

WHATEVER you call it, a cantilever system, a triangulated rear swinging arm, or as Yamaha prefer 'Monocross suspension', there is no doubt that it is the main distinguishing feature of the DT series of trail bikes.

It is also the most obvious example of putting technology developed from racing directly into use on the road, or to put it another way, making the most of the image of race-bred machines.

It is important to make that qualification, because it is rather more a question of appearance than that of practical use. Yamaha have styled their new trail bikes to look very closely like their moto cross machines, from the paintwork right down to their matt-black handlebars. But the actual advantage of having a cantilevered green-laner is negligible.

If anything, in fact, the bike is slightly heavier, and the centre of gravity plumped a few inches higher as a result of the massive single rear

suspension strut rammed up inside the hollow spine of the frame.

But those are the dictates of fashion, and anyone with blood in his veins, and dirt under his finger nails would have to admit that the DT250 looks the part. The stylists have pleased the city-street scramblers with sleek lines and attractive colours, while at the same time incorporating rugged and functional features for the serious off-road rider.

The DTs have always been about the best of the Japanese bunch when it came to dirt-digging. The latest DT250 is in the same mould, but I have my reservations about whether it is actually the best of the Yamaha line. Apart from the suspension, the basic bike is not a lot different from the original, conventionally-suspended two-fifty two stroke Japan came up with several years back. Unfortunately, the Yamaha importers in Britain held off bringing in a trail bike bigger than 175cc until

the cantilever model came along, so it had no reputation to work from. Then they brought in both the DT250, and its big-bore brother the DT400, with a little over a hundred pounds difference in their retail price. A lot of people who seriously wanted a good off-road bike obviously went for the big one, but you've only got to look at

# ROAD TEST YAMAHA DT 250



BY MARTIN CHRISTIE

the number of DT400s for sale in the second-hand columns to see it was a short-lived love-affair.

Yamaha importers Mitsui obviously thought so, because they stopped bringing them in after a year. Not that the DT400 is a bad bike, it's just that there are so few people who can cope with a 400cc single cylinder two stroke. It's got a lot of power, and it just drinks petrol so that it is not really practical as an on/off road mount. For the average Sunday afternoon adventurer a smaller bike will do everything easier, and with better economy.

So now we have the DT250 as Yamaha's biggest two-stroke trailer. But I would suggest that maybe even that is in danger of being upstaged (or is it downstaged?) by its little brother, the DT175 as a more practical all-round machine.

It is a relatively big bike for the average rider; although the seat height is kept low, the steering head and handlebars are high. It is also comparatively heavy for a two-stroke single, and this is felt both in the steering, and when trying to make the

front wheel light.

While it may not be a damning criticism, and no worse than any of its similar competition, it is perhaps because the Yamaha promises so much from its appearance and its heritage, that its actual agility is something of a disappointment. But let's start at basics. There's nothing wrong with the motor. The oversquare, 70 x 64mm pot is a puller rather than a revver, with the help of a reed valve in the inlet tract to smooth out low speed carburation. It will wind up to full boil, but it prefers to hum along, and be kept on simmer by full use of the gears. But therein lies the rub. The standard gearing is too high overall, and the internal ratios too close to make full use of the motor's potential.

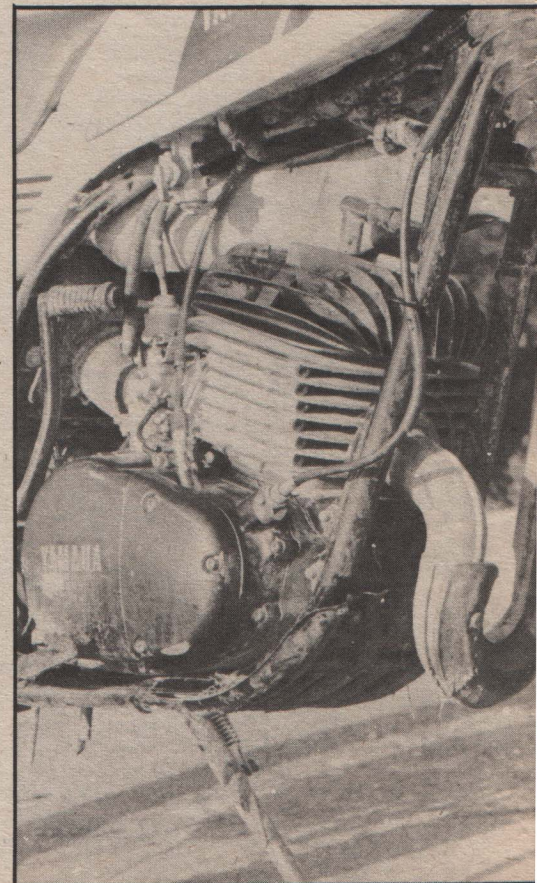
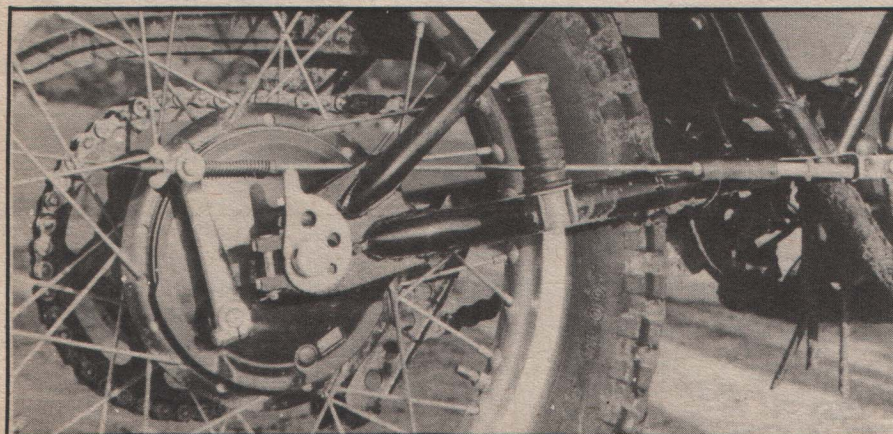
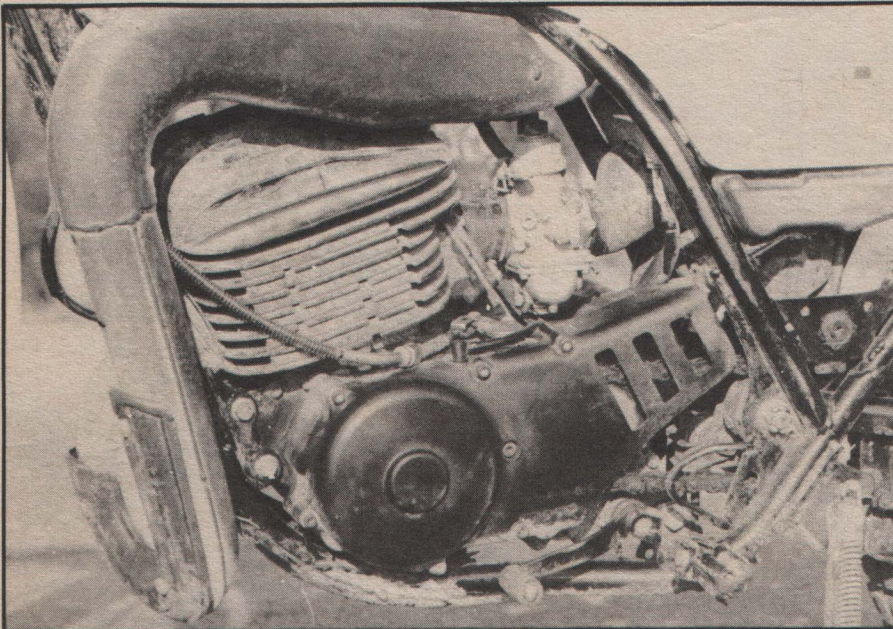
Lowering the overall ratio, by putting a larger sprocket on the rear wheel, for example, would go part way to making it tractable. But it would dramatically reduce the 70 plus top road speed, not to mention a present pleasant 65mph cruising one.

The real answer, I feel, would be a lower first and second actually in the

box. Perhaps Yamaha have this up their sleeve with a six-speed cluster, like that on the 175, but for the moment options are limited. The situation is not helped by the fact that gear selection and transmission take up is poor. The DT250 would not miss gears, but operation at the pedal was harsh, particularly between first and second and it was not generally a pleasure to use. The big multi-plate clutch was rather over-keen to bite, making it difficult to slip gingerly in sticky situations, and when trying to prise the overgeared machine out of boggy going the unit would start to moan rather bitterly about its treatment.

The motor itself was exceptionally well behaved, even when covered in mud and water. It started perfectly within a few prods even after being stalled and laid over, and ran sweetly through the range. Only the transmission objected.

Final drive from the box is by conventionally exposed chain, and this seems to have a hard time of it, through a long reach, and much movement of the rear arm. A chain



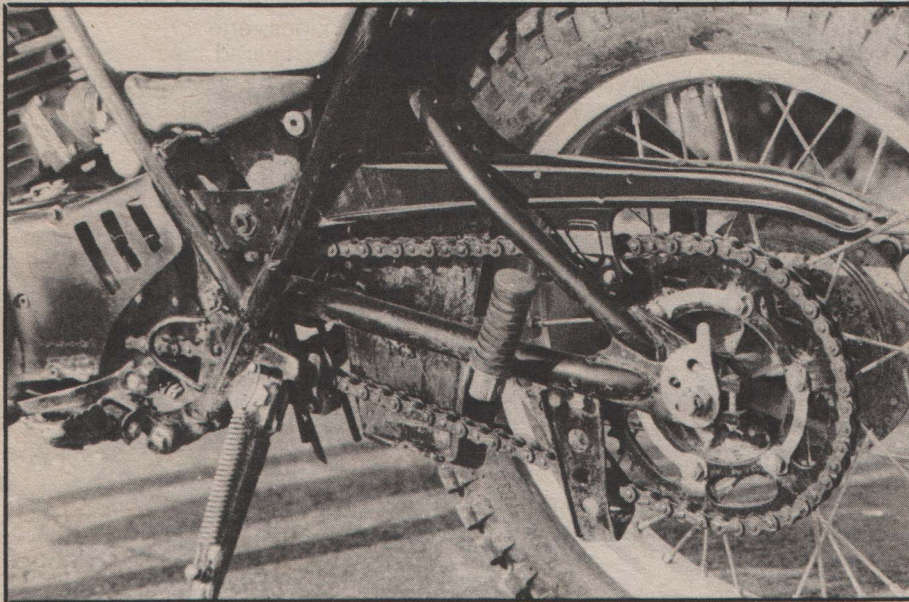
*The reed valve motor has plenty of power, but the transmission lets it down. General appearance is pure moto-crosser, but not necessarily that practical for the street/trail use.*

tensioner is fitted, but it is a fairly flimsy one, and an owner would be well advised to seek stouter material both for it, and the chain itself. A metal chain guide, looped under the rear of the swinging arm, has probably as much chance of getting bent and whipping the chain off as actually keeping it on its intended direction. But at least they thought about it. Chain adjustment, by snail cam at the rear of the swinging arm,

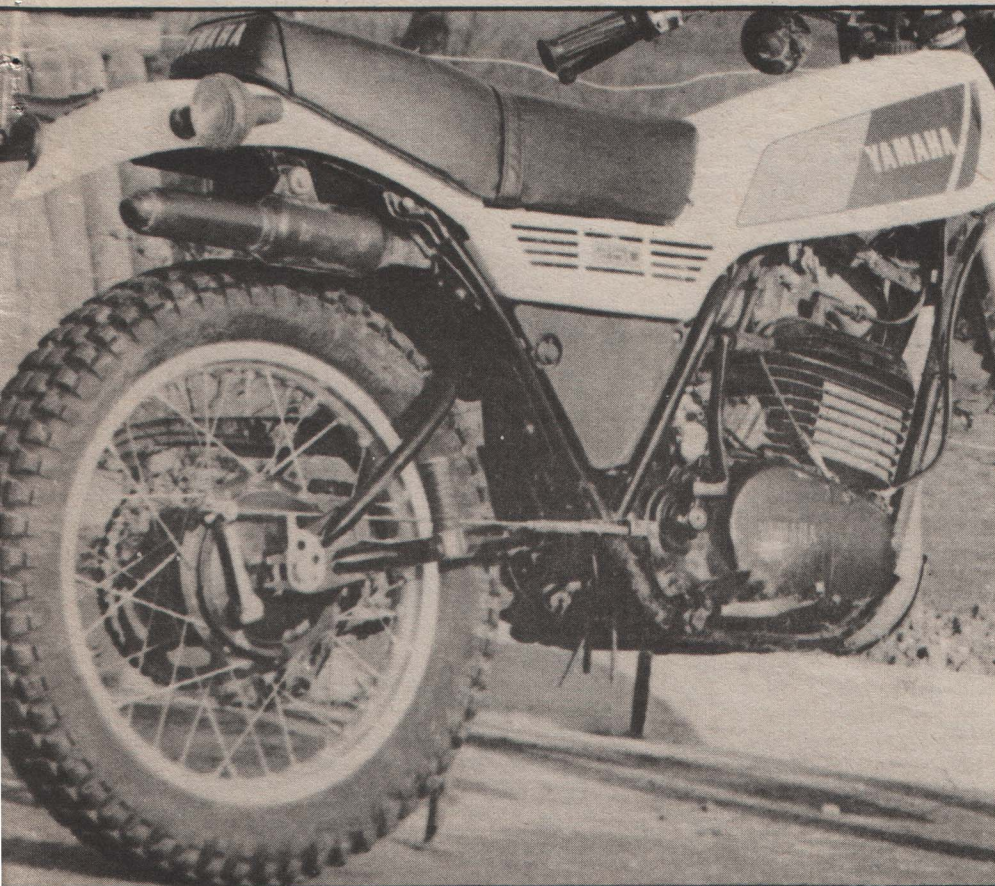
is a good feature, as is neat, fuss-free rear wheel removal.

I learnt that the hard way by collecting a large thorn in the rear tread, and nearly taking the tyre off the rim. Both rims have sensible security bolts to protect the tyre from moving round, one in the front and two aft.

Fittings and features on the Yamaha are overall of a very high quality, and well-suited to its dual-



*Cantilever suspension is a good gimmick, but not really an advantage for trail use. The chain tensioner is necessary for the long chain run/suspension movement, but rather flimsy.*



purpose role. Given that you have to have indicators on a trail bike, mounting them on collapsible rubber stalks has got to be the answer. The front ones are mounted under the handlebars anyway, so they are fairly safe. The rear ones, towards the end of the mudguard, are reasonably inoffensive, and will stand up to most knocks.

The rear light, and number plate is not so well mounted, being exposed and prone to vibration as well as any other damage. It is surprising that, having gone to the trouble of tuning the indicators for the trail, Yamaha didn't carry on the logic to the taillight.

Still, the headlamp, which has an adequate 30/30 watt beam, has its own metal grill to protect it from flying stones. But there again, while applauding Yamaha for putting one on, can't one ask why it was not in impact-resistant plastic instead? If the metal strips bend under impact, they will pierce the glass anyway.

The front forks come with black rubber gaiters on already, again conforming to popular moto cross style. If you don't like these, they only cover the normal chrome stanchions, and rubber leg seals, but they are handy at keeping the muck out.

The front mudguard has been extended by clipping on an additional length of plastic. Whether this is another piece of intentional cobblyness, I am not sure, but it does help keep down spray and dirt from the front tyre which would otherwise hit the rider's eyes.

The petrol tank is nice and slim, holds just a touch under two gallons, and has a plastic screw-on cap with a vent pipe that feeds out to the top fork yolk. Unfortunately it also has a balance pipe underneath, joining the two sides of the tank between the frame spine. That makes it a tricky job to remove if you want to get at the electrics or the suspension unit itself.

Actual adjustment of the suspension unit spring load is easy enough. You only have to remove the seat, held on by two bolts under the rear mudguard, to reveal the naked spine of the bike, and a castellated collar around the centrally-mounted unit. A lever supplied in the tool kit can turn this either to increase or decrease the spring load through five positions.

The tool kit itself is locked away under a black plastic flap on the right side of the bike, so don't lose your key! On the left side, a white plastic cover pulls off grommets to reveal the oil tank. This swings out for topping up by removal of a locating wing nut. For some reason this wing nut must take a lot of knocks, because on

my test bike, first one of the wings disappeared, then the whole nut itself. So I had to replace it with a conventional bolt.

The oil tank does not have a window, so it is very difficult to see how much oil you have got in. Yamaha in their wisdom have installed an electrical gadget, just like a fuel gauge, which lights up a red warning light in the speedo console when you are running out. This strikes me as one more good candidate for the most useless motorcycle invention out.

First, how low is low? Do you panic when the light comes on, or does it come on so early you get lulled into a false sense of security? How do you find out in advance on a long journey that you are about to run low, and worse, what happens when the unit fails? To all these questions, Yamaha have no satisfactory answer.

At least as curious must be the reason why, when you go to the trouble of fitting an exceptionally well-tucked in overhead exhaust pipe to get better ground clearance, you give it an initial loop almost as low as the motor itself. Yamaha have created a real dirt trap in a proper plumber's job of U-bending the pipe out of the head. Not only will it pick

up mud, but also the odd rock, which is why they have to protect it with a thin extra shield. Apart from that, the pipe is excellent, getting well out of the way along the backbone of the bike, to exit in a cylindrical and extremely efficient silencer.

There are no noise problems with this Yamaha from the exhaust. The only offence may be caused to the rider by the motor itself. They have done their best to muffle it, putting rubber bungs between the fins to cut down resonance. But it is as much the transmission and related gear that gives the Yamaha its distinctive sound, reminiscent of an irate clockwork mouse.

The DT's brakes are very good, powerful for single leading shoe drums, but with a good deal of feel in them, especially the rod-operated rear. As with any lightweight, it is possible to lock both wheels, but never inadvertently. They allow the bike to be ridden fast on the road, making full use of a high cruising speed potential, and still worked well under full pressure.

In its standard trim, in fact, the DT250 feels much happier on tarmac than off it. The suspension is on the soft and spongy side, and combined with stable steering, makes for a

comfortable ride. Off road handling is adequate for pottering along green lanes, but used any more forcefully needs to be beefed up somewhat, as both the front fork and the single rear unit could do with more progressive damping.

Changing the overall gearing would do a good deal to improve tractability, and probably help steering and general handling by getting some of the pulling power lower down, where it ought to be. But those are matters the test rider can only speculate about. Taking the product as it comes out of the crate, the DT250 is a very good all-rounder in its class, which is a pretty fair comment against some stiff opposition.

It is one of the best Japanese trail bikes, but it is probably not the best that Yamaha can do, and the novelty of cantilevered rear suspension is not matched by equivalent advances in other areas of the bike that need attention.

A good one, but not a great one.

*Our fearless rider puts the Yamaha through the "let's try the effectiveness of the flexible indicator stalks test". Actually, he is just wishing that his right leg were 6in. longer.*

