

RiDE

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EXUP BUYERS GUIDE

YAMAHA FZR1000

Life before the R1... big-bore FZR and the Thunderace stripped and analysed.

WHO are you calling dated? They might not be exactly cutting-edge, but you can't ignore the fact that the FZR1000 and Thunderace are the R1's direct ancestors. And they can be just as rewarding to ride now as they were when it all began back in '87.

Yamaha wasn't pulling any punches when it launched into the litre sportsbike class; the first FZR1000 Genesis was a very single-minded, raw beast. A twin beam alloy frame and five-valves-per-cylinder might not be ground breaking stuff these days but back then they were outrageous.

More clever technology came two years later with the EXUP valve which tricks the engine into thinking there are two exhaust systems - one for progressive midrange

stomp, the other for peak power.

The FZR1000R EXUP (most just call it the EXUP) was faster and better handling than even Suzuki's mental GSX-R1100. Only an insurance crisis, soaring premiums and Honda's FireBlade slowed sales.

Regular updates kept the Yamaha just about on the pace, but its days were numbered and in 1996 it was replaced by the YZF1000R Thunderace. The Ace is a classy machine, but lacks the sporting focus of its predecessors. Chances are Yamaha designers were already working on the R1 and knew the Thunderace could shift into the sports-tourer category.

Whichever big Yamaha suits your pocket you're getting a lot of bike for your money. And while you're at it, you can enjoy sampling a part of Yamaha's hall of fame.



Fast in a straight line, but goes around corners too.

In the beginning...

From Genesis to Thunderace. Meet the family.

FZR1000 GENESIS '87

■ 998cc, 116bhp, liquid-cooled, 20v in-line four with 75mm x 56mm bore and stroke. Deltabox alloy frame, five-speed gearbox, 204kg (451lb) dry weight and 160mph top speed.



FZR1000 EXUP '92

■ Projector beam headlights, water-cooled oil cooler. Available in white/red/black, white/violet or blue/black.



FZR1000 EXUP '89

■ 1002cc, 125bhp, liquid cooled, 20v in-line four with EXUP valve, new frame, swing-arm, more power, new bodywork and 17in rear wheel.



FZR1000 EXUP '94

■ Revised bodywork. YZF750-styled fairing with twin foxeye headlights. Ohlins fork internals, six-piston front calipers, adjustable levers and minor gearbox mods.



FZR1000 EXUP '90

■ Now has fork pre-load adjusters and new colours. Available in red/blue/white or blue/black.



YZF1000R THUNDERACE '96-'00

■ All new bike. Tweaked EXUP engine with a lighter crankshaft, forged pistons and throttle position sensor on carbs for better throttle response. Now making a claimed 145bhp. YZF750R-based frame and swing-arm was lighter and stiffer. Forks were right way up. Brakes featured one-piece calipers to reduce flex. Available in red/white, or black/grey. A year later the wiring loom was changed to make it easier for owners to fit alarms. Available in black/red/white, or black/blue.



'96, it's a sports bike...

FZR1000 EXUP '91

■ Features upside-down forks, new frame, fully adjustable suspension, new slant-eyed fairing with single headlight. Available in red/white or black.



... '98, not anymore.



Facts

■ Sixty per cent of early FZR owners who took part in the RIDER POWER 2000 survey are single. All of them are male.

■ Owners aren't scared of long-distances. According to RIDER POWER, '89-'93 FZR's have done an average of 24,928 miles.

■ Twenty-five per cent of FZR owners admitted crashing in the last 12 months. But they still love their bikes... 50 per cent said they would definitely buy another Yamaha.

■ Reliability's not bad. According to RIDER POWER only 20 per cent have gone wrong beyond normal wear and tear. Tired clutches are the biggest pain.

■ Nearly a quarter of Thunderaces in the RIDER POWER survey were parallel imports. Riders have done an average of 10,942 miles.

■ Nigel Davies was third in the '96 Production TT on a "sports-tourer" Thunderace and Dennis Winterbottom was fastest in practice with a 119mph lap on his Thunderace.

■ Honda's YB11 superbike uses a Thunderace engine. The older YB8 and 10 models used EXUP motors. And the YB6 was fitted with a Genesis engine.

■ Italian specialist firm Motor American modified an FZR to look like a Second World War army bike. Nobody's sure why.

■ The Thunderace's one-piece calipers were the first to be fitted to a production machine.

■ When it was launched the Thunderace had the best power-to-weight ratio of any production bike at 0.73bhp/kg. The Fireblade only made 0.66bhp/kg.

RIDER
POWER
2000

FZR1000 Genesis '87

Thirteen years-old... but that doesn't mean it won't deliver.

YOU'D be naive to expect modern day performance from a 13 year-old machine, but the Genesis was the first of the true modern sports bikes. 160mph top speed, alloy beam frame, fresh air induction (not ram-air) and the right size wheels for the new-fangled radial tyres.

Just make sure the one you buy isn't knackered (plenty are) or you'll end up shelling out more in repairs than the bike is worth – our Olly's head gasket (page 30) springs to mind... ed. There aren't that many around so allow time to find a good 'un. And bear in mind things have moved on since 1987, even a mint Genesis is going to feel

slower and heavier than today's stuff.

But the performance is still respectable. Top speed nudges 160mph, acceleration is enough to humble most modern 600s so long as your carburation hasn't been bugged up with an ill-chosen race exhaust and 13-year-old air filter.

The Genesis needs revving hard before it's willing to party. It's more a case of the strongest surges being up at the top end of the revs than the engine lacking midrange. But, even so, working the five-speed gearbox is the fastest way to get the Genesis shifting. Gear selection is notchy and the grabby clutch doesn't help matters away from the line. These are quirks rather

than faults and you soon get used to them.

The Yamaha's weight can make it hard work in tighter corners and the steering is quite leisurely so some extra effort is needed to get it to change direction quickly. But it's no worse than something like Honda's Super Blackbird (clapped-out suspension permitting) and you are rewarded with reassuring stability.

Wind protection isn't bad, but the riding position is unusual with a thinly padded, low seat and high(ish) bars. Long hours in the saddle quickly reduce the smiles.

Quirks and unrealistic insurance quotes aside, the original FZR1000 Genesis is still a realistic sporting contender for under £1900.

EXHAUST

One-piece system means replacements are expensive. A Dynojet kit and K&N filter can increase peak power by 10-15bhp with a stronger midrange.

CARB RUBBERS

Inlet manifold rubbers can perish, leading to irregular running and weak mixtures. Check them out if the engine is running badly.

FORKS

Most will need an overhaul by now to restore the correct damping and springing characteristics. Check their action before you buy.

BRAKES

Check disc condition. Discs warp, caliper pistons seize and by 20,000 miles discs can be too worn to pass an MoT test. ZOOM (01327 702345) can supply EBC discs and pads and re-condition calipers.

REAR SUSPENSION

Check for worn or seized linkages. Yamaha replacement shocks cost £130.

GEARBOX OUTPUT SHAFT BEARING

Prone to failure if chain is too tight. Check for oil leaking from gearbox sprocket. Very expensive to replace.

MASTERCLASS

Clean the calipers

The front calipers must be kept serviced. Ignore them and the brakes will bind and overheat – resulting in glazed pads, worn discs and serious fade. The answer is to clean around the caliper area whenever you're washing the bike. Every 4000 miles undo the calipers, remove the pads and use a toothbrush and soapy water to clean out the grime. Pumping out the pistons a little and coating them in silicone grease, not forgetting the back and edges of the brake pads and their retaining pins, keeps further corrosion at bay.



Look after these and they'll look after you.

"I bought one..."



John Green is a 38 year-old fireman from Leeds. He's owned his FZR1000 Genesis for two years and covered 12,000 miles.

"Everything about it is excellent. It's my first sportsbike, there's stacks of power and it's far more comfortable and practical than I expected. The handling's sharp enough and has never worried me at any speed, though it can feel a bit heavy at times.

"I bought it for just £2000 from an older guy who was giving up biking. It was in mint condition then and I make sure it stays that way by washing it very regularly. Even with 50,000 miles on the clock it still looks smart.

"Nothing has gone wrong, touch wood. Apart from steel braided brake lines, EBC HH pads and a Scottoliner, my Yamaha is still absolutely standard.

"If I had some more money I'd buy something more modern – I'd be daft not to – but I'll never sell the FZR. I love it to bits, and I'm going to hang on to it for ever."



SPECIFICATIONS

Price	£1800-£1900
Engine	20v liquid-cooled 4-cyl four
Claimed power	110bhp @ 8000rpm
Claimed torque	68ft lb @ 6000rpm
Frame	alloy tube-spar with double cradle
Dry weight	294kg (411lb)
Fuel capacity	28 litres (4.4 gal)
Seat height	81cm (31.5in)
Tyre sizes	front 120/70 17, rear 180/60 18

PERFORMANCE

Top speed	160mph
Fuel consumption	34mpg

Verdict: classic sportsbike. Buy the best you can afford to avoid the uneconomic expense of repairs or costly replacement parts.

Engine	★★★★	Chassis	★★★★
Brakes	★★★★	Suspension	★★★★
Comfort	★★★	RIDE value	★★★★

FZR1000R EXUP '89

Four little letters, one hell of a difference. Enter the first EXUP.

WE'RE all used to acronyms plastered over fairings and sidepanels. Most are pretty meaningless, but not "EXUP". It's a cunning exhaust valve which transformed the FZR's performance.

The EXUP valve sits in the downpipes and alters the exhaust flow to suit the revs. It's like having one exhaust system for midrange and another for the top end – allowing Yamaha to tune the engine for maximum power while maintaining a civilised delivery.

The valve, which is opened and shut by cables operated by a servo motor, fine-tunes the back pressure in the system to keep the engine working at maximum efficiency.

As well as fitting the EXUP valve, Yamaha increased the bore size to take the capacity to 1002cc. Far more power was available, but Yamaha restricted the output to 125bhp

to meet a voluntary code for all UK bikes. Little did the bureaucrats know that taking a sharp knife to the rubber webs moulded into each inlet manifold was all that was needed to unleash another 10-15bhp. Bingo.

Not that the Yamaha was short on power. It was only about 2mph faster than the Genesis, but working the five-speed box was nowhere near as important to maintain sharp response and fluid acceleration.

The chassis was all new and the twin-spar alloy frame used the new EXUP motor as a stressed member. This eliminated the Genesis' need for its alloy box section cradles under the motor and made the frame stiffer and steering more responsive. It also introduced an annoying vibration round the rider's groin at 80mph in top.

Other changes included all-new bodywork and a 17in rear wheel which gave

owners a far wider choice of rubber. Yamaha also equipped the EXUP with bigger brake discs for stronger stopping power.

But designers didn't iron out all the gripes from the Genesis. The clutch and gearbox were still less than perfect and the mirrors were better at checking elbows than anything behind. Some early EXUPs suffered from a dicky oil level sensor which would activate the warning light for no reason (they all burned a bit of oil anyway).

The seat remained low and thinly padded and there was a trick electric fuel reserve switch which didn't actually open a reserve tank, it just reminded you the petrol was getting perilously low.

These days you'll get a good EXUP from around £2000. Watch out for rebuilt wrecks and ringers. Loads were stolen, a lot less were recovered.

FUEL PUMP

Relays fail (cost £20 a/h), replacement pumps cost £275. Reserve switch fails too.

CHAIN AND SPROCKETS

Forget the recommended 532-section kit if you need replacements. Fit 530-section chain and sprockets instead. They'll be just as good, are easier to get hold of and will save you cash.

CLUTCH

Regular fluid changes and bleeding are essential.

MASTERCLASS

Save the seals

Later EXUPs had upside-down forks and the stanchions were covered by the front mudguard, early bikes came with conventional forks which need regular cleaning if you want to keep the fragile seals in good condition.

Dead flies and road grime on the stanchions will wreck the seals, so pay special attention to this area when you wash the bike. Polishing helps and stops future flies from sticking on as hard. Keep an eye on pitting caused by stone chips, you'll be able to smooth some of them out with an oil stone.



Little jobs like this can save you a fortune.

MIRRORS

Stock ones aren't up to much. Mirrors from a YZF750 fit OK and give a far better view.

SUSPENSION

Fork seals pop, thin walled forks crease rather than bend. Rear shock is scrap by 15,000 miles, genuine replacements are cheap though.

TYRES

Originals were a 130/60 17 front and 170/60 17 rear which are hard to find these days. The more common 120/60/17 and 180/55/17 combination works fine.

POWER

Most are derestricted by now. Webs in the inlet manifolds limit power. Remove the airbox and carbs then cut out the rubber for an extra 10-15bhp.

"I bought one..."



Mark Richards (39) bought his EXUP two years ago. The publican from Leicestershire has done 2000 miles on it since.

"My brother bought a new one in 1991. I used to ride it occasionally and really liked how it looked and went. I took a breather from biking for a few years, but when I wanted another machine it seemed like the obvious choice.

"Strong performance and agile handling are its best features – it might be 10 years-old but it'll keep up with most new stuff. Just because it's a sportsbike, it doesn't mean practicality goes out of the window either.

"My job at the pub means I can't go out and ride as much as I'd like, but I try to get out on it whenever I can and always come back with a huge grin plastered all over my face.

"I'd consider a new Honda FireBlade if I had more time to justify the cash. But at the end of the day I'm happy with my EXUP. It's a well sorted bike."



SPECIFICATIONS

Price	£1800-£2300
Engine	25v liquid-cooled in-line four
Claimed power	125bhp @ 10,000rpm
Claimed torque	75ft lb @ 8500rpm
Frame	alloy twin-spar Delta-box
Dry weight	200kg (440lb)
Fuel capacity	18 litres (4.2 gal)
Seat height	77.5cm (30.5in)
Tyre sizes	front 130/60 17, rear 170/60 17

PERFORMANCE

Top speed	162mph
Fuel consumption	34mpg

Verdict: still an impressive bike after all these years. Very forgiving and rewarding with it. Not perfect, but a major advance over the first model.

Engine	★★★★	Chassis	★★★★
Brakes	★★★★	Suspension	★★★★
Comfort	★★★★	RIDE value	★★★★

FZR1000 EXUP RU '94

Foxeye lights, saucy styling... this FZR is the best of the bunch.

BUY one of these and you'll have a motorcycle to be proud of. It was the most refined of the FZR's and the 1992 models are the best looking... this bike is seriously fast and up for anything.

The famed 20-valve motor is strong and reliable. Like its predecessors it's restricted to 125bhp courtesy of rubber inlet restrictors, but there's still plenty of stomp and few will feel the need to liberate the extra horses which lurk within the engine.

Getting up to 165mph is easy. The broad spread of power, accentuated by the EXUP valve, makes for instant acceleration. Gear selection and precise revs aren't an issue;

you just twist the throttle and go.

There's quite a lot of metal to control when the Yamaha is shifting. But don't be put off too much by the relatively porky 209kg (460lb) dry weight, it's well distributed and flicking the bike around through twisty back roads isn't nearly as demanding as those figures suggest. The EXUP's stiff chassis keeps things under control and quality suspension makes light work of ruts and ripples in the road.

Later bikes (1994 on) got six-piston front calipers and Öhlins fork internals which are man enough to cope with the extra stopping power. The calipers need to be kept clean and serviced to give maximum effect (see

Masterclass, page 71), but do that and two fingers are all you'll need.

The riding position is OK, but too committed to be truly comfortable. Long and fast rides need to be broken up by the odd breather, but that's the price you pay for its sporting focus and fuel stops every 150 miles are usually enough to bring tired muscles and aching joints back to life.

The last of the FZR EXUPs can now be regarded as a bit of a modern day classic and that sort of cred is well worth the £2500-£3200 you'll need to spend. The bad news is there aren't that many around so you'll have to hunt around to find a minter. The good news is that it'll be well worth the effort.

CORROSION

The finish isn't great. Clean the bike regularly, especially after a ride on salty roads. Use plenty of WD40 and pay special attention to the electrical block connectors behind the fairing.

CHAIN ADJUSTERS

Keep them lubed. If not they can corrode and stick to the swing-arm.

ENGINE

Tough, but check the oil level regularly - some consumption is normal but topping up is tricky. Carry a funnel or be ready to make one.

MASTERCLASS

Avoiding sticky valves

III Neglect the EXUP and it can seize, leading to poor engine performance. Check whether the servo rotates freely when you turn on the ignition and when the motor is being revved. If not, then the valve may be binding.

Stripping out the assembly from the downpipes is fiddly but it's essential to do at least once a year. Take off the EXUP valve cover. Loosen the actuating cables, then undo the retaining plate and withdraw the valve itself. Copostip all pivot points, bolts and the retaining plate face where it meets the exhaust assembly. Oil the cables and adjust them so the notch in the valve pulley lines up with the hole in the retaining plate.



Fiddly, but it'll pay off in the long run.

BRAKE AND CLUTCH FLUID

Change every year to avoid spongy and vague action.

BODYWORK

Fixing pegs and brackets are fragile so use decent tools to remove them and lube threads to make life easier the next time. Screen is surprisingly noisy.

BRAKES

Six-piston calipers are very costly to overhaul if they're corroded and the seals are damaged. Make sure they've been looked after. Check the discs aren't warped and the wheels turn freely.

"I bought one..."



Darren Lovatt is a 38 year-old mechanical engineer from Cornwall. He's had his EXUP for three years and done 7000 miles on it.

"I owned two FZR1000 Genesis models before this; I guess I'm a bit of a big Yamaha fan. The EXUP is such a capable all-rounder. OK, so it's not cutting-edge, but it's good enough for me.

"So far it's never let me down. I've had to fit a new battery and clutch slave cylinder but that's not bad going in three-and-a-half years.

"Fitting Goodridge braided hoses has sharpened the brakes up a bit and a Micron end can makes it sound nice and saves a bit of weight. The only things I'd moan about are the suspension, which could do with more adjustment, and the gearbox, which is a bit clunky at times. Keeping the chain well adjusted and lubed makes a big difference.

"When I've got enough money I'm going to splash out on getting the suspension sorted."



SPECIFICATIONS

Price	£2500-£3200
Engine	20v liquid-cooled 4-cyl four
Claimed power	125bhp @ 11,000rpm
Claimed torque	75lb ft @ 9500rpm
Frame	alloy twin spar Delta-box
Dry weight	209kg (460lb)
Fuel capacity	18 litres (4.2 gal)
Seat height	77.5cm (30.5in)
Tyre sizes	120/70 17, rear 180/55 17

PERFORMANCE

Top speed	165mph
Fuel consumption	25mpg

Verdict: powerful, good looking and easy to live with. This model is old enough to have classic status, but fast enough to hold its own.

Engine	★★★★	Chassis	★★★
Brakes	★★★★	Suspension	★★★★
Comfort	★★★	RIDE value	★★★★