

# YAMAHA XT250 • HONDA XL250S • KAWASAKI KL250

The four stroke trail bike scene is hotting up with the introduction of Yamaha's all new XT250. Rick Kemp finds out how it shapes up against Honda's XL250S and Kawasaki's revised KL250. Photographs by Tim Leighton-Boyce.

## HAPPY TRAILS

Honda have had things all their own way for a long time with four-stroke trail bikes and XL250 has always provided a good alternative for the 'L' rider. Now Yamaha look set to change all that with their brand new XT250. It's got the style, it's lighter and, would you believe, it's the same price.

The XT250 was first introduced to the world in November last year. Everyone was suitably impressed

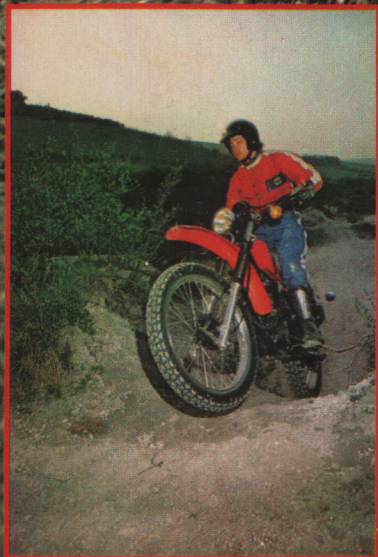
*The Honda XL250S — the class master*

and various bits and pieces appeared in the press, but since then...nothing. Releasing a test bike five months later seems like a strange way to market a bike, but who are we to argue with the tactics of the Mighty Japanese Sales

Machine?

The XT is diving into an arena dominated by Honda and contested by Kawasaki with the latest version of their KL250. Yamaha are already the market leaders with their two stroke trail bikes so it's no accident that the XT looks like a stroke version of the DTs.

Anyone who wants a serious off road bike isn't going to buy a trailbike let alone a four-stroke now that so much else is available.



*Kawasaki's KL250A3*

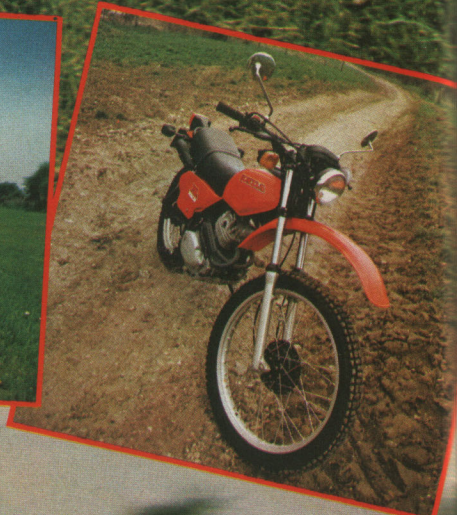


*Yamaha's XT250*



*Below: The Honda's low gearing makes it very controllable when the going gets sticky.*  
*Centre left: The Kawasaki is the only one with air forks and it's got the best all round suspension.*

*Centre: Yamaha's gold wheels and Monocross rear suspension put it ahead on looks. Below right: 23inch front wheel and twin exhaust pipes still make the Honda unique. Bottom: Despite its superior suspension the Kawa tends to flop into slow corners.*



But if you can only afford one bike, like most of us, and you want it to be dual purpose the available machinery is becoming less of a compromise. The biggest single improvement on trail bikes is their tyres. We now have tread patterns and compounds that give enough grip of road to be very useful combined with a profile that's safer for road use.

The Honda is the most familiar of the three having been around for eight years, yes it really is that long, even though the latest version has nothing in common with the original.

The ohc engine uses a pair of chain-driven balance weights to smooth out the 74 x 57.9 mm bore and stroke piston. The virtues of this are debatable. Though the engine is very smooth any power gain from the four valve head has been dissipated by the time it reaches the gearbox. As a result the Honda is one horse down on the opposition. Without the balancers it would probably have the others panting in its wake. The four valve head uses twin exhaust pipes to take the gases away and this is claimed to give better heat dissipation and engine breathing at high revs. The engine is fed via a single 28 mm Keihin carburettor. Capacitor discharge ignition supplies the sparks.

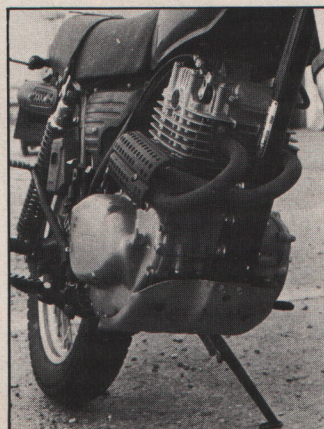
Kick starting is made easier by an automatic exhaust valve lifter. This is cable-operated from the kick start lever so there's no fiddling around to find the compression stroke, just kick and it's all taken care of. To further aid starting there is a handlebar mounted progressive choke which eliminates all that groping under the tank when the motor is cold.

The Honda is a well laid out bike. The seat height is a bit high at 33 ins but the long travel rear suspension compresses a fair bit as soon as you sit on it and most people should be able to put both feet on the ground. The seat, handlebar, footrest relationship is good, probably the best of the three for normal road use. The frame is a single

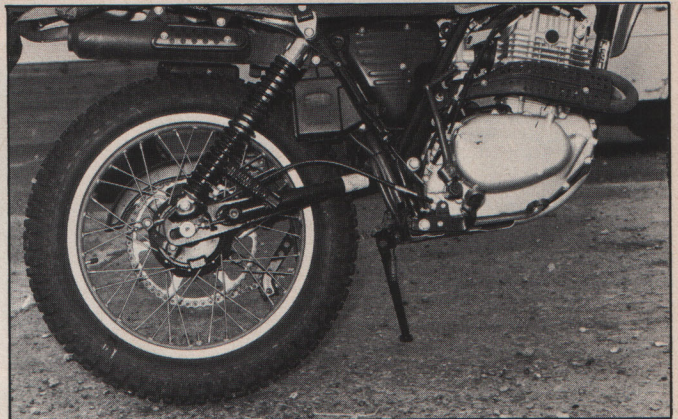
downtube construction using the engine to complete the bottom loop. As with most trail bikes things are pretty cramped under the seat. Air filter box, electrics and a fair bit of exhaust plumbing are squashed in but everything is accessible.

Suspension is very comfortable with the leading-axle fork giving eight inches of travel. Seven inches of movement is provided at the rear by the very long acute angle shocks. Having this much travel at the rear has created a chain run problem and Honda overcame this by fitting huge rear sprocket to give the chain enough clearance around the swing arm pivot. This is fine on the road though a sprung tensioner would be an improvement, but off road it just gets in the way of too many obstacles, rocks and twigs. But it's a problem that Honda are stuck with unless they redesign the swing arm.

The Honda's power comes in very smoothly which must be proof that the counter balancers work. Though the bike can pull away at very low revs in first gear, feeding the clutch in is not a smooth operation. Its action is very light but at the same time it tends to grab a bit so it's quite easy to pull the odd inadvertent wheelie. The five ratios in the gearbox are quite evenly spaced so you never find the engine short of revs, in fact the overall gearing is too low. There's no rev counter fitted to the bike but in the speedo there are different coloured bands giving a maximum speed for each gear. The danger of over revving the motor is minimal as the power drops off quickly once past the optimum 7,500 rpm

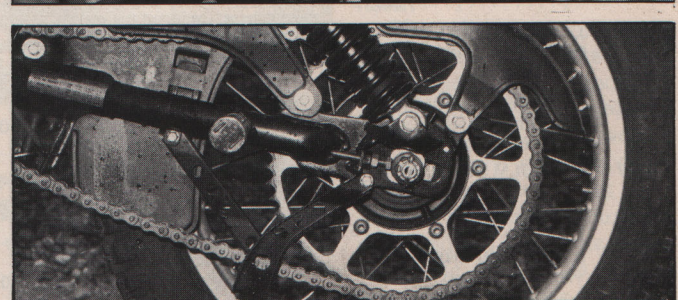
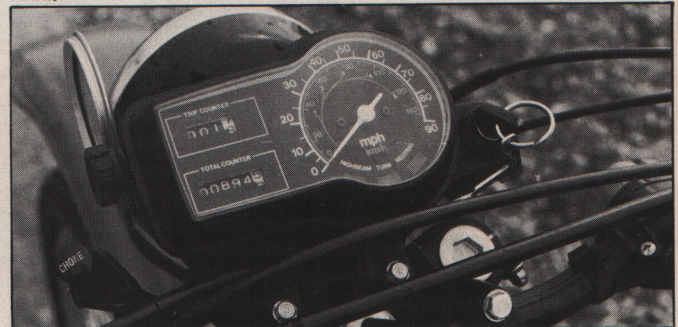


Twin exhaust ports provide the Honda with better breathing and head cooling.



Above: Exhaust plumbing and air filter box means the Honda's battery has to be mounted in a more vulnerable position.

Below: Larger rear sprocket is needed to get a smooth chain run with the increased suspension travel, but it does get in the way off road.

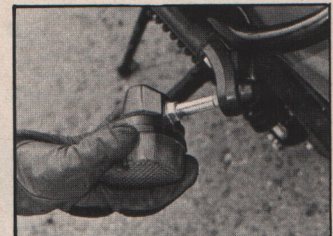


The Honda is the only one not equipped with a rev counter.

at which point it develops 20.2 bhp. The engine's maximum torque of 14.4 lb-ft occurs at 6,000 rpm but it's by no means gutless below this figure.

At 70mph motorway cruising speeds the Honda is stable but like any light-weight motorcycle is very susceptible to side or head winds and its indicated 78 mph top speed can soon be dragged down. The absence of vibration through the seat and footrests is marked though a high frequency tingle makes itself felt through the 'bars over about 60mph in top. Handling is taught enough but the suspension is lightly damped so there's a bit of bounce front and back. This doesn't affect normal road work but off road it's very noticeable.

Also off road, the Honda is front end heavy and the footrests are just too far forward to easily lift the front when the bike is in the



Rubber mounts endow the indicators with longer life.

air. Lifting the front with the power however is very easy and the XL can take some pretty large obstacles in its stride. The Honda has the shortest wheelbase of the three at 54.7 ins but the most ground clearance (10.2ins).

Equipment is minimal with only a speedo and large tripmeter. Tools are kept in a plastic box mounted to the left of the rear mudguard, the trouble is it's almost impossible to get the things back in once you've used them. Lighting is six volt with a 35-watt headlight and suffers from lack of indicators if you run around

with the lights on during the day, but the headlight is adequate for urban riding.

The Honda fulfils its role as a dual purpose machine very well but is better on rather than off the road where it returned 53mpg. The tyres are mainly responsible for this not giving as much grip in the dirt as the rubber fitted to the other bikes. At £899 it is the same price as Yamaha's XT and more expensive than the Kawasaki and as such we feel it's a bit overpriced as it's beginning to show its age.

## KAWASAKI KL250

Kawasaki's entry into the four stroke trail bike market in 1978 with the original KL250 didn't set the world alight. But the latest A3 version is a different proposition completely. The bike has been restyled along the lines of the KX moto-crossers with humpy petrol tank and revised suspension including box section swing arm. The rear shock absorbers are gas/oil units. The front fork is now leading axle with air assisted springing, and the whole thing looks much more together as a result.

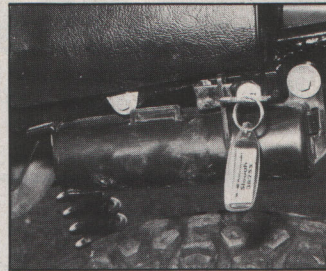
The engine is basically unchanged with the same bore and stroke of 70 x 64mm and produces 21 bhp at 8,500 rpm on an 8.9 to 1 compression ratio. New is the automatic cam chain tensioner and capacitor discharge ignition. A constant-vacuum 34mm Mikuni carburettor is now used for better throttle response. The exhaust too



*The Kawasaki's motor doesn't employ any form of balancing so it shakes a bit, but the constant vacuum carb ensures a smooth power delivery.*

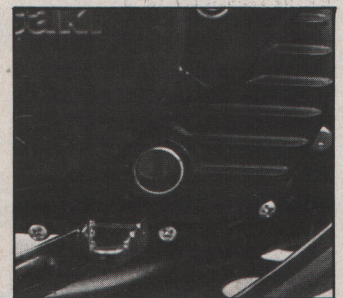
takes a different route on the A3 version. After it leaves the head it winds round to the left and enters a first stage silencer that runs across under the seat, the tail pipe then comes out on the right side ending in a short silencer. The whole system is tucked out of the way but it is louder than either the Honda or the Yamaha with a fair amount of popping on overrun.

The Kawasaki lacks any form of balancing. You can feel the vibration through the handlebar but this sacrifice isn't borne out with a lighter bike; it's the same weight as the 260lb Honda.



*The Kawa's tool box locks on to the helmet holder, very neat.*

The Kawasaki also lacks any form of decompressor for starting but this doesn't make it any more difficult to start. If the kick start lever goes solid before the motor fires up, you just pull the clutch in and start again but the bike usually



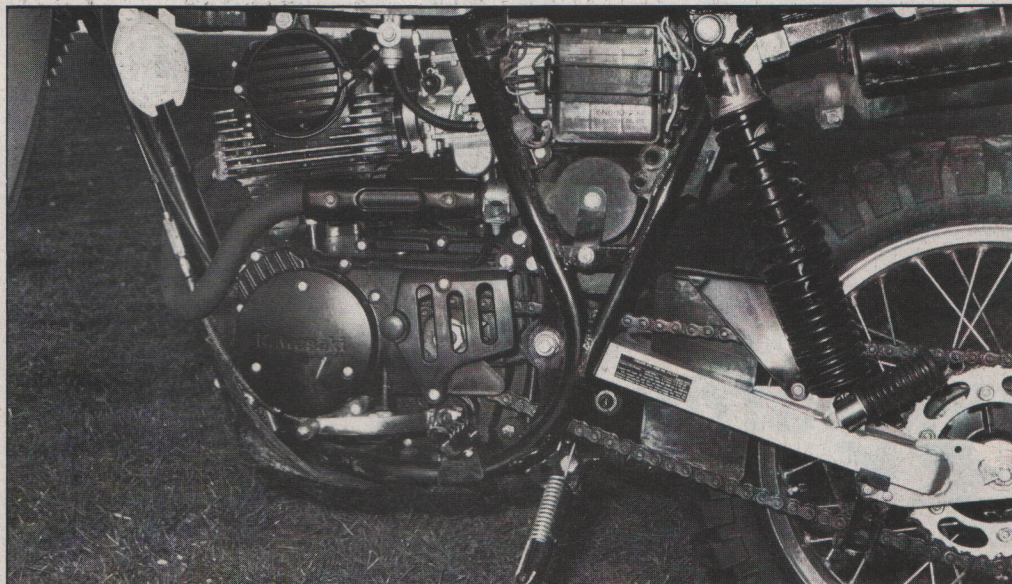
*Oil level sight glass is rather obscure being surrounded by black.*

fires first or second prod. Gear selection is very good on the move or stationary, but occasionally when leaping about off road it jumped out of gear.

The suspension works very well both on and off road. Springing and damping on the rear units are well matched to the bike's weight and as the forks are air pressurised now it's up to the rider to decide how they're set. Alloy rims and hubs reduce the unsprung weight which contributes to the suspension behaving itself.

The riding position on the KL differs from the other two. The seat's a good bit higher for a start, 34¾ins, and the bars are lower so you're really on top of it. This has its advantages when you're throwing it around off road and it's also quite handy in traffic. But once on the open road the rider feels a bit like a sail in the wind.

The Kawasaki's gearing seems better suited to its engine's power output than the other two, the Yamaha being over geared and the Honda under geared. Its top speed of 78 mph is beyond maximum powers revs in top. Handling on the road is good at speed but there is a tendency to flop into corners at lower speeds and, this is reflected in the bike's off road steering; when going from one lock to the other you're lifting the bike which indicates too much rake. The tyres fitted to the Kawa are Dunlops with a new tread pattern, the first compromise tyre we've seen from the Japanese subsidiary. The tread blocks are bigger than average and the 4.60 x 17 fitted to the rear wheel looks very chunky while the front is a 3.00 x 21 version. Weight and wheelbase are very close to the Honda but the weight distribution is different, lighter at the front,



*Fabricated steel swing arm and gas/oil shocks produce a firm, well-controlled ride at the back end.*

so it doesn't need much encouragement to get the wheel off the ground when the going gets bumpy.

In comparison the Kawa vibrates more, no doubt about it. So its top speed, even though the engine finds it easy to hold, is rather a strain on the rider. 65mph would be a more realistic cruising speed for any length of time as the seat and handlebars are the worst affected by vibration. The KL might be easier to live with for all its vibration if it were lighter as a consequence.

Kawasaki have accepted the fact that most trail bikes spend most of their time on the tarmac, so they

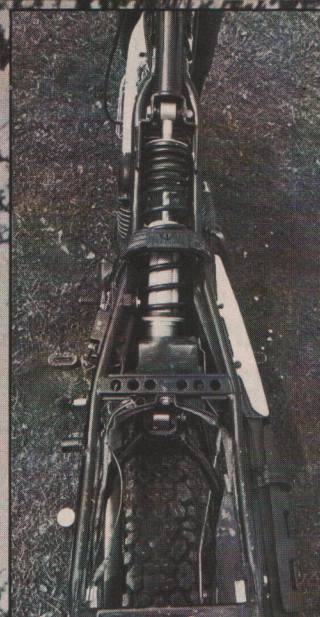
have fitted a rear carrier as standard not that this item impares any off road activity. Full instrumentation is provided and the stop light switch is activated by both front and rear levers. The 6 volt battery copes well with all the auxiliaries as well as the battery supplied (not direct) 35 watt headlight. Maintenance should be minimal and within the reach of most owners. Ignition and cam chain tension take care of themselves so that only leaves valve clearances to adjust and these are very

accessible. The oil filter is housed behind a plate on the right side of the engine and there is a sight glass for checking the oil level.

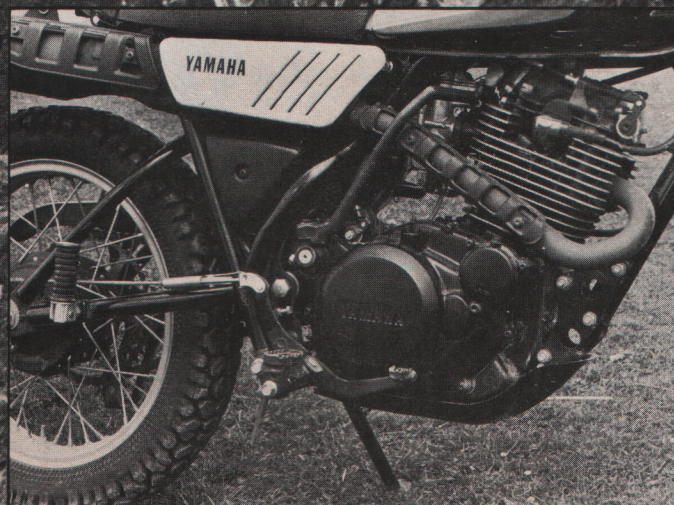
The Kawasaki is £30 cheaper than the competition which makes it good value, the suspension is excellent and it is the most forgiving bike off road. But at what cost of vibration?

**YAMAHA  
XT250**

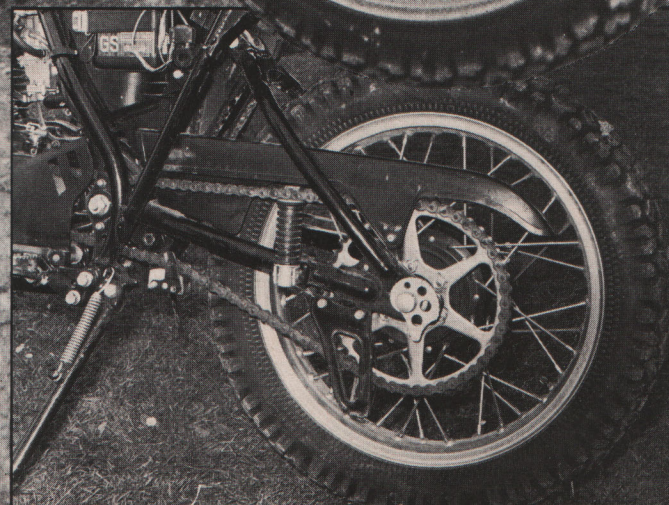
The XT250 is a pretty bike with its black and white paint job, black engine and gold



*Tank and seat have to be removed to adjust the spring preload.*



*Yamaha's motor has a gear driven balance shaft and a kick start linked exhaust valve lifter for easier starting the end result is very smooth.*



*Yamaha's Monocross rear end is used for the XT along with a 17 inch rear wheel. Trail Wing tyres fitted are the best yet from Japan.*

anodised wheel rims. The cantilever rear suspension gives the bike a very clean look too. In this case beauty is more than skin deep as the engine is without doubt the sweetest four-stroke 250cc single around. It's smooth and mechanically quiet and most of the credit for this must go to the balancing system. This is a single gear-driven counterweight that runs behind the crankshaft, supported either end on roller bearings like the crank. This balance shaft doesn't perform total magic since you can still feel the power pulses, but they become more a gentle oscillation than actual vibration. On the overrun though, you can't feel a thing. Having one shaft gear driven is quieter and lighter than the Honda's two chain driven ones.

Elsewhere the engine is a straightforward overhead camshaft design with wet sump lubrication. Its 249cc comes from a 75 x 56.5mm bore and stroke, making it the shortest stroke of the lot. So not surprisingly it's the highest revver, just, making maximum power at 8,500 rpm. The figure quoted is 21 bhp, the same as the Kawasaki. Strangely enough all the bikes produce the same amount of torque, 14.4 lb-ft, the Yamaha and Kawasaki make it at 6,500 rpm and the Honda at 6,000. Ignition is by capacitor discharge on the left side of the crank. The five speed gearbox is driven via a wet multiplate clutch.

It will show an indicated 80 mph downhill but it won't hold more than 76mph on the flat.

The Yamaha uses a kick-start-linked exhaust valve lifter almost identical to the one found on the Honda. The kick lever itself is in one piece and it swings through 90 degrees at its base when in use, but since it has to tuck into the bike neatly, it's at a rather awkward angle to kick. The choke is the push-pull type as you'd expect on a Mikuni carburettor and this 28mm item is fitted with accelerator pump. Starting proved no problem from cold on full choke but with a warm motor a few more kicks are necessary. The XT500 is fitted with a warm start button, maybe the 250 would benefit from a similar device.

Throttle response is very good, the power comes in quickly and smoothly, even when snapping it open from low revs. In fact for off road use it's almost too good, it would be better to leave more free play in the cables so you didn't move the throttle each time you hit a bump. On the road though it's a boon in traffic and makes nipping in and out a more precise business and therefore safer.

The Yamaha is more front-end heavy than the others and this is a mixed blessing. It's great on the road because it means you can accelerate faster without the front lifting but on the turf you've got to do more grafting. Handling on the road is excellent for a trail bike, steering geometry is neutral and its 55½ wheelbase gives it stability at speed. At 249 lbs the Yam is the lightest of the bunch but while this works in its favour in agility it gets blown around more on open motorways. In fact if you've got the choice it's best to avoid motorway trips on any

of these bikes, it's just plain boring.

The front forks, despite their appearance, are conventional oil damped teles, and not too well damped at that. The rear end is the Yamaha Monocross system as found on the DT/MX range with a triangular rear fork using a single shock absorber running up under the seat and tank. The unit fitted to the XT is adjustable for spring preload only and to do this the seat and tank have to be removed. Adjustment is on a threaded damper rod with a locking nut. In doing this we discovered one area of weight saving. The seat has a plastic base and the whole thing only weighs a few pounds.

Surprisingly the bike's performance off road wasn't as good as we had hoped. The relatively heavy front end and a stiff rear end made the bike prone to nose diving. The rear wheel flicks up even over quite small bumps and if anything like a jump is attempted you've got to

make sure the front is up by giving the throttle a blip as you go over. It's a pity that the XT is not as versatile as the DT but I expect we will see some sorted ones in enduros just the same.

As a road bike though, the XT is the most comfortable to ride, and has a very responsive engine. It is also fitted with the best tyres, Bridgestone Trial Wings. These give enough grip off road for the average clubman and behave well even on wet tarmac. It comes fully equipped with rev counter, tripmeter, steering lock and tools but like the Honda these are a bit inaccessible behind the side panel and under the seat all mixed up with the electrics. Furthermore, the Yamaha produced the most economically with a fuel consumption of 65 mpg. Priced the same as the Honda at £899 the Yam is more attractive. It's new, it's pretty and it's a great road bike.

|   | KAWASAKI KL250  | HONDA XL250S   | YAMAHA XT250  |
|---|---|--|---|
| <b>Price inc. VAT:</b>                      | £869  | £899   | £899  |
| <b>Engine:</b>                              | Ohc single  | Ohc four valve/single  | Ohc single  |
| <b>Capacity:</b>                            | 246cc (70 x 64mm)   | 248cc (74 x 57.8mm)  | 249cc (75 x 56.5mm)   |
| <b>Lubrication:</b>                         | Wet sump  | Wet sump   | Wet sump  |
| <b>Comp ratio:</b>                          | 8.9 to 1  | 9 to 1   | 9.2 to 1  |
| <b>Carburetion:</b>                         | 34mm Mikuni CV  | 28mm Keihin  | 28mm Mikuni   |
| <b>Ignition:</b>                            | Capacitor discharge   | Capacitor discharge  | Capacitor discharge   |
| <b>Max power:</b>                           | 21bhp at 8,500rpm   | 20.2bhp at 7,500rpm  | 21bhp at 8,000 rpm  |
| <b>Max torque:</b>                          | 14.4lbs-ft at 6,500rpm  | 14.4lbs-ft at 6,000rpm   | 14.4lbs-ft at 6,500 rpm   |
| <b>Primary Drive:</b>                       | Gear  | Gear   | Gear  |
| <b>Clutch:</b>                              | Wet multiplate  | Wet multiplate   | Wet multiplate  |
| <b>Gearbox:</b>                             | Five speed  | Five Speed   | Five speed  |
| <b>Final Drive:</b>                         | 520 chain   | 520 chain  | 520 chain   |
| <b>Mph/1,000rpm:</b>                        | 8.5 in top  | 9.3 in top   | 9.4 in top  |
| <b>Electrics:</b>                           | 6v 6ah battery, alternator, 35/35w headlight  | 6v 4ah battery, alternator 35/35w headlight                              | 6v 6ah battery, alternator 35/35w headlight                               |
| <b>Fuel Capacity:</b>                       | 2.1 gals  | 2.1 gals   | 1.7 gals  |
| <b>Frame:</b>                               | Single downtube   | Single downtube, integral motor  | Single downtube   |
| <b>Suspension:</b>                          | Air assisted leading axle telescopic fork (f) Swing arm with 5 pos. spring preload adj. | Leading axle, telescopic fork (f) Swing arm with 5 pos. preload adj. (v) | Leading axle, telescopic fork (f) Cantilever with 5-pos. preload adj. (r) |
| <b>Tyres:</b>                               | Dunlop 3.00x21 (f) 4.60x17 (r)  | Yokohama 3.00x23 (f) 4.60x18 (r)   | Bridgestone Trail Wing 3.00x21 (f) 4.60x17 (r) Drum/drum                  |
| <b>Brakes:</b>                              | Drum/drum   | Drum/drum  | Drum/drum   |
| <b>DIMENSIONS</b>                           |   |  |   |
| <b>Wheelbase:</b>                           | 55.7ins   | 54.7 ins   | 55.5 ins  |
| <b>Seat Height:</b>                         | 34.75 ins   | 33 ins   | 32.5 ins  |
| <b>Grnd Clrnce:</b>                         | 9.5 ins   | 10.2 ins   | 10 ins  |
| <b>H'bar Width:</b>                         | 34.8 ins  | n/a  | 32.5 ins  |
| <b>Rake/Trail:</b>                          | 59.5 deg/5.2 in   | 61.5 deg/5.4 in  | 61.25 deg/4.6 in  |
| <b>Weight:</b>                              | 260 lbs dry   | 261 lbs dry  | 248 lbs dry   |
| <b>EQUIPMENT</b>                            |   |  |   |
|   | Mirror, tools, rear carrier, steering lock, helmet lock, trip meter, rev counter        | Steering lock, trip meter, tools, mirrors                                | Mirror, tools, trip meter, steering lock, rev counter                     |
| <b>PERFORMANCE</b>                          |   |  |   |
| <b>Top Speed:</b>                           | 78mph   | 78mph  | 76mph   |
| <b>Calculated speeds at max power revs:</b> | 24,36,48,60,72 mph  | 22,34,46,56,70 mph   | 23,37,49,62,75 mph  |
| <b>Ave. fuel cons:</b>                      | 55.3mpg   | 53mpg  | 65mpg   |
| <b>Tank range:</b>                          | 116 miles   | 111 miles  | 110 miles   |
| <b>Importer:</b>                            | Kawasaki Motors UK Ltd, Deal Avenue, Trading Estate, Slough, Bucks.                     | Honda UK Ltd, Power Road, London W4.                                     | Mitsui Machinery Sales, Oakcroft Road, Chessington, Surrey.               |