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If at first you don't succeed- TR1, TR1, AND TR1, AGAIN

It was only two months ago that *SuperBike* published Kutz's impressions of the TR1 when he nipped over to Sicily for the launch. The limited facilities for road testing offered by the old Targa Florio circuit left generally favourable impressions, but the average lap speeds there were about 60mph. Around a slow and tortuous course, the big Vee-twin acquitted itself handsomely. But how would it be back on the wide variety of roads in Blighty? Does the TR1 cut the ice as a big time tourer?

When you've read this test you will understand why the answer is ambivalent, though in general is makes the grade. The shortcomings are largely outweighed by merits, and ultimately it will be up to the prospective owner to decide what factors he rates in a road tourer.

To recapitulate briefly (for those of you who were unlucky enough not to get the June '81 issue). The engine of the TR1 is an air-cooled 75 degree Vee-twin, with the cylinders offset and displacing 981cc. The stroke is 69.2mm and the bore is 95mm, which makes it very oversquare. The rear cylinder head has been turned around, so that the exhaust runs out behind the engine and the two carburettors are located side by side between the pots.

The frame is a pressed steel spine device using the engine as a stressed member. The air intake is routed through the main frame member, which makes for some convoluted breathing, and the side panel on the left conceals the air filter unit, while the one on the right covers a massive 12V 18A/h battery.

The drive chain is fully enclosed and churns around in a bath of lithium grease. Which should give long chain life, about 38 000 miles according to Yamaha, which is something of a positive advance. Advanced, too, is the suspension; with the air-assisted forks and a similarly sprung cantilever monoshock at the back.

In short, the TR1 is virtually identical to the 750 Vee tested last month, with two important distinctions. The first is obviously the extra engine size and added power and torque which come with it: the cubes coming from a simple big-bore job, with the same crankshaft as the 750. The other distinction is the styling and the riding position. Instead of neo-American slouch, the TR1 is distinctly European; with a higher seat, flatter and narrower bars, and a sports-tourer look. Plus that unique back mudguard, which hugs the back wheel, and moves with it on the suspension.

Paradoxically, and again like the 750, the advanced suspension is the TR1's weakest point. The apparently impressive range of adjustment proved a bit redundant, and here's why. Up front, the air forks have a separate valve for each fork leg, which makes them difficult to balance accurately, and (because of the tiny amounts of air involved with major pressure adjustments) very fiddly to set up. These problems could have been easily overcome with a balance pipe and an air reservoir, which can be used for adjustment then sealed off from the fork legs during operation. The valves are beneath rubber caps which are quick to fall off, and are thus very tamper-prone. You may need to adjust them more often than you expect, if there are kids loitering about your parking place.

At the back, both damping and air pressure are easily adjusted, the former can be changed while you are riding. However, in practice we found we kept the air at the recommended maximum pressure (56psi) with the damping at its maximum all the time: the adjustment was pretty well unused. Anything less, and it bottomed badly, even one-up, jarring the rider and marring the roadholding. With no more air pressure to come, the obvious next step is to add preload to the coil spring. But Yamaha have made no provision for that . . . you are on your own, boy.

The end result is as though Yamaha have simply given up the struggle. "We can't sort the back suspension out . . . you have a go." And even then, they haven't given enough range of adjustment to play with.

Still more paradox: having said that, it must be added that – most of the time – the bike is very comfortable, both one and two-up. It only bottoms when it is being pushed hard: during milder riding and on better roads the ride is good and the seat sufficiently firm and well-padded to make it comfortable for long periods in the saddle.

In the end, the suspension simply limits the TR1's ability. While it is poor at scratching, it is very good at long-distance touring, provided you aren't in a particular rush to cover ground. But surely the unprecedented range of adjustment should broaden its ability, not conspire to restrict it?

As stated earlier, and in line with Kutz's observations, the low speed handling (up to 65mph) is perfectly acceptable. The narrow engine and reasonably low centre of gravity allow the lithe Yamaha to be swung from one side to the other without undue hassle. The rather tall steering head and high narrow bars

make the whole plot feel a bit disjointed if you're trying to think your way around a corner by steering from the top. It has a chopper-like feel to it that might go down well with custom freaks, but doesn't do much for me. The vagueness is inhibiting, and even when thinking the steering around the footpeg level (which works far better in this instance), the handling did not inspire confidence.

This does not mean that it handled badly, just that it didn't feel good. A sensation further aggravated by the rear tyre, a 120/90 x 18V Mag Mopus with squarish profile and minimal tread around the sidewalls. It seemed to fall off the tyres when laid over hard, causing a nasty lurching and grinding of protruding bits of ironmongery – the side and main stand pegs on the left, and the footrest on the right.

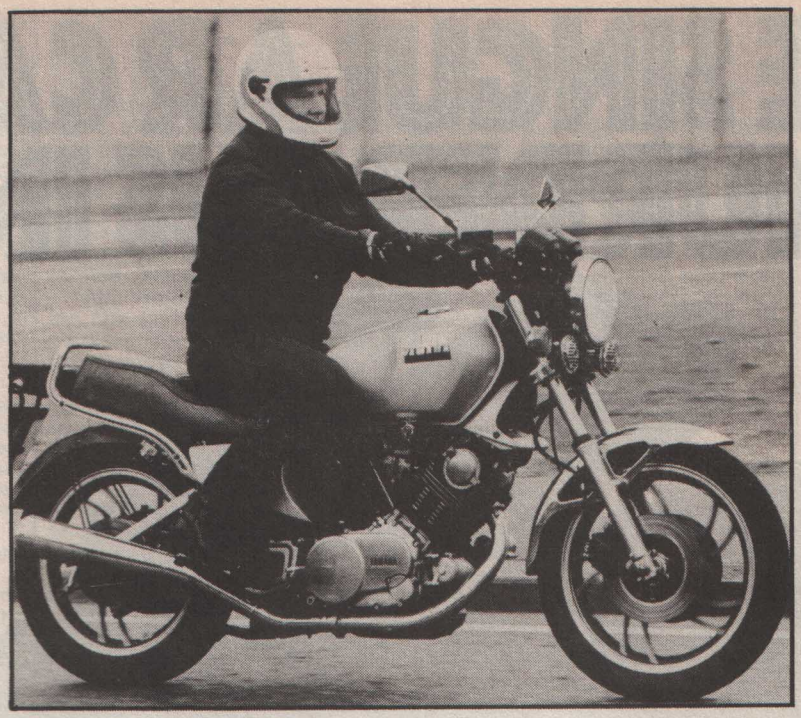
The brakes deserve some praise. The twin discs at the front have plenty of feel and work very progressively, biting firmly without locking the front end up. At the rear, the drum brake is well up to the job. Leverage is plentiful without being too much, and the brake wasn't at all grabby, which is a common fault with rear brakes. Even on a wet road, and almost despite the tyres, the bike stopped predictably and in a straight line.

So much of this seems to be putting the bike down. The best part of the machine, the engine, produces ample power and an abundance of torque, yet it still seems to be a bit breathless at the top. It has got notably more beans than the 750, and admittedly it will run to 112mph, but it feels strained at speeds of over 90. There again, so does a Harley, which produces a similar sort of power and torque.

The Yamaha's peak is at 6500rpm, where the engine develops 70bhp, a mere 500rpm from the 7-grand redline; and maximum torque (a hefty 60lb/ft) is produced only 1000rpm lower, at 5500. Since torque and power peaks very nearly coincide, the motor has a punchy feel around these upper revs, but is less tractable lower down and the power curve drops dramatically towards the redline. Though it is a perfectly flexible engine, it operates best within fairly narrow mid-range parameters, and excludes prolonged high-speed riding.

To illustrate the point, a pair of rivals make an interesting comparison to the TR1. The first is the 80-cube FLT Harley – the definitive big-inch Vee-twin tourer. It produces its power at 5400rpm (65bhp), but more important, it produces peak torque, an enormous 72lb/ft, at 3800rpm. This characteristic enables the Milwaukee Mammoth to lug along in a high gear at very low engine speeds. To go faster you simply change up a gear, hardly moving the throttle. In fact, the Harley's throttle response is very poor once it has passed peak torque, and thus the engine characteristics and high gearing encourage riding at low engine speeds, and inevitably detracts from the top end.

The next worthy rival is the 180-degree "Vee" BMW R100RT, because it is the Tourer by which all others are judged. Yamaha are competing directly with the soft-edged twins, and not with the high horsepower mob. The BMW produces somewhat less torque (55.7lb/ft) at the same revs as the TR1 – 5500rpm; and the same amount of power, 70bhp, but at considerably



higher revs. This endows the Bavarian twin with the ability to run high engine and road speeds for endless hours without seeming strained. It will cruise happily very close to its top speed, making it an ideal bike for covering vast distances very quickly. Unlike the Harley, the big BM engine is distinctly unhappy at low speeds, below 3000rpm, and its ungainly feel encourages harder use via higher revs.

The TR1 is considerably smoother lower down than the BM, and continues to produce usable power at higher revs than the Harley, but it lacks the bottom end punch of the American bike and doesn't have the speed cruising ability of the German.

You might be surprised that I haven't compared it with a Ducati. But the Italian Vee doesn't even come into the picture. All Dukes are relatively uncompromising, sporty, much faster and better handling, and suited to a different kind of long distance cruising. It is single minded, where the Yamaha is multi-purpose.

Thus the TR1 is a bike of many compromises. It is mostly very comfortable, but only passably swift. Its handling is predictable, but again only bearably so. The steering is ungainly, even ponderous, yet does not feel actually dangerous. It abounds with innovative features: but some of them, such as the suspension, appear to be only half-thought out; while others, such as the totally enclosed drive chain, are the very acme of theory in practice. The fuel consumption for a big twin is high, although for a 1-litre Japanese bike, it is average (approximately 40mpg at sedate, normal riding speeds, much worse – 26mpg – when being hurried along).

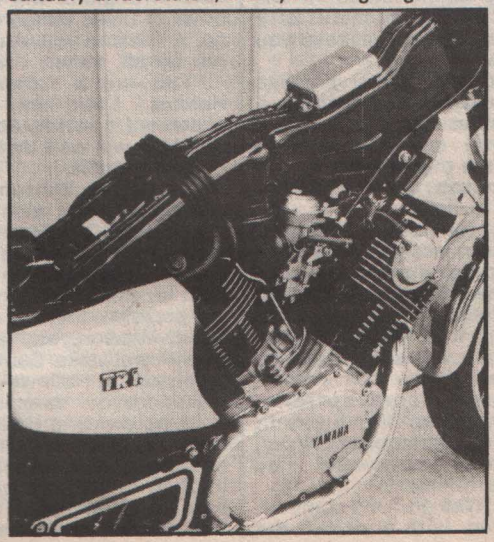
Gadgets abound. Like the 750 Vee, the big one also has the temperature compensator built into the back suspension unit. I spotted also that, as well as the usual single tube leading from the inlet stub to the vacuum-controlled petrol tap, there are two more vacuum tubes. These disappear into the plastic housing that makes that spurious scoop beneath the steering head. Judicious stripping revealed they led to a little cannister. "Hah", we exclaimed. "It's a vacuum-controlled cannister." Turned out it's an anti-backfire device. Under conditions of high manifold vacuum (like on the over-run), it bleeds air into the inlet tract to lean the mixture and stop the bike popping back. But it is only fitted to the front cylinder. "Wasn't needed on the back one," said Mitsui. Maybe not, but the test bike was prone to spitting back, anyway.

But there is one over-riding feature that must be borne in mind when comparing the Yamaha with American and European competition, it is considerably cheaper. Thus in terms of value for money it possibly represents a better buy than the others. For your money you get a bike that abounds in high tech, yet is reliable and easy to maintain. Features such as cantilever monoshock suspension, electronic ignition and self-cancelling indicators, air adjustable front shocks and good electrics, all help to cancel the deficit created by bizarre steering geometry and a slightly decapitated powerband.

Although the bike is very pleasant to ride, it dislikes being hurried. Its handling is acceptable within the limitations of sedate touring. The engine produces sufficient power to climb most hills in top gear, but not enough to make the bike exciting. Yet the bike has some character. The TR1 is different, and endearingly so. I might choose it for a leisurely cruise through France, or a meander around the Italian Riviera.

It delivers the goods, up to a point. And if that is about the limit of your biking, then the TR1 will probably suit both pocket and your pleasure. But if you're looking for something that will entertain and excite you, tour and tear along, go for the four pot XS 1100. For virtually the same money (. . . cut the bullshit, what's the discount?), you get less high tech and lots more ponies. It all depends what you're into.

The thing is, the Vee-twin caters for those who don't want four cylinder high speed bikes. Taken as a machine that doesn't excel at anything, but accomplishes a great deal of things with remarkable efficiency, there is probably one word which sums the TR1 up –adequate. If you think that this damns the bike with faint praise, then it isn't the kind of bike that will appeal to you. Should the description prove suitably understated, then you are going to be a very happy TR1 owner.



So now I hope that you can understand the ambivalence of the big Yamaha Vee. It is too good really to slag off, but there's nothing about it that would cause me to sit up and take notice. It is an unusual Japanese bike, yet it is cursed with mediocrity. It's likeably different, yet detestably mundane. The only answer is to try one, and satisfy yourself. **MM**

Yamaha TR1

£1999 inclusive

PERFORMANCE

Maximum Speed – 115.2mpg
Standing Quarter Mile – 13.40secs
Fuel Consumption – Hard Riding – 26mpg
Cruising – 44.3mpg
Best Full-Tank Range – 186 miles

ENGINE

Type – air cooled 75 degree sohc Vee-twin, roller main bearings, plain big ends
Displacement – 981cc
Power – 70bhp at 6500rpm
Torque – 60 lb/ft at 5500rpm
Bore & Stroke – 95x69.2mm
Compression Ratio – 8.3:1
Induction – two 40mm Hitachi CV carburettors
Exhaust – two into two, with collector box
Oil System – wet sump, 6.3 pints
Ignition – transistorised electronic ignition

TRANSMISSION

Clutch – wet multiplate
Primary Drive – helical cut gears
Final Drive – fully enclosed chain
Gears – five-speed, constant mesh

CHASSIS

Frame – pressed steel spine
Front Suspension – telescopic (air assisted)
Rear Suspension – cantilever monoshock, de Carbon type unit with adjustable damping and air adjustable spring
Wheelbase – 60.6in
Ground Clearance – 5.6in
Seat Height – 30.5in
Weight (wet) – 530lb
Fuel Capacity – 4.2 gall
Tyres – front: Bridgestone Mag Mopus 3.25x19; rear: 120/90x18
Brakes – twin discs at front, SLS at rear

INSTRUMENTS

140mph speedometer with tripmeter, 10000rpm rev counter with 7000 redline, warning lights for high beam, oil level, indicators, neutral, charge

EQUIPMENT

Electrical – 12V 18Ah battery
Lighting – 60/55W
Sundry – self-cancelling indicators, twin horns, luggage rack with lock-up stash box

Test bike supplied by: Mitsui Yamaha, Oakcroft Road, Chessington, Surrey