting your favourite tools on, you need a worktop.

18 MAGAZINES

Keep your mags for reference or just for chilling out. *PB*, *MCN Sport* and *Club* come highly recommended.

19 WHEEL BALANCER

This Abba balancer goes with the bead breaker as part of your essential tyre changing kit.

20 WIDOWMAKER HAMMER

If in doubt give it a clout. A useful tool to have around.

21 CLEAR WORKING SPACE

Such a simple thing as keeping the floor clear might prevent an accident and make it easier to find stray bolts.

22 LATEX GLOVES

Engine oil is carcinogenic, nuff said.

23 TV

Either for background noise or for sitting in the garage next to your bike and watching the GP.

24 WORKING LAMP

Have yourself a high-powered, self-standing halogen lamp close at hand.

25 CD/CASS/RADIO

"If music be the food of love - let's eat," (Alan Partridge).

26 TOOLCHEST

A little obvious, but essential. It's an organised place to store your tools. Just make sure it's lockable.

27 NICE TOOLS

Buy a comprehensive, lower priced set, and gradually replace the items you use most regularly with quality kit.

28 OIL CATCHPAN

Essential for avoiding spillages on your garage floor.

29 MONKEY BIKE

The ultimate road-legal toy. Use for popping to the shops

30 HEATER

In the colder months you and your bike might spend a lot of time together in the garage, so you want to be toasty.

31 LEATHERS

Don't stink your house out with them - but do keep them dry. The sliders will remind you why you're fixing the bike.

32 PADDOCK STAND

No centre stand? You'll need one of these

33 HAND CLEANER

It's a grubby environment, so have a big tub handy to clean yourself up after each session.

THANK YOU

Machine Mart - suppliers of workshop equipment and tools (0845 4501800 & www.machinemark.co.uk)

Würth - they do most things you need in your garage (0870 5987841 & www.wurth.co.uk)

Demon Tweaks - and so do they (01978 664474)



Track toolbox

When you're at the track you don't want a minor spill or mechanical failure to ruin your whole day – be prepared

ESSENTIAL



Gaffer tape

Like a lighthouse to a ship's captain, gaffer tape is the do-it-all saviour of choice to us bikers. Its versatility knows no bounds. Apart from the obvious uses – taping lights and clocks – the strategic positioning of gaffer can be used to stop people tampering with your finely-tuned suspension settings; it can keep bodywork together, hold wires in the right place, even stick leathers together or hold broken visors shut. If anything breaks or falls off – gaffer will hold it all together again.

■ **Cost:** from £3
 ■ **Contact:** www.halfords.com or your local DIY store

Halfords 36-piece 1/4in drive socket set

The Halfords Professional range is guaranteed for life – which gives you some idea of the confidence Halfords have in the quality. Despite such compact dimensions (the box is just 194mm x 130mm x 35mm) it contains 36 extremely useful bits. The chrome vanadium steel ratchet is small but provides ample leverage for most jobs; sockets range from 3.5mm-14mm; there's a universal joint, a handy screwdriver attachment and a selection of adaptors. Perfect for pit lane fettling.

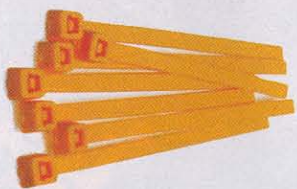
■ **Cost:** £29.99
 ■ **Contact:** www.halfords.com or 0870 121 4488

Vise Grip Multi-Tool

While the American army has traditionally supplied its troops with the latest high-tech weaponry, the mighty Swiss army famously equips its recruits with a penknife... not much good for repelling foes unless you intend to prod them with a toothpick or file them to death. If the Swiss army spent more time bodging together track bikes than hiding in the hills, maybe they'd have invented this: the Vise Grip Multitool, with capable 50mm locking pliers, a wire cutter and stripper, a magnetic screwdriver and a dual edged knife. A competent package.

■ **Cost:** £16.50
 ■ **Contact:** www.axminster.co.uk

RECOMMENDED



Cable ties

Where would we be without cable ties? They do everything from handcuffing Colombian drugs dealers to keeping electrical cables where they should be. Broken bodywork, clocks, tanks, mudguards, footpegs and sidestands can all be lashed to the frame to keep you on the move, as well.

■ **Cost:** around £3 for 100
 ■ **Contact:** your local electrical store



Adjustable C-spanner

Track days are the best place to get the most from your bike in relative safety. But this usually requires some adjustment of the suspension. A screwdriver and spanners are all that's required up front, but rear preload requires a special tool, and rather than collect a whole range of C-spanners, stick one of these in your 'box.

■ **Cost:** £30
 ■ **Contact:** www.tga.co.uk



Halfords pencil gauge & footpump

If you're doing some track riding you'll be working the tyres harder and heating them up more than usual. As air expands when heated, setting the correct tyre pressures before the off is essential. A footpump and an accurate pressure gauge are therefore vital kit to carry with you.

■ **Cost:** footpumps from £8.99
 ■ **Contact:** www.halfords.com

WORTH A LOOK



Halfords stubby spanner set

There's a trade-off with stubby spanners: they're small enough to carry around under your seat or in a rucksack, but their miniscule size means leverage is also reduced. In most cases this isn't a major problem though. When coupled with a Halfords socket set, you can get at both ends of a nut and bolt without the risk of that roadside/pitlane problem – a rounded head, which often occurs when forced to use pliers.

■ **Cost:** £19.99
 ■ **Contact:** www.halfords.com 0870 1214488



WD-40

On a trackday more demand is placed on the moving parts of a bike such as the gear selector, clutch cable and rear brake lever. A quick squirt of penetrating WD40 will lubricate these moving parts and – by reducing friction – give them an easier time. It's also a useful aid if the bike's a bit reluctant to start. No substitute for proper maintenance but it might just prevent a problem which has the potential to ruin your day.

■ **Cost:** from £2.50
 ■ **Contact:** your local DIY store

DOUBTFUL



Rep & Air puncture repair kit

Getting a puncture can ruin your day, but remember – puncture repair kits are sold as a 'get you home' rather than a 'get round Cadwell'. This neat kit consists of three gas cartridges, three repair plugs, plug cement and an insertion tool. Gets you home – or to the tyre fitters – but use on track at your own risk.

■ **Cost:** £19.99
 ■ **Contact:** Motrax 01933 418414



Chain lube

Tempting as it is to take as much kit and caboodle as possible – chain lube isn't necessary and takes up useful space. Chain lube, or chain wax will work for at least a week without needing to be re-applied. But an un-lubed chain is prone to excessive wear – so lube your chain before heading off to the track.

■ **Cost:** £4.50
 ■ **Contact:** www.mandp.com 08705 703030

TYRE FITMENT GUIDE

AVOID!



Imperial tools

The whole world uses metric except for the good old US of A where they still measure bolt sizes in inches, of all things. Because of this, we still see a huge range of Imperial tools on the shelves of hardware shops in this country. Don't make the mistake of buying these, they won't fit most modern bikes and will round off every bolt you attack.

■ **Cost:** various
 ■ **Contact:** local tool shop



Standard tool kit

The only thing more useless than the mini-screwdriver set found in Christmas crackers is the standard tool-kit under the seat of your bike. The spanners will at the first hint of a seized nut and the flexi-screwdrivers can butcher even the toughest screw head. Ditch the lot.

■ **Cost:** n/a
 ■ **Contact:** n/a

Sports tyres

Want more grip? Check out **PB's** definitive guide to the best sticky rubber available

Manufacturers give their tyres recommended retail prices, which promptly go out of the window as soon as they hit the showroom. Tyres are competitively priced – it's hard to find more than a few quid difference between either tyre brands themselves, or the places that sell them. So

although it's probably worth shopping around between dealers, tyre emporiums, online and supermarkets, look to spend roughly the following:

- **Sports (medium/fast road):** £95 front, £140 rear, £235 pair
- **Supersport (fast road/track-day):** £105 front, £145 rear, £280

SUBSCRIBE AND GET FREE STUFF! 

- **Hypersports (track day/race only):** £120 front, £160 rear, £280 per pair.

Tyres are one of the few things that cost less the longer lasting they are. ChengSlimes will last about a decade and cost pennies, while Dunlop SnotGrips last a few seconds but cost loads more.

AVON AZARO SPORT PRO

- Medium/fast road
- Avon: 01225 703101
www.avonmotorcycle.com

FRONT	REAR
110/70 ZR17	150/60 ZR17
120/60 ZR17	160/60 ZR17
120/70 ZR17	170/60 ZR17
130/70 ZR16	180/55 ZR17
	190/55 ZR17



AVON AZARO SP PRO SERIES

- Fast road/trackday
- Avon: 01225 703101
www.avonmotorcycle.com

FRONT	REAR
110/70 ZR17	150/60 ZR17
120/60 ZR17	160/60 ZR17
120/70 ZR17	170/60 ZR17
130/70 ZR16	180/55 ZR17
	190/55 ZR17



AVON AZARO SP PRO EXTREME

- Trackday/race only
- Avon: 01225 703101
www.avonmotorcycle.com

FRONT	REAR
120/70 ZR17	180/55 ZR17
130/70 ZR16	190/50 ZR17



BRIDGESTONE BT-012

- Medium/fast road
- Bridgestone: 07000 228852
www.bridgestone-eu.com

FRONT	REAR
130/70 ZR16	180/55 ZR17
120/60 ZR17	190/50 ZR17
	200/50 ZR17



BRIDGESTONE BT-012 SS TYPE

- Fast road/ trackday
- Bridgestone: 07000 228852
www.bridgestone-eu.com

FRONT	REAR
130/70 ZR16	180/55 ZR17
120/70 ZR17	190/50 ZR17



BRIDGESTONE BT-001 PRO

- Trackday/race only
- Bridgestone: 07000 228852
www.bridgestone-eu.com

FRONT	REAR
120/70 ZR17	180/55 ZR17
	190/55 ZR17



DUNLOP D207RR

- Fast road/trackday
- Dunlop: 0121 3062940
www.dunloptyres.co.uk

FRONT	REAR
130/70 ZR16	160/60 ZR17
120/65 ZR17	180/55 ZR17
120/70 ZR17	190/50 ZR17



DUNLOP D208 GP

- Trackday/race only
- Dunlop: 0121 3062940
www.dunloptyres.co.uk

FRONT	REAR
110/70 ZR17	150/60 ZR17
120/70 ZR17	170/60 ZR17
	180/55 ZR17
	190/50 ZR17



METZELER SPORTEC M1

- Medium/fast road
- Pirelli Metzeler Moto UK: 08456 094949

FRONT	REAR
130/70 ZR16	150/60 ZR17
110/70 ZR17	160/60 ZR17
120/60 ZR17	170/60 ZR17
120/65 ZR17	180/55 ZR17
120/70 ZR17	190/50 ZR17
	200/50 ZR17



METZELER RENNSPORT STREET

- Fast road/ trackday
- Pirelli Metzeler Moto UK: 08456 094949

FRONT	REAR
110/70 ZR17	150/60 ZR17
120/60 ZR17	160/60 ZR17
120/70 ZR17	180/55 ZR17
	190/50 ZR17



METZELER RENNSPORT RACE

- Trackday/race only
- Pirelli Metzeler Moto UK: 08456 094949

FRONT	REAR
110/70 ZR17	150/60 ZR17
120/70 ZR17	160/60 ZR17
	180/55 ZR17
	190/55 ZR17



MICHELIN PILOT SPORT

- Medium/fast road
- Michelin Tyre PLC: 01782 401853

FRONT	REAR
130/70 ZR16	150/60 ZR17
110/70 ZR17	160/60 ZR17
120/60 ZR17	170/60 ZR17
120/65 ZR17	180/55 ZR17
120/70 ZR17	190/50 ZR17



MICHELIN PILOT RACE 2

- Trackday/race only
- Michelin Tyre PLC: 01782 401853
Pilot Race S2/M2/H2 compounds

FRONT	REAR
120/60 ZR17	150/60 ZR17
120/70 ZR17	160/60 ZR17
	170/60 ZR17
	180/55 ZR17
	190/50 ZR17



PIRELLI DIABLO

- Medium/fast road
- Pirelli Metzeler Moto UK: 08456 094949
www.pirellimoto.co.uk

FRONT	REAR
130/70 ZR16	150/60 ZR17
110/70 ZR17	160/60 ZR17
120/60 ZR17	170/60 ZR17
120/65 ZR17	180/55 ZR17
120/70 ZR17	190/50 ZR17
	200/50 ZR17



PIRELLI DIABLO CORSA

- Supersports (fast road/trackday)
- Pirelli Metzeler Moto UK: 08456 094949
www.pirellimoto.co.uk

FRONT	REAR
120/70 ZR17	180/55 ZR17
	190/55 ZR17



PIRELLI DRAGON GTS

- sport touring
- Pirelli Metzeler Moto UK: 08456 094949
www.pirellimoto.co.uk

FRONT	REAR
110/70 ZR17	160/60 ZR17
120/60 ZR17	180/55 ZR17
120/70 ZR17	190/50 ZR17
	160/60 ZR18



PIRELLI DRAGON SUPERCORSA

- Trackday/race only
- Pirelli Metzeler Moto UK: 08456 094949
www.pirellimoto.co.uk

FRONT	REAR
120/70 ZR17	160/60 ZR17
120/70 ZR17	160/60 ZR17
	180/55 ZR17
	190/55 ZR17



TOMAHAWK ROAD

- Medium/fast road
- Tomhawk: 01902 307767
www.tomhawktiresltd.com

FRONT	REAR
120/60 ZR17	150/70 ZR17
120/70 ZR17	160/60 ZR17
130/60 ZR17	170/60 ZR17
	180/55 ZR17
	190/55 ZR17
	160/60 ZR18



TOMAHAWK SPORT

- Fast road/ trackday
- Tomhawk: 01902 307767
www.tomhawktiresltd.com

FRONT	REAR
120/60 ZR17	150/70 ZR17
120/70 ZR17	160/60 ZR17
130/60 ZR17	170/60 ZR17
	180/55 ZR17
	190/55 ZR17
	160/60 ZR18



TOMAHAWK SPRINT

- Trackday/race only
- Tomhawk: 01902 307767
www.tomhawktiresltd.com

FRONT	REAR
120/60 ZR17	150/70 ZR17
120/70 ZR17	160/60 ZR17
130/60 ZR17	170/60 ZR17
	180/55 ZR17
	190/55 ZR17
	160/60 ZR18



TYRE FITMENT GUIDE

A big list of bikes and what tyre sizes they run, nice

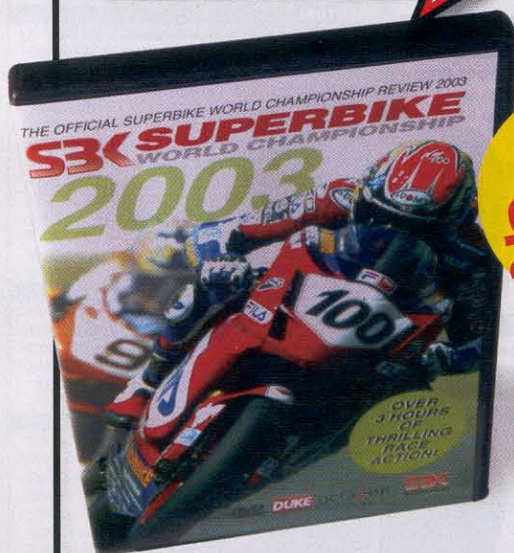
MODEL	FRONT	REAR
APRILIA		
RSV Mille R	120/70 ZR17	190/55 ZR17
RSV Mille	120/70 ZR17	190/55 ZR17
RSV Tuono	120/70 ZR17	180/55 ZR17
Futura	120/70 ZR17	180/55 ZR17
Falco	120/70 ZR17	180/55 ZR17
DUCATI		
748R	120/65 ZR17	180/55 ZR17
748SP/SOS/Bip	120/60 ZR17	180/50 ZR17
749	120/70 ZR17	180/55 ZR17
916 (5.5in)	120/70 ZR17	180/55 ZR17
916 (6in)	120/70 ZR17	190/50 ZR17
ST-4/ST-4S/S4	120/70 ZR17	180/55 ZR17
998 SP/S/R/Bip	120/70 ZR17	190/50 ZR17
999 R/S/Bip	120/70 ZR17	190/50 ZR17
HONDA		
Hornet 600 ('98-'00)	130/70 ZR16	180/55 ZR17
Hornet 600 ('01-)	120/70 ZR17	180/55 ZR17
CBR600 ('91-'98)	120/60 ZR17	160/60 ZR17
CBR600 ('99-'00)	120/70 ZR17	180/55 ZR17
CBR600 ('01-'02)	120/70 ZR17	180/55 ZR17
CBR600RR ('03-)	120/70 ZR17	180/55 ZR17
RC45	130/70 ZR17	190/50 ZR17
VFR750 ('90-'97)	120/70 ZR17	170/60 ZR17
VFR800/VTEC	120/70 ZR17	180/55 ZR17
Hornet 900	120/70 ZR17	180/55 ZR17
Blade ('92-'99)	130/70 ZR16	180/55 ZR17
Blade ('00-'02)	120/70 ZR17	190/50 ZR17
Firestorm	120/70 ZR17	180/55 ZR17
SP-1/2	120/70 ZR17	180/55 ZR17
Blackbird	120/70 ZR17	180/55 ZR17
KAWASAKI		
ZX-6R ('95-'97)	120/60 ZR17	160/60 ZR17
ZX-6R ('98-'99)	120/60 ZR17	170/60 ZR17
ZX-6R ('00-'01)	120/65 ZR17	180/55 ZR17
ZX636 ('02)	120/65 ZR17	180/55 ZR17
ZX636/ZX-6RR ('03)	120/65 ZR17	180/55 ZR17
ZXR750 ('89-'95)	120/70 ZR17	180/55 ZR17
ZX-7R	120/70 ZR17	190/50 ZR17
ZX-9R ('94-'99)	120/70 ZR17	180/55 ZR17
ZX-9R ('00-'02)	120/70 ZR17	190/50 ZR17
ZRX1100	120/70 ZR17	170/60 ZR17
ZZ-R1100	120/70 ZR17	180/55 ZR17
ZRX1200R/S	120/70 ZR17	180/55 ZR17
ZX-12R	120/70 ZR17	200/50 ZR17
SUZUKI		
Bandit 600 ('95-'00)	110/80 ZR17	150/70 ZR17
Bandit 600 ('00-)	120/60 ZR17	160/60 ZR17
RF600R	120/70 ZR17	160/60 ZR17
GSX-R600	120/70 ZR17	180/55 ZR17
GSX-R750 ('92-'95)	120/70 ZR17	180/55 ZR17
GSX-R750 ('96-'00)	120/70 ZR17	190/50 ZR17
GSX-R750 ('00-'03)	120/70 ZR17	180/55 ZR17
RF900R	120/70 ZR17	180/55 ZR17
GSX-R1000 K1/2/3	120/70 ZR17	190/50 ZR17
TL1000R/S	120/70 ZR17	190/50 ZR17
GSX-R1100 ('90-'96)	120/70 ZR17	190/50 ZR17
Bandit 1200/S	120/70 ZR17	180/55 ZR17
Hayabusa	120/70 ZR17	190/50 ZR17
GSX1400	120/70 ZR17	190/50 ZR17
TRIUMPH		
Speed Four	120/70 ZR17	180/55 ZR17
TT600	120/70 ZR17	180/55 ZR17
Daytona 600	120/70 ZR17	180/55 ZR17
Sprint RS/ST	120/70 ZR17	180/55 ZR17
Speed Triple (all)	120/70 ZR17	190/50 ZR17
T595/955i	120/70 ZR17	190/50 ZR17
YAMAHA		
FZR600 ('94-'95)	120/60 ZR17	160/60 ZR17
Fazer 600	110/70 ZR17	160/60 ZR17
Thundercat	120/60 ZR17	160/60 ZR17
R6	120/60 ZR17	180/55 ZR17
YZF750R/SP	120/70 ZR17	180/55 ZR17
FZR1000 Exup	120/70 ZR17	180/55 ZR17
Thunderace	120/70 ZR17	180/55 ZR17
R1	120/70 ZR17	190/50 ZR17
Fazer 1000	120/70 ZR17	180/55 ZR17
XJR1300/SP	120/70 ZR17	180/55 ZR17

GET A YEAR'S

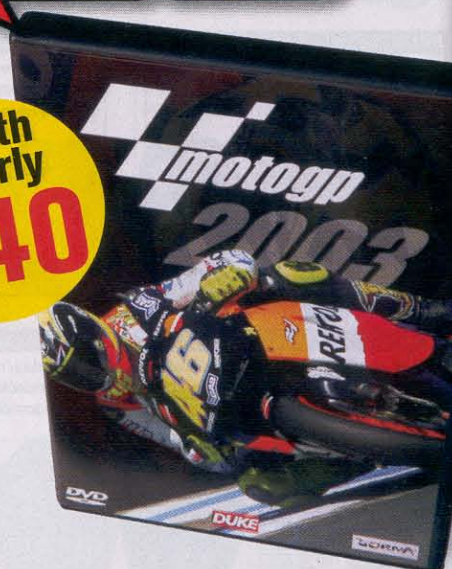
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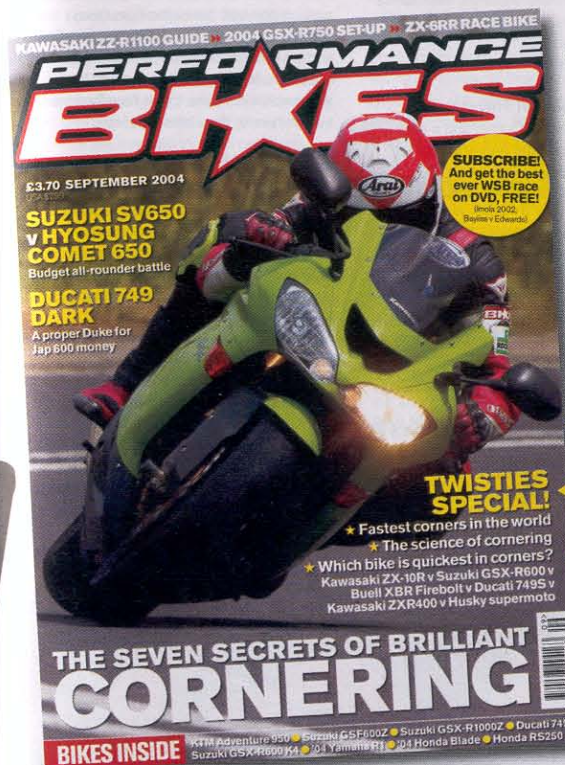
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Engine

Problems with your lump? Don't worry, we've got experts on hand...



Troubleshooting
a TL1000S

TL HELL

Q I have a 1999 Suzuki TL1000S, which is causing me grief. The bike has 48,000km on the clock, is well maintained and serviced and fitted with a set of Staintune cans. I use the bike for commuting and scratching. But, when the temperature gauge is showing 80° or less and the revs are between 3000 and 3500 the motor snatches severely. I have to pull the clutch, blip the throttle to clear the rev range and then slip the clutch till the revs are above that particular part of the dial. This only occurs when the temp is less than 80°, if the temperature is higher there is a very slight stumble but nothing I would call a problem.

I have noticed that my current TL has significantly less 'punch' than my old '97 model. Are there any reasonably inexpensive ways to get some of the power back?

Mojo, Brisbane, Australia

A Mark Brewin at BSD: "You could regain the top end power of your 1997 model by fitting an ECU from that bike. But you will encounter the low speed running problems of that model. The low speed running problems you are currently experiencing are down to the end-cans and a lack of back pressure. Best bet is to get to a dyno centre and have your bike remapped to account for the cans."

■ BSD: 01733 223377

BLOWN YAM

Q My 2000 Yamaha R1 is making a rattling sound. It starts at 4000rpm but then gets worse at 6000. Checked the camchain tensioner and chain but they're fine. Then on the M1 the cam cover gasket blew out the side of the casing. Stripped the top off and checked all the cams and gaps which again seem fine. I've also checked the clutch and generator but nothing's loose there either. At this rate it's gonna end up in a skip after an accident with a sledgehammer.

Alex Pryce, email

A Saul Towers at Flitwick Motorcycles: "Something's awry here, and I'm afraid the only answer is a top-end strip. The cambox could be pressurising because of a blocked breather."

"The rattle may be down to a seized camchain tensioner, although I know you say you've checked that. Clearly further investigation is required."

■ Flitwick Motorcycles: 01525 712197

REVS LIMITED

Q My 1987 Kawasaki GPZ600R won't pull past 7000rpm or go over 80mph. The engine just dies as if there's a restrictor on it. Could this be the cause? I removed the K&N filters that had been fitted to the bike and put on a standard airbox. The bike also came with a road legal 4-into-1 Micron system. Could the carbs need balancing? The log book says

it's a ZX600A3. I think it's an import but don't know from which country. The Swiss model only revs to 7000 but the other A3 models indicated go to 10,500rpm. If it is a Swiss model can it be derestricted or can you suggest anything else I can try?

Step hen Spalding, Renfrewshire

A Alan at PB: "As your bike has at some time been treated to K&N filters and an aftermarket exhaust, it's a fair assumption that the carbs have been rejiggered to suit. So check the jets, needles and slides first, because if it's overfueling back on a standard airbox, it could bog. If it is a restricted model, this is usually done somewhere in the carbs/induction."

BANGIN' HONDA

Q I've had a problem with my 1999 VTR Firestorm from new. When the bike reaches near normal operating temperature and is then left to idle at about 1300rpm, around every 15 seconds there is a loud clunk as one of the pistons tries to run in reverse.

I returned to the dealer that carried out the PDI where I was quite adamantly told that the timing couldn't be adjusted as it was set permanently by Honda, so I carried on in the hope that it might settle down after the running in period, but to this day it still bangs in the odd early combustion at tickover. Obviously not too clever for the engine internals.

Paul Foulger, email

Firestorm running 'in reverse'?



A Mark Brewin at BSD: "We have experienced an occasional problem with the front plug cap on VTRs, which shorts leading to an occasional misfire."

■ BSD: 01733 223377

HONDA STUTTER

Q My old 1977 Honda XL125 stutters and backfires when I rev it. What's wrong, and are there any modifications that would make it faster?

Ben London, Nantwich, Cheshire

A Mark Brewin at BSD: "Check for air leaks on both the induction and exhaust sides. If that's okay, strip the carb and check the pilot and main jets are clear, and that the needle's in good condition."

■ BSD: 01733 223377

APRIL FUELS DAY

Q I've got a GSX-R1000 K2s and thought I'd fit a pipe. So I lobbied on a full titanium Akrapovic. Looks fookin loovly, sounds even better and feels quicker everywhere. Had the fuelling matched to the pipe (supposedly) and dynoed. The end result was 149 brake at the rear wheel. The throttle response is a bit snatchy at lower speeds which is a pain in the clutch! Is it worth pulling out for a Power Commander as views seem to vary whether or not these bikes actually need or benefit from them.

Graham Stott, Sunderland supporter

A Jon Helm at PDQ: "The ECUs on Suzukis can be re-programmed by means of a Yosh Box or Factory Teka tool. "It sounds like someone has already tried the Yosh Box / Teka Tool route, which is often too coarse. If it's still snatchy then this adjustment is not fine enough, which is why we never bother with it and always fit a Power Commander. It's a common misconception that fuel injected bikes have some means of self-compensating the fuelling when race-cans or systems are fitted. Very few bikes have lambda sensors in the exhaust to tell the ECU that anything has changed in how rich or lean the bike is running. This is a closed loop system."

"Dynojet's Power Commanders or Yoshimura's EMS System are the favoured method of adjusting the fuel injection on modern bikes because they offer such a finely tunable map, being able to change



Only problem with your NSR?

the fuelling for nine different throttle positions for every 500rpm throughout the rev range (every 250rpm on the very latest type). They are also the most expensive, starting at £284.35 for the K2."

■ PDQ: 01753 811060

TUNING BACKFIRES

Q I have a '96 ZX-9R which has a 950cc big bore, full Akrapovic exhaust, standard dialed-in cams and factory ignition advancer. Since I had the cams dialed in it backfires through the airbox occasionally, around idle. Also, it stinks of fuel at idle and the exhaust is pretty sooty. The carbs have stock 190 mains and stock needles. Can you help me out with carb set-up?

Rob Harris, New Zealand

A Steve at BikerDen: "Any combustion engine is essentially a box into which air and fuel are put, squashed together and then set fire to. The resultant gases are then extracted and the process is repeated. The more you can burn or the quicker you can burn it, the more the output increases. You have fitted a full exhaust system, which will have changed the way the gases leave the engine. This affects the air and fuel entering it and the whole process needs to be balanced for things to run smoothly."

"I suspect the exhaust and overlap have caused the inlet pressure to be lower, drawing harder through the carbs. A stock airfilter is probably now restrictive, causing the pressure drop to draw extra fuel from the carbs, in effect richening the mixture. This is then fouling the plugs after a short journey – most noticeable when it's hot!"

"If you can get to a rolling road, a quick gas analysis will show up the problem. Try a K&N filter and Stage 1 Dynojet kit to complement the exhaust, or get a Stage 3

set-up on a rolling road. The smell of fuel at idle is probably caused by 'stand off' – an effect created by inlet changes, (possibly the cams in this case) creating a haze of fuel and air above the carb inlet tracts."

■ BikerDen: 01908 587171

FOULED NSR

Q On good days my Honda NSR400R goes very well, but those good days are far apart. I have to clean my plugs every three to four weeks. I've been told the problem is down to the two-stroke oil I'm using. Would I be better going to a fully synthetic two-stroke oil?

Lee, Cleveland

A Mick Bone at Pidcock's (Nottingham): "Definitely use a fully synthetic on a bike of this type. Run on semi-synthetic for a while when making the transition. Also check that the two-stroke pump is correctly adjusted to deliver the correct amount of oil. Access to make adjustments is a little tricky as the front downpipes have to be removed, but the pump can be inspected with the pipes in place."

■ Pidcock's (Nottingham): 0115 9692200

NEEDLE POINTS

Q My Kawasaki ZX-7RR won't pull cleanly past 10,500rpm in any gear.

Can you advise me on carb needle type and position, jets, general carb set-up and so on. I have recently fitted, on recommendation, a Hindle full race system.

Chris Burrell, Morayshire

A Nigel at BSD: "You need to set the bike up on a dyno. Look at power and fuelling then have the necessary carb adjustments done from there."

■ BSD: 01733 223377

Chassis

Wobbles and weaves, slides and springs – your queries answered

Just nipping down the shops, love...



ONE BLADE...

Q I have a '98 CBR RR Blade and I am having trouble with the back end wallowing when cornering fast. The settings are on standard and I am 5ft 10in tall and weigh 14 stone. Do you have any suggestions what to set the suspension to? Please help cos my mate on his R6 keeps pissing on me on our favourite knee-down roundabouts.
Tim Auty, email

A **Bruce Dunn, PB set-up guru:** "Sounds like you want a bit more rebound damping. We did a set-up guide on your bike in January 2001. There are no issues left, but Sal can do you a photocopy for £2.50 to the UK, £3.50 overseas. Give Sal a call on 01733 468099 and she'll sort you out."

...TWO BLADE

Q I have changed the front end on my FireBlade after a spill. I had to use second-hand parts but fitted Öhlins fork springs and rear shock. I would like to know how to set up the suspension. It's a 1997 RRV.
Marco, email

A **Bruce Dunn, PB set-up guru:** "Sort out the preload. You should be using about 30 per cent of the available travel at the front when you're sat on the bike. Aim for about 15mm static sag at the back. Rebound and compression are down to what you're doing with the bike."

WEIGHTING GAME

Q I am planning to do my bike test when I get my licence back at the end of this month. I have already got all the gear, including a 1987/8 Honda CBR400 Tri-Arm. I was wondering if there was anything I should do to it with regards to set-up so that the poor little thing can cope with my portly 17-stone frame.
James Barton, Newmarket

A **Grant at Elliott Motorcycles:** "We encounter a surprising amount of larger gentlemen on these tiddler bikes, so we know a few ways to make things better. "Extended spacers (around 10-15mm) in the front forks will give some preload. Wind everything up at the back too (preload and damping)."

"If that isn't enough we can overhaul the shock for £156 and for an extra £20-30 we can extend the damper rod."

■ Elliott Motorcycles: 01793 751752

CAT CONVERTER

Q I know you don't think much of the Thundercat and rip the piss at every opportunity. I haven't done anything except fit a Venom can, that feels good. But the Cat was always lacking in the suspension department so I've fitted an Öhlins shock and stripped the forks to replace the standard springs with Öhlins and 10w oil. It now rocks.

The question is, if I could get R1 forks and yokes at the right price will they slip in without much trouble using the Cat wheel,

calipers, and discs, or will I need the complete front end?

Today's bikes are too small for my Adonis-like frame, while the Cat is spot on.
Andy Bee, Isle of Wight

A **Saul Towers at Flitwick Motorcycles:** "You would need a complete front end and a considerable amount of patience. Thundercat brakes aren't that far off those on an R1 anyway. "With second-hand R1 prices as low as £3500 it might be worth considering trading up as a front end from a breakers is likely to be quite expensive."

■ Flitwick Motorcycles: 01525 712197

SPRING TIME

Q I have a 2001 Aprilia RSV Mille and have bought a pair of OZ wheels and an Öhlins rear shock, from an RSV-R.

I have yet to fit these but would like to know how to set up the suspension as I assume I will have to make adjustments to suit the lighter wheels. I have also been told that the Öhlins shock is longer than the stock Sachs item.

The Öhlins unit has been fitted with a 150 Newton K-Tech spring.
Innis Finlay, email

A **Chris Taylor at K-Tech:** "Make sure you have the linkage that goes with the shock, otherwise it's not a straight bolt-on job. The stroke's the same but the length is different, and Aprilia fitted two different Öhlins shocks that year, one with a ride height adjuster. You've got a little less unsprung weight with the OZ wheels, but not really enough to mean you'll have to go too radical on suspension settings."

■ K-Tech: 01530 810625

ARSED BANDIT

Q A few months ago my '99, 1200 S Bandit broke into a weave as I went past my buddy on the motorway. I just thought it was down to the conditions. This bike had done a steady 140mph for an hour or so, in Spain, two up, fully loaded with crammed three-box Givi and tankbag, just weeks before. The next weekend it weaved again. In fact if pushed in a corner, or anywhere over 100 mph it would just start to nod its head in a worsening shimmy. With another European jaunt

coming up I started to modify and test to get the problem sorted. New tyres – no change. New chain and sprockets – no change.

New tyres again (different make) – no change. £500 rear damper – no change. No luggage, no screen, no fairing, no mudguard, all combinations – no change. New headraces – no change. Fork brace – maybe worse. Mess with front preload – no real change.

If anything most changes make it worse, with the weave starting at 90mph or so on the straight and 60 in a bend, increasing front preload to max can make it more rideable in the weave. Add a passenger, however, and it's absolutely rock steady.
Martin Pender, email

A **John at BanditMania:** "We have had problems with the odd new-shape Bandit, where weaving can become a problem after the tyres have worn by about a mil or so, but not the old shape like yours. You don't say which tyres you're using, but don't go for anything with too triangulated a profile. We recommend standard Dunlop D207s, not RRs or anything fancy. They're cheap too. Run at 36psi front and rear. This might sound daft, but what jacket are you wearing? A flapping cloth jacket can provoke a weave. The forks are budget items, but fitting a £58 pair of Hagon springs and switching from 10 to 15w oil yields huge benefits."

■ BanditMania: 01522 871600

SHORT ANSWER

Q I'm 5ft 2in and currently ride a NC30 but need more power to keep with my mate on his GSX-R600. I'm considering getting a 600, but being a



Set-up issues when fitting an RSV with RSV-R suspension and wheels

Speed wobbles on a Bandit 12?



short arse, I don't know what my options are. My other thought was to tune my NC30, but with it drinking petrol like a fish already, I want to do more than a few miles before re-filling.
Lee Emery, email

A **Alan at PB:** "Your diminutive stature need not preclude you from the joys of larger sportsbikes. Some longer tie rods for the rear shock will drop the seat height, although ground clearance will be compromised slightly. But don't let this put you off. You can sort out the ground clearance issues by fitting a set of rearsets. This will also allow your tiny legs to reach the pegs more easily."

FORKED OFF

Q I have a 1989 Kawasaki GPZ500 S, yup the one with the suicidally small front wheel. I know about the tendency for it to drop away but I hadn't expected it to be quite this bad. It's wanted to slide away even at reasonable speeds (40mph) on warm dry roads – websites on the subject say to be careful on wet roads – bad conditions etc.

I've noticed that if I hold the brake while stationary and push down on the bars the forks go down – come back up and then back down again, suggesting to me that there's something not quite right with the damping. Would heavier fork oil and a spacer on the spring do it or should I take a look at the valve and see if it needs fixing or replacing?

The alternative is go through corners like a wimp.

Rickie Bardsley, email

A **Nigel at BSD:** "Fit single rate springs to suit your body weight. If you're 10-13 stone, an 8 or 8.5 spring should do it. Then reduce the air gap by

putting more oil in. Start at 120mm and see how you go. Push the stanchion into the slider with the springs out and measure the distance from the top of the oil to the top of the stanchion. That's your air gap."

■ BSD: 01733 223377

WHEEL SWOP

Q I have an NC24 which makes a fine track bike but is let down by the limited tyre choice for the 16in front wheel. Will a wheel from an NC30 or 35 fit the front without too much grief or can you suggest the best stickiest tyre available in the 100/90 x 16 size? I'm currently using Bridgestone BT45s.
Cliff, email

A **Grant at Elliott Motorcycles:** "The spindle diameter is the same, but you may find that you need to have spacers made up, not just for the spindle, but for the calipers. And the larger tyre may foul the mudguard. If you do stick with the 16in front wheel, the Bridgestone BT45 is an excellent choice, and should be perfect for fast track use."

TAKING THE RISE

Q I want to change the handlebars on my Honda X11 (X what? I hear you say...) I would like to know who can supply the necessary risers for this bike. Also can I do away with the linked brake system and fit two-piece front and single rear braided hoses without affecting stopping?
Len Gray, email

A **Alan at PB:** "M&P (08705 703030) can provide risers and bars. Any competent engineering shop can make the blanking plugs you need when you disconnect the brakes and Goodridge (01392 369090) can provide the hosework."

Brakes and tyres

Ever since the invention of the wheel we've had brake and tyre grief

WARP FACTOR

Q My 1995 Yamaha RD350R has brake judder so new discs are required. I would like to update the calipers if possible, and have fitted Goodridge hoses. Can you advise on a make of disc, type of pads and any calipers that might fit. I have seen pictures of Suzuki RGV250 front ends on these, but I don't want to go down this route.

Russell Cashmore, email

A **Saul Towers at Flitwick Motorcycles:** "EBC do discs at £81 each and Yamaha originals are £110. There is little point in updating the calipers as all this will do is highlight the deficiencies of the spindly forks. The best set-up for an RD350 is standard calipers (overhauled if necessary) with EBC HH pads and Goodridge hoses."

■ **Flitwick Motorcycles:** 01525 712197

BRAKER'S YARD

Q I'm the proud owner of a 1998 TRX850 (Dutch import). It's a top bike but I find it lacks stopping power, actually that's an understatement, they are complete pants. I've fitted braided hoses but couldn't notice the difference. I was wondering if any better brakes from any other sportsbike could be fitted straight on? Please help!

Steve Robinson, Lincoln

A **Saul at Flitwick Motorcycles:** "I've met a few TRX850 owners who've asked about better brakes. It's a stroke of luck that calipers from the R series bolt straight on. I'd go for a pair of R1 calipers and master cylinder, although you could stick with your standard master cylinder if you like. It should be a straightforward swap."

■ **Flitwick Motorcycles:** 01525 712197
Ben at PB: "I've done some research on R1 calipers, and I've been quoted anything from £100 to £140 a pair. If you take a look at our classics, you might find a set!"

THE WRONG SHOES

Q I recently bought a 1997 Honda CBR600 that came with partly worn tyres. My mates say they are the incorrect sizes. There's a 120/70 on the front and a 180/55 on the rear. Are my mates right



ZXR boots - what's best?

and if so, what size should they be?
Mark Anderson, Kirkcaldy, Fife

A **Alan at PB:** "Your mates are right, the tyres fitted to your bike are actually the recommended fit for '99-on models. So either a dealer has misread the fitment book, or someone has fitted the larger tyres in the hope of improving grip and handling, something that simply doesn't happen."

"Next time you fit tyres go for the sizes your bike was designed to run on, which are 120/60 front and 160/60 rear."

SPANKED ARSE

Q I have a ZXR750 J2, and need to replace the old BT56 on the arse. Thing is the front is spanking. What's my best option for fitting compatible tyres?

Graham Dudman, email

A **Bryn Phillips at Bridgestone:** "Our nearest tyre in terms of performance is the BT010, which replaced the BT56. Ideally you want a matched pair, but we understand that in the real world riders can't always afford to do that."

"Go for a careful running in period of around 100 miles to check for stability. You shouldn't have any problems, but in case you do, consider a new front as well."

■ **Bridgestone:** 07000 228852

MATCH MAKING

Q I wondered if you could offer any advice for setting up the suspension on my GSX-R600 K1? I've owned the bike for a year and have always had trouble with it giving the sensation of moving when half way round a corner (right or left). The tyre on the front is the original Corsa but the one on the back is the Metzeler MEZ3. I am told the tyres are compatible.

I have, after advice from a friend, taken some of the rebound off the rear suspension. This seems to have improved the sliding, but because I don't know what I'm doing I'd rather not fiddle and tweak. All the other settings are as standard front and rear, I weigh 111½ stone and brake quite hard going into corners. I do hope you can help as this problem is spoiling my days out. One piece of advice that I was given is to take it on a trackday at Cadwell, as I only live 15mins from the track, and ask one of the lads there to help.

Would you know if you ever did a write up on the suspension in your mag?
Kev Parro, Lincolnshire

A **Paul Chance at Pirelli Metzeler:** "You want the stickier tyre on the front, which is what you've got. The tyres are compatible and should certainly be capable on the road. My friends at Performance Bikes did a set-up on this model in December 2001, and Sal can sell you a reprint for £2.50. Give her a call on 01733 468099."

TYRE CHOICE

Q After 20 years away I've just got back into biking. I have a Honda CB250Y with Dunlop tyres. My last bike was a Suzuki GSX250 that had Michelins which were good in the dry and the wet. When I come to change my tyres I'd like to use Michelins again. What would you recommend? Also I'd like a manual and some crash bars.

L McGrath, Fife

A **Alan at PB:** "Different manufacturers top the tyre tree for different bikes at different times. And some of us have a leaning towards or away from different makes depending on our experiences. You won't go wrong with either of the brands you name for your CB250. As far as the manual goes, you'll have to get a Honda original as no-one else does one. Can't find a manufacturer of crash bars for your model either, although at a guess an adapted set from a 250 Superdream might just fit."

TYRE CONFUSION

Q I have an RGV250 and I am looking for a new set of tyres. I'm looking for a sticky road tyre, not high mileage, what do you recommend? Two years ago Metzeler Rennsports were the tyre to go for. With the march of time and tyre technology, what would you fit to my bike?



Best brake set-up on an RD350?

Rick Brice, Ipswich

A **Mike at PB:** "Rennsports and Pirelli Super Corsas are good and available in road or race compounds. But I would recommend the Bridgestone 090. I've got some fitted to my NSR250 and they are the absolute bollocks. They heat up quick and are superb in the wet. Something to do with 'silica richness' they tell us."

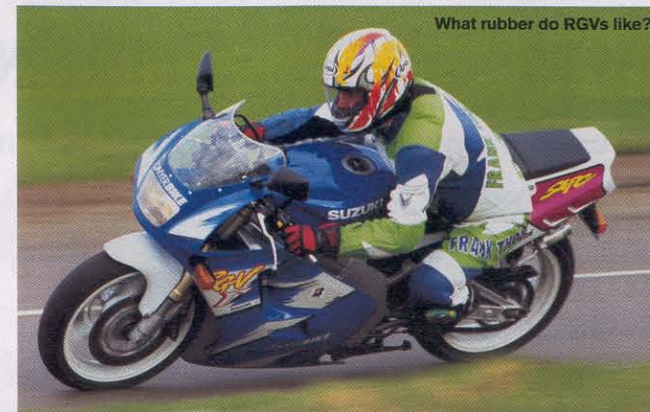
■ **Bridgestone:** 07000 228852

■ **Pirelli Metzeler:** 0845 6094949

THE RIGHT PROFILE

Q Being pretty new to bikes I have just encountered my first puncture - on the rear tyre of my GSX600F. Thanks to a friendly local Hayabusa rider I managed to ride the 40 miles home from deepest Ayrshire with foam in the tyre.

On the side of caution I decided to change the tyre instead of plugging it, but couldn't find a match for the newish Continental Continimax on the front in time



What rubber do RGVs like?

for a trip to Knockhill.

On advice of a dealer I now have a Pirelli Dragon GTS on the back and a Contiforce on the front, having been told these were compatible. Anyone I now tell is horrified. Is it really that critical to have two matching tyres?

Justin Gill, email

A **Paul Chance at Pirelli Metzeler:**

"Manufacturers always recommend fitment in matching pairs for various reasons. Different tyre makers use different profiles - some are triangular where others are more rounded - which means mixing and matching can be a bit of a lottery. You can wind up with tyres that have different contact patches and turn-in characteristics. In extreme cases, say if a rear is grippier than a front, the back will push the front end, although this is unlikely."

"You're not doing anything illegal though, and it wouldn't cause any insurance problems. We accept that in the real world people mix and match tyres, we've all done it. If you are going to though, get as close a profile match to the other tyre as you can. The Pirelli Dragon GTS you've fitted is our sports-touring tyre and is quite rounded. It's designed for stability with no surprises, so I'm sure you'll be fine with it."

Pirelli Metzeler: 0845 6094949

Getting fatter

Q I ride a 99 VTR Firestorm and wondered if I can fit a 190 section rear tyre. Will it fit? Will it affect the handling? Help would be appreciated.

Pete Ross, e-mail

A **Alan at PB:** "Yes you can fit the bigger tyre, but it'll do nothing for handling. Obviously all your mates will think your cock's grown along with your tyre, however, so maybe it's worth doing."

Miscellaneous

Tell us your problems – if we can't help, we know a man who can



Fuel mapping on a late model Blade

OFF THE MAP

Q I own a Honda FireBlade RR-1 (registered in 2002) and I'm considering buying an Akrapovic end-can. My local bike shop (who don't have a dyno) told me that there is no need for any remapping and, as the can is tested on factory settings, there will be no flatspot problems. Is this correct? Also, would you recommend a road or race-can?

Nigel Goodall, email

A Alan at PB: "Back in May 2001 we did a test of various end-cans on an RR-1 Blade. An Akrapovic titanium unit performed very well at that time, and apart from a slight dip around 4000rpm the can was at least as good and mostly better than the standard unit. But as every bike is made to meet emissions and noise regs at a fixed point, tweaking the fuelling is sure to deliver benefits. Whether it's worth it is an argument your throttle hand has to have with your wallet."

"A race-can has the potential to free up more ponies than a road legal one, but is considered anti-social by some. If you have noise sensitive neighbours, or don't want your exhaust note to act as an early warning system for roadside plod, you may be better off with a road legal can."

GOING LEGAL

Q I'm in my second season of racing and currently riding a GSX-R1000 K1. I've managed to insure it for daytime

use so when I'm not racing I can go out with my mates the odd time.

What do I need on the bike to make it road legal in the UK? Is it as simple as fitting brakelights?

Mark Webb, email

A Charles at Flitwick Motorcycles:

"Best thing to look at is the current MoT regulations. For a daytime ticket the law says if a bike has lights of any description there must either be a full set, including indicators on recent machines, or no lights at all (ie they have to be taped up or removed). So don't fit just a brakelight on its own, or, if you do for safety reasons, be prepared to tape it up for the (daytime) MoT certificate. A reflector is also a good safety idea. But you'd be best not riding the bike if the weather's going to be bad as you could get into trouble."

"Tyres have to be road legal so no slicks or race only tyres. You'll need to refit and connect the horn and to be within the letter of the law you should have the standard or an approved type exhaust can on the bike. There's no legal need for a chainguard. Make sure the clip-ons can't trap your thumbs on full lock."

Flitwick Motorcycles: 01525 712197

A RIGHT SHAG

Q I read your article on gearing in the Feb 2003 issue. All very logical, but I was fascinated that changing the gearing on the Aprilia RSV Mille did not knock any

top speed off. I've got a '99 RSV myself, so I'm really keen to try this out.

Only thing is, the article didn't mention what gearing you ended up using. Presumably one tooth off the front – but what about the rear? I don't want to be shagging for days if you lot have already found a gearing that works pretty well.

Martin Attwill, Perth, Australia

A Alan at PB: "Received wisdom on Mille gearing is to take one tooth off the front (from 17T to 16T) to improve acceleration. As standard the bikes are geared far too tall for everyday use. Leave the rear alone."

"The effect of taking one tooth off the front is roughly equivalent to adding three to the rear on most bikes, without the problem of needing a longer chain. There will be no difference to the speedo reading as it's driven off the wheel rather than the gearbox, as we mistakenly reported previously. By the way, we'd love to be shagging for days. Plainly means something different where you come from."

GREEN DREAM

Q Please help me to find a set of leathers in Kawasaki green to match my ZX-6R. Why do all the manufacturers only do sizes for people that are skinny and short? I'm 6ft 2in and have a 56 chest. I can't afford a made-to-measure suit, does anybody do off-the-peg for bigger men?

Nick Tyler, email

A Luke, PB products guru: "Think again about not being able to afford a made-to-measure suit. Supposing you can find cheap leathers in your size they'll be knackered inside a season or two. I'd recommend you look at a bespoke suit from someone like Crowtree which will last you for years."

"Prices range from £475-750. These leathers are a top choice of many crash-happy club racers which suggests that they're built to last."

Linda at Crowtree says: "We can do anything you want. The spec of your suit, like armour and logos, determine the price. It's not usually a problem to accommodate bigger people."

Crowtree: 01507 602099

RATTLING DIV

Q I have a Yamaha XJ600N Diversion which I use as a runabout and winter hack. It's a 1995 model with 60,000 kilometres on the clock.

I haven't had any trouble with it except to replace worn clutch plates. The problem is the noise from the clutch at idle. It's seriously rattly and grumbly. When the clutch lever is pulled in the noise all but disappears. It works perfectly and I've been told this bike has a relatively noisy clutch anyway, and that balancing the carbs might reduce the racket. I can't believe the noise is 'normal'.

Ben McGrath, email

A Saul Towers at Flitwick

Motorcycles: "It's fairly common for the clutch centre nut to work loose on this model. It'll need a new tab washer and the nut whacked back up with an air spanner. If this isn't the problem then it's possible the clutch thrust bearing has collapsed."

Flitwick Motorcycles: 01525 712194

DUMPED DUKE

Q Recently on a trackday at Brands Hatch, I low-sided my 998 at Druids. Not a front wheel wash out – it felt more like I had too much lean on and the back slid away. After throwing money at it, it is back to how it was, my question is have you guys every ground the pegs on a 998? On my previous bikes (SP-1, GSX-R etc) I could use the pegs as a guide, which

Tidy up that Falco clutter



Learn to lean safely

helped. I had Michelin Pilot Sports on previously and now have Dunlop D207RRs, so grip should be improved. But how do you gauge the amount of lean? I know Colin Edwards reckons that on the limit the bike will slide a bit then you back off. Yeah right, not good advice for a novice like me.

Matt Woodroffe, email

A Bruce Dunn, PB set-up guru: "We all have our in-built guide as to how far we can go. It's not good practice to use the pegs as a guide on any bike. You've got a good set of tyres fitted. Perhaps you might like to spend a day at race school where you would get good advice on tailoring and developing your style."

FALCO ARSE

Q I've bought a 2000 Aprilia SL1000 Falco. Superb bike, and I've sorted the handling, courtesy of your July issue, but the arse-end looks shite.

Can you put me in touch with anyone who can supply a rear hugger and undertray, with or without indicators?

Blakey, email

A Luke, products guru at PB:

"Skidmax (01305 780808) can do you a hugger for £65. Rhencullen (01455 890345) can provide an undertray for £250, painted and including indicators."

IF THE HAT FITS

Q I bought an Arai RX7RR IV helmet in Japan. The lid has stickers on it showing conformance to the JIS and SNELL safety standards, and even one for FIM motorsports, but no BSI markings or ACU stickers.

I understand that technically no BSI mark could cause me problems on UK roads, and some trackdays want to see a

gold ACU sticker. Can I retro-fit the stickers legally? Or do I just have to hope no-one notices?

Simon Hart, email

A Wendy Hearn at UK Arai distributor, Phoenix Distribution:

"You should have no problem with trackdays. The FIM sticker should be satisfactory for those, and if push came to shove, the ACU handbook lists all the helmets they have given approval to, and of course the RX7RR is among those. The road situation is a bit trickier, as the letter of the law says helmets worn on UK roads should conform to the BS6658 standard or the new EC22-05. Just one word on Japanese-market Arai helmets – the innards are a different shape to suit local heads and they don't always fit other people very well!"

Phoenix Distribution: 01782 569800

DISC LOCK CARNAGE

Q Can you recommend a product for sticking my GSX-R600's front mudguard back together after I wheeled the bike backwards with my disc lock still fitted? I was thinking of using one of those repair kits with glassfibre to reinforce the repair. Fortunately the crack missed the bolt holes.

Alan's brother Gordon, email

A Alan at PB: "Unbelievable. You show me up sometimes, you really do. There's nothing quite like undermining my credibility as PB's advice guru with a query born out of your asinine disc lock antics. That said, this is exactly the type of thing I'd normally do. You could go for a Plastex (0115 8757490) repair kit, from £10.49, if you're planning to make a habit of this. But that flexible superglue should do it for around a fiver."

Contacts

Seen something you like and want to order it in? Look here...

Avon	01225 707050	Purveyors of fine sticky tyres
B&C Express	01522 791369	Mail order parts, including chains and sprockets
Big CC Racing	01189 776774	Tuning shop that would love to give you extra power
Bike Torque Racing	01373 464252	Mail order parts, including chains, sprockets and engine casings
Bridgestone	01926 488500	Purveyors of fine sticky tyres
BSD	01733 223377	Tuning shop gurus, complete with dyno and suspension set-up
BSR Aerotek	01386 849060	Creators of lots of lovely billet goodies
Carbontek	01737 789878	Lightweight carbon bodywork
Crescent	01202 820170	Tuning arm of the Suzuki BSB team
Demon Tweaks	01978 664474	Mail order performance parts
Dream Machine	01159 736615	Creators of 1001 replica paint schemes
Dymag	01249 655481	Lightweight wheels
Ermix	01522 697007	Producers of fine aftermarket bodywork
Evolution Composites	01590 622355	Creators of fine carbon bodywork
Extreme Paint & Design	01933 441999	Need your wheels or bike painted? Call them, now
GPR UK	01945 585842	Trick rotary steering dampers from overseas
Harris Performance	01992 532500	Custom made performance parts, exhaust hangers to swingarms
Hel	01392 811601	Braided brake lines for better braking performance
Holeshot Racing	01113 2576644	Creators of super-fast specials
HPS	0870 774 7740	Mail order stuff for the trackday nut
JHS	01179 712966	They know everything there is to know about the SV
K&N	01788 869100	Air filters that help your bike breathe more easily
K-Tech	01530 810625	Suspension set-up gurus
Maxton Engineering	01928 740531	Maxton shocks and full set-up service
Motrax	01933 418414	Handy bits 'n' bobs. Ratchet straps, crash bungs, tankpads...
NWS	01992 501285	Custom engineering service. Extensive range of unique accessories
PDQ	01628 667644	Tuning shop, with dyno and vast range of bolt-on goodies
Performance Parts	01788 869100	Importers of, Akrapovic, AP, Galfer, Remus, Sprint dampers and K&N
PFM	01624 829419	Stop. You will if you fit their performance braking system
Piper Cams	01772 635213	Hotter cams that help squeeze more power from your engine
Pipercross	01604 494495	Air filters that help your bike breathe more easily
Pirelli	08456 094949	Purveyors of fine sticky tyres
QB Carbon	0115 9894468	Unique carbon bodywork
R&G	01252 377600	They make crashing less expensive with their crash bungs
RDI UK	01664 822279	Helping your bike breathe; air filters, induction kits
Rhencullen	01455 890345	Aftermarket bodywork and go-faster goodies
Skidmax	01305 780808	Producers of fine aftermarket bodywork
Straightline Racing	01553 811855	Tuning shop, with a large range of go faster parts
TTS	01604 636363	They sell power. Big bores, superchargers, nitrous...
X-Bikes	01945 585533	Tuning shop with dyno. Turning road bikes into specials

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