

Moroccan magic

Malcolm Gough got to grips with the RD80LC and came away impressed



ALL the signs point to the fact that 80cc road bikes are going to become a very popular capacity in the future in Britain.

More people are starting their motorcycle careers on this class of bike, say Yamaha. Eighties are certainly far cheaper to insure than, say, 125s at the moment, and over the next few years the 80cc category is likely to displace 50cc motorcycles on the racing scene.

So with this potential big market in mind, Yamaha have introduced their sporty RD80LC.

Clearly styled on its successful bigger brothers, the RD250LC and RD350LC, the 80 is being launched this month at a price of £625, to be followed shortly by an RD125LC, making up an 'RD LC' foursome.

Sportster

Though only an 80cc single cylinder two-stroke engine, liquid cooling enables it to develop almost 9bhp with a 10,000rpm redline. The result is a super little sportster capable of reaching 65mph-plus (indicated), with handling and brakes to match.

I was able to have my first taste of the bike when taken by Yamaha to a European launch in Agadir, on the Moroccan coast. The stylish 80 was quick to impress.

The motor is a 79cc unit with a bore and stroke of 49 x 42mm, housed in its frame using what Yamaha confusingly call their "orthogonal engine mount system". The simple aim of this is to reduce vibration.

The rear engine mount using ball bearings is set on a line running at right angles to the



An impressive sight . . . Yamaha's little 80cc flier.

cylinder through the engine's centre of gravity. This allows the engine to shake up and down on the pivot of its rear mount. A front rubber mount absorbs this vibration, forming a kind of vibration unit which rotates at a constant resonant speed.

Vibration

This rubber mount at the front is adjustable so that the inherent

vibration of the engine can theoretically be damped out over any practical speed range. On my test bike this set up had the effect of reducing vibration to all but a tingle for nearly all of the rev range.

The 80 has its engine rpm redline set at 10,000revs. There is not much point in revving the engine beyond 8,000rpm on flat roads because it soon runs out of steam above this mark.

Maximum revs are only needed when changing up through the gears when climbing a hill or when you are going for maximum speed in top.

There were three test RD80s in Morocco and although I rode only one for a comparatively short period, it soon became clear that all three bikes performed differently, even allowing for the average journalist's sense of disproportion.

Mine would not creep over 67mph in top and was showing some 10,300 revs on the tachometer. You had to be patient to gain those last few mph as well. Another couple of riders claimed they saw 72mph on the clock of the second machine, while the third machine was slower than both and probably a 6bhp restricted bike intended for the German market.

Camel

I think Yamaha's energy induction system does a better job of spreading out the power on the 80 than on the DT125LC, first impressions of which appear on page 29. The 80 accelerates handsomely with only 4,000rpm on the clock, and there is none of the leap frogging which can be experienced on the perky 250 and 350LCs.

The 80 also feels a safe machine even on the undulating Moroccan roads, where drivers are apt to pull out in front of you and where it is not unknown for the odd camel or goat to step out in the road as you've got your head on the tank!



Liquid cooling allows the single cylinder two-stroke engine to develop almost 9bhp with a 10,000rpm redline.

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The bike has a low centre of gravity which makes cornering a pleasure, even for a six footer like myself, and the front brake is superb with good 'feel'. The design of the 80 just oozes sports styling with its cockpit fairing (which rattles on its mountings), black chrome expansion chamber, streamline tank and seat and 'italic' alloy wheels. There are no pillion footrests nor are there provisions for mounting any on the narrow tubed rear swinging arm.

Monoshock suspension is the order of the day, it seems, and that fitted to the RD80 is a scaled down version of the set-up proven by Yamaha's road racers. It feels soft but works very well. Both the main chassis and the pivoting rear sub-frame are triangulated to achieve maximum rigidity.

The handling is taut and only on the bumpiest sections of the Moroccan highway did the machine tend to hop around at the back. With some machines, however, the bumps would have meant that I probably wouldn't be here to tell the tale. At the very



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least I would have had to slow down — not so on the 80, everything can be taken flat out.

Cooling

There was just about enough room for me to get my head behind the fairing but, having

squeezed myself 'in', it did not seem to have much effect on top speed whether you were flat on the tank or in a half crouch position.

The cooling system on the 80 is a sealed system. Expanded hot water is routed into an expansion tank separate to the radiator and returned to the main system as it

cools. This is supposed to do away with the need for constant topping up — as long as the system is not leaking. There is also a temperature gauge and a water level gauge.

The radiator holds one litre of water and coolant in a 1:1 ratio. The water pump is gear driven from the primary drive on the crankshaft and centrifugal force pulls the liquid into the cylinder jacket through a joint pipe. The liquid is then induced into the cylinder head where it cools the engine. The liquid then returns to the radiator where it is recooled and goes back to the radiator.

Zippy

Liquid temperature is monitored by a sensor on the cylinder head jacket and the temperature gauge pointer begins to move when the engine coolant reaches 40degC.

The 80cc machine is a zippy little bike on which, I believe, few young riders would not want to start their motorcycling life. It's fairly expensive but Yamaha say the price reflects the true manufacturing costs.

With autolube lubrication, CDI ignition, a lockable storage compartment in the rear of the seat cowling plus a helmet locket the specification is certainly comprehensive. I'll be surprised if the design of a bike like the RD80 does not set the pace for this capacity for many years to come.

Yamaha says of its little 80cc flier: "It is designed as an ultralight supersports machine, with a particular appeal to young riders who might be restricted to that capacity bracket by law".

True! □



A rider's view. The design of the 80 oozes sports styling with its cockpit fairing and streamline tank. It handles superbly.

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