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motorcycle MECHANICS



MAKING MILWAUKEE FAMOUS

MIGHTY ATOMS
We split the Yamaha
and Kawasaki 80's



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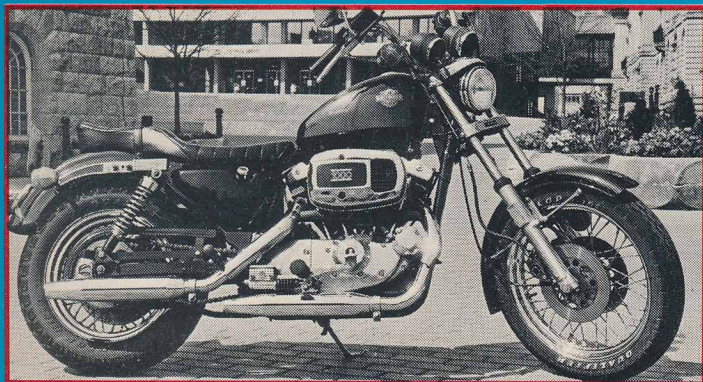
**Biking's heavy
metal hero**

Shocks unlimited **Women's wear** Z 750 GP on test

WIN +++ WIN +++ WIN



Our hot MB50 — see page 34



What made Milwaukee famous... Colin Taylor passes on his thoughts on the Harley Sportster — See page 24.

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May 12th-May 25th, 1982

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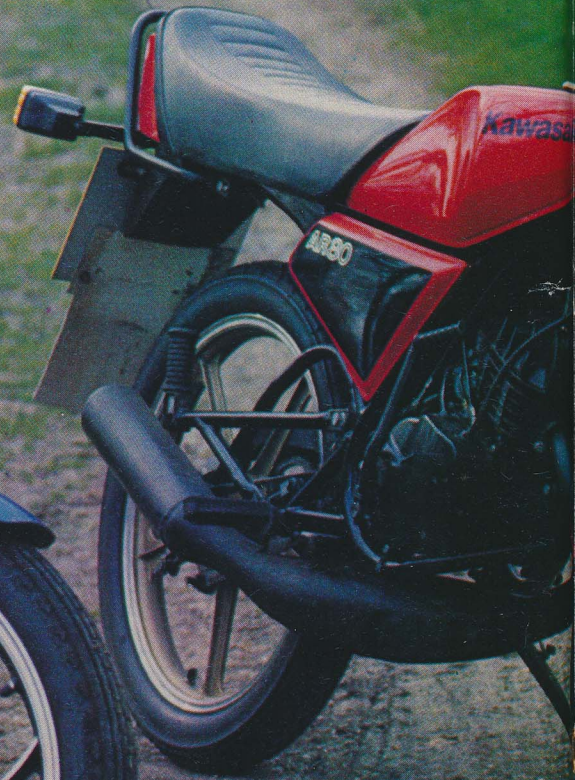
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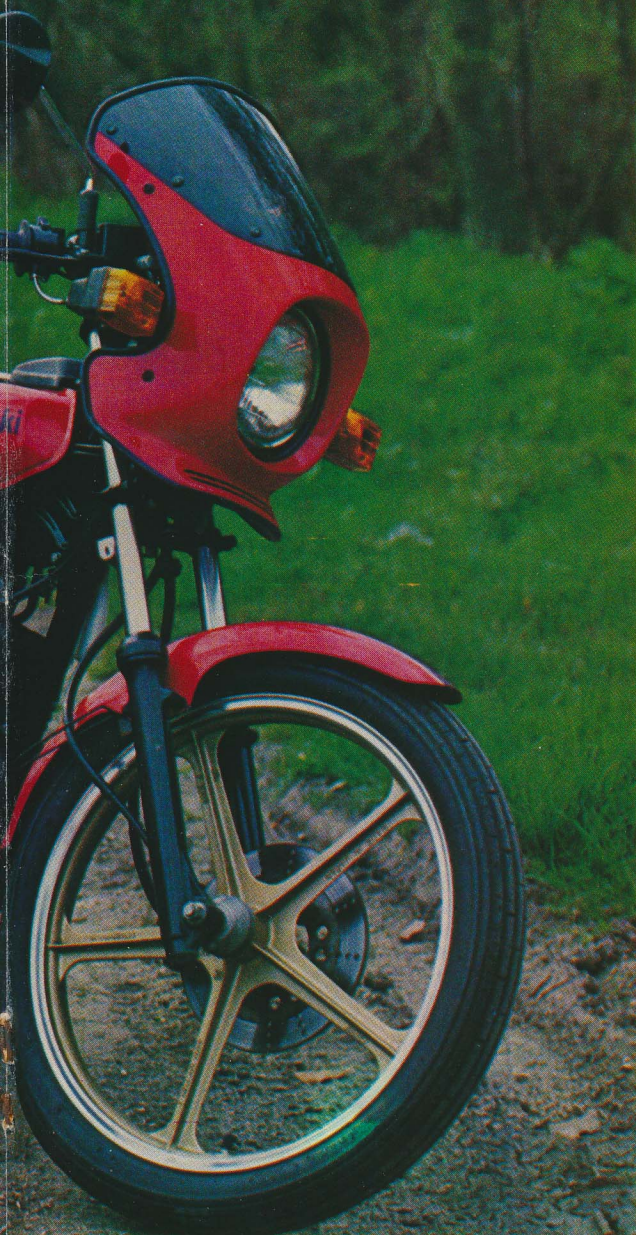
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SPLITTING



The 80cc models from Yamaha

AT THE ATOMS



and Kawasaki are light, fast and very popular — Jim Lindsay finds out which is the most explosive

Test report begins on next page.

SPLITTING THE ATOMS

LAST YEAR, it seemed as if the proposed learner legislation affecting 17 year-olds was about to spawn a whole load of 80cc two strokes aimed specifically at people just leaving the restrictions of the sixteen year behind them. Rumours led quite a few people to believe that all the Big Four would be carrying at least one sports 80 each in their '82 line-ups.

As it turned out, the rumours were without foundation. Only Yamaha and Kawasaki have actually come up with 80cc learner specials. Honda, we hear do have an 80cc version of the MB5 but not for the UK. And Suzuki have nothing in that line at all, they say.

So, that leaves us with a market of two (well, three if you count the trail styled Kawasaki AE80). Both bikes are reed-valve, piston ported two-strokes, both have single shock rear suspension systems and both feature racy styling with scanty handlebar fairings. Sounded to me like an ideal basis for a comparison test . . .

Kawasaki AR80

THE MOTORCYCLE division of Kawasaki Heavy Industries has a knack of styling bikes to make them look both fast and aggressive. They went for broke when they put together the AR80. The sharp, angular styling coated in vivid Kawasaki red with just the bare minimum of lettering to let you know who built the bike, makes the whole package look highly desirable.

The rear end is beautifully uncluttered thanks to the Uni Trak rear suspension and the gold cast alloy wheels set off the rest of the machine to a fine degree. And how about that exhaust? Looks like it just came off a racer doesn't it?

The feel of the bike goes quite a long way towards matching its looks. It's a very revvy engine and you don't find any acceleration worth speaking of until the tachometer needle is showing 6000rpm. The build-up to that figure is a touch sluggish but thereafter, the engine gathers speed rapidly up to and slightly beyond the 10000rpm red line.

It's quite easy to hold the bike at an unstrained 55-60mph provided you work the gearbox hard. Fast, clutchless shifts are no problem and I never once hit a false neutral.

The only problem with our test machine was a reluctance to start when warm and uneven running at low revs. I rode another AR last year when I was working for another motorcycle publication so I can say that the starting and slow running problems were peculiar to the particular bike we had on test and are not to be found on all ARs.

The rear suspension is very much state-of-the-art, to use that well worn expression (must think up a new one). The cantilever swinging arm is connected to a rocker beam pivoted on the chassis which is in turn connected to a vertically mounted spring damper unit. The greater the upward movement of the rear wheel, the greater the leverage applied through the linkage to the shock absorber—in other words, it's a rising rate system.

The handling is good. My main problem when slinging the thing through corners was a psychological one. It took some time before I allowed myself to believe that those skinny tyres would give enough grip to keep me and the bike as one unit rather than two separate items destroying themselves in a series of bounces along the tarmac.



Same idea, different styles. There's little to choose between the performances of both bikes but quite a difference in price and appearance.

To take corners cleanly though, you do have to go at them flat out. Not surprisingly, neither the Kawasaki nor the Yamaha has enough power to climb out of bends on the throttle.

The AR has excellent brakes. They're almost too excellent. Indulging in some stupidity in the car park, I thought it would be fun to try the old pushbike trick of slamming on the front brake and lift the rear wheel clear of the ground. On the AR, this is a too easy trick. I nearly ended up doing a headstand on the asphalt.

The AR is, above all, a well balanced bike. It has enough of everything in the right proportions. That's why I grew to like it almost a year ago. Riding it again this year just confirmed my original opinion.

Yamaha RD80LC
FOR £147 more than you would pay for the Kawasaki, you can have what is probably the ultimate small-bore roadburner.

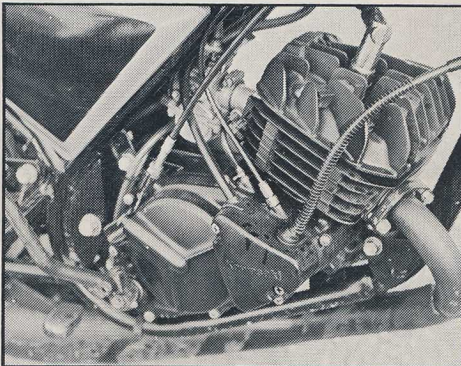
The RD80LC is one very flash bike. The styling makes it look like a single pot clone of the 250 and 350 LCs. It does not, however,

have the spiky and aggressive appearance of the AR. Nor, incidentally, does it have pillion pegs so you'll have to fit some if you want to carry your girlfriend on the back after you've passed the test (both parts of course).

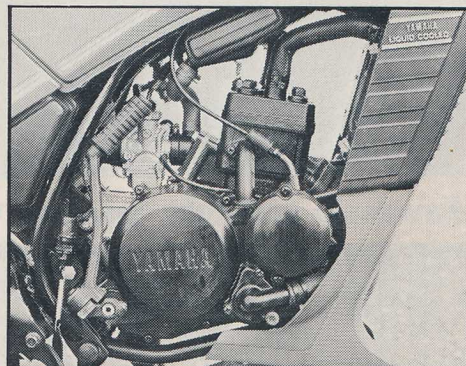
The coolant pump is located on the righthand side of the engine and the use of coolant hoses has been kept to a minimum. The radiator is small and unobtrusive with a clear strip on the lefthand side through which you can see the coolant. A handy idea, because you can check the level at a glance without having to remove the radiator cap.

Like the Kawasaki, the motor has to be revved if you want to get anywhere in a hurry. It did, however, feel crisper than the Kawasaki. The power comes in at 6000rpm with a more noticeable bang. You can pop modest power wheelies in first gear without trying all that hard. In top gear, the motor eventually pulls its way round to the red line (10000rpm) with the rider sitting up. Crouch over the tank and it will pull into the red with a bit of effort.

As with the Kawasaki, it took me some time



Aircooled two-stroke AR80 motor has plenty of go but was marginally slower than the Yamaha on both top-end and acceleration.



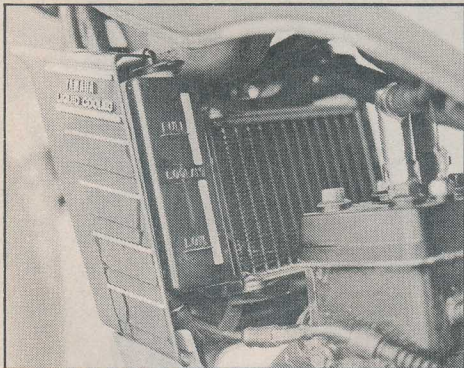
Sophistication hits the small-bore scene. The RD80LC power unit should be very tuneable.

to get into riding the bike fast through the twisty lanes that thankfully are to be found within easy reach of our Peterborough base. But after ten miles, I really began to warm to the bike, hurling it through the bends, playing tunes on the gearbox and enjoying the sharp buzz of the exhaust.

The rear suspension is not as fancy as the Kawasaki set-up. The spring damper unit is mounted longitudinally along the rear section of the frame spine and is connected direct to the cantilever swinging arm rather than through a linkage. There is actually no discernible difference in handling between the machines. Neither bike has enough performance to really push the frames or suspensions to their limits.

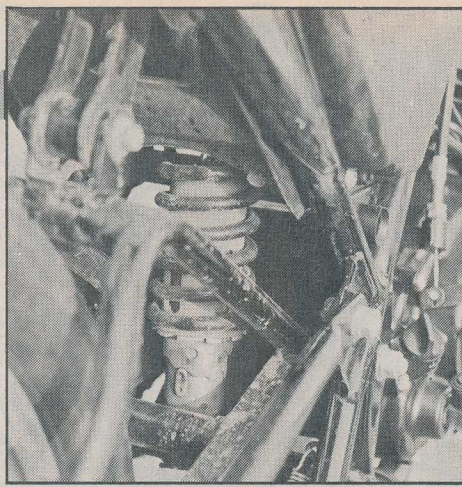
The LC's brakes are as good as you'd expect but somehow, as a styling device, the italic pattern cast wheels do not work as well on the 80 as they do on the bigger Yamahas. They look a bit out of place. That's just my opinion though. You may well think differently. Conclusion

BOTH 80s are fun to ride and have pretty similar performances. Both would no doubt respond well to tuning, although the Yamaha would probably have a slight edge in this area. They both handle well and look good. So, the choice between them comes down to the questions of style and price.

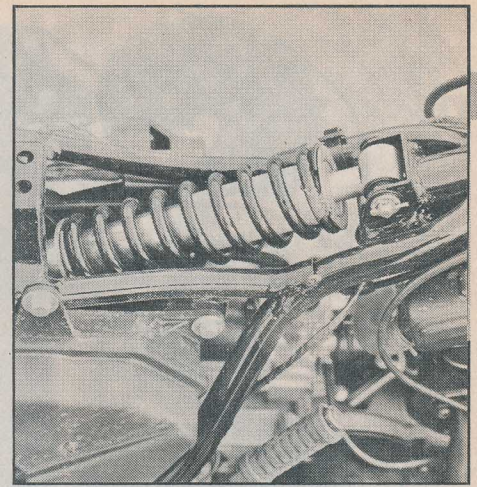


Coolant level can be checked at a glance without having to remove any caps or getting a faceful of steam.

Style is a matter of personal preferences; I preferred the Kawasaki because it looked more aggressive. On price and value for money, it's no contest — Kawasaki's AR80 is the clear winner. I just can't see that many people prepared to shell out £646 for an 80cc motorcycle, even if it is liquid cooled.



AR80 features Uni-Track rear suspension. Spring is adjustable for pre-load, but the adjuster cam is difficult to get at.



The RD80LC rear end is more straightforward using the by now familiar Monoshock set-up with the damper being attached to the rear of the frame spine.

SPECIFICATIONS

Yamaha RD80LC

Recommended retail price£646
 Warranty 12 months/unlimited mileage
 Availability immediate

Performance

Top speed62.46mph
 Standing start ¼ mile 19.04s/59.41mph
 30mph top gear roll on ¼ mile20.37s/
 59.65mph
 Fuel consumption68mpg

Engine

Typesingle cylinder, watercooled 2-stroke
 Bore and stroke 49 x 42mm
 Piston displacement.....79cc
 Compression ratio 7.1:1
 Fuel system..... 18mm carburettor

Transmission

Gears6 speed
 Clutch multiplate, wet
 Primary drive gear
 Final drive chain
 Primary reduction n/a
 Final reduction..... n/a
 Gear ratios n/a

Chassis

Type Tubular semi-double cradle
 Suspension front..... telescopic fork
 rear monoshock
 Front tyre 2.50 x 18
 Rear tyre.....2.75 x 18
 Front brake.....disc
 Rear brake..... drum

Dimensions

Wheelbase 48½ inches
 Seat height.....30 inches
 Dry weight 172lb
 Fuel capacity2.2 gal

Instruments

Includes: speedometer, rev counter, odometer, temperature gauge, warning lights for oil level, high beam, turn signals and neutral.
Importer: Mitsui Machinery Sales Ltd, Oakcroft Road, Chessington, Surrey.

Tester's verdict

Good points fast
 Bad points expensive
 Performancehot for an 80
 Economy OK
 Handling OK
 Comfort.....better than a rocking horse
 Braking..... excellent
 Equipment adequate
 Value not very good

Kawasaki AR80

Recommended retail price£499
 Warranty 12 months/unlimited mileage
 Availability Good

Performance

Top speed60.16mph
 Standing start ¼ mile 21.53s/56.79mph
 30mph top gear roll on ¼ mile21.50s/
 52.73mph
 Fuel consumption72mpg

Engine

Typesingle cylinder 2-stroke
 Bore and stroke49x41.6mm
 Piston displacement.....78cc
 Compression ratio 7.8:1
 Fuel system..... 18mm Mikuni

Transmission

Gears 6-speed
 Clutch multiplate, wet
 Primary drive gear
 Final drive chain
 Primary reduction 3.619
 Final reduction.....3.769
 Gear ratios 1st — 3.307, 2nd — 2.11,
 3rd — 1.545, 4th — 1.240,
 5th — 1.074, 6th — 2.733

Chassis

Type Tubular semi-double cradle
 Suspension
 Front telescopic forks
 Rear Uni-Trak
 Front tyre 2.50 — 18 4 PR
 Rear tyre..... 2.75 — 18 4 PR
 Front brake.....single disc
 Rear brake..... drum

Dimensions

Wheelbase 47½ inches
 Seat height 31 inches
 Dry weight170 lb
 Fuel capacity2.1 gal

Instruments

Includes: Speedometer, Odometer, rev counter, warning lights for oil level, high beam, neutral and turn signals
Importer: Kawasaki (UK), Deal Avenue, Slough, Berks.

Tester's verdict

Good pointsstyling, price
 Bad pointsrear suspension difficult to adjust
 Performance good
 Economy reasonable
 Handling ace
 Comfort..... what comfort?
 Braking..... sharp
 Equipment OK
 Value well worth the price