

# The Man Who Bought

*It may sound like a weird acquisition, but bikes could be on the verge of transforming*

By Mike Nick

THERE ARE times when a journalist's feelings for magazine production schedules fall to about the same level as the contempt that the directors of NVT must reserve for politicians. The trouble with magazines is that you have to work several weeks, even months, in advance of publication, whereas with dailies or weeklies you can get information into print almost instantly.

So there I was gloating over the feature I had lined up for this issue about a quiet man from the north country who makes a remarkable motorcycle. His bikes are so good that they could very conceivably lead to a technological revolution in a certain brand of world championship racing currently dominated by heavyweight Japanese and Continental factories.

Then a little piece about our man appeared on the front page of the *Sunday Times* Business News. Ah well, not every *Bike* subscriber is into the financial pages of quality Sunday papers. Then the *Daily Mail* ran a few inches on him. But still, not too many *Bike* type people can buy that ode to the joys of middle class existence. The next irritation was that someone was telling me they'd seen a piece on my hero's activities on TV the previous night, and a lot of people do spend time in front of the box. The crowning aggravation happened when one of the weekly motorcycle papers ran a three-page piece on the same subject, and more than a few people also read the biking weeklies (this particular one, anyway).

However, if you hadn't already guessed, we still elected to run the CCM feature in this issue — well, there's just a chance you might have been on a llama spotting expedition to Tibet just recently and missed what the national media were saying about Alan Clews. And anyway, I still think the combined total of all this publicity has left some of the best parts of the story untold.

Like the 80,000 clutch plates for BSA singles he has stashed away in a storehouse in Bolton, Lancs. What does a man do with that many components for obsolete motorcycles that went out of production five years ago? The same thing that he'll do with the 20,000 clutch pressure plates, the 6,000 main bearings, the 4,000 of every pinion for the gearbox, the 2,000 pistons and similar number of flywheels, and 1,000 pairs of crankcases, the several hundred cylinder heads and barrels. There's a hundred tons of this equipment packed in metal crates in that warehouse, and it represents the future working capital for CCM.

With it, Clews will continue to build his single-cylinder four-stroke moto cross bikes

*Right*

Alan Clews stands on the future of CCM — 100 tons of precious ex-BSA spare parts.

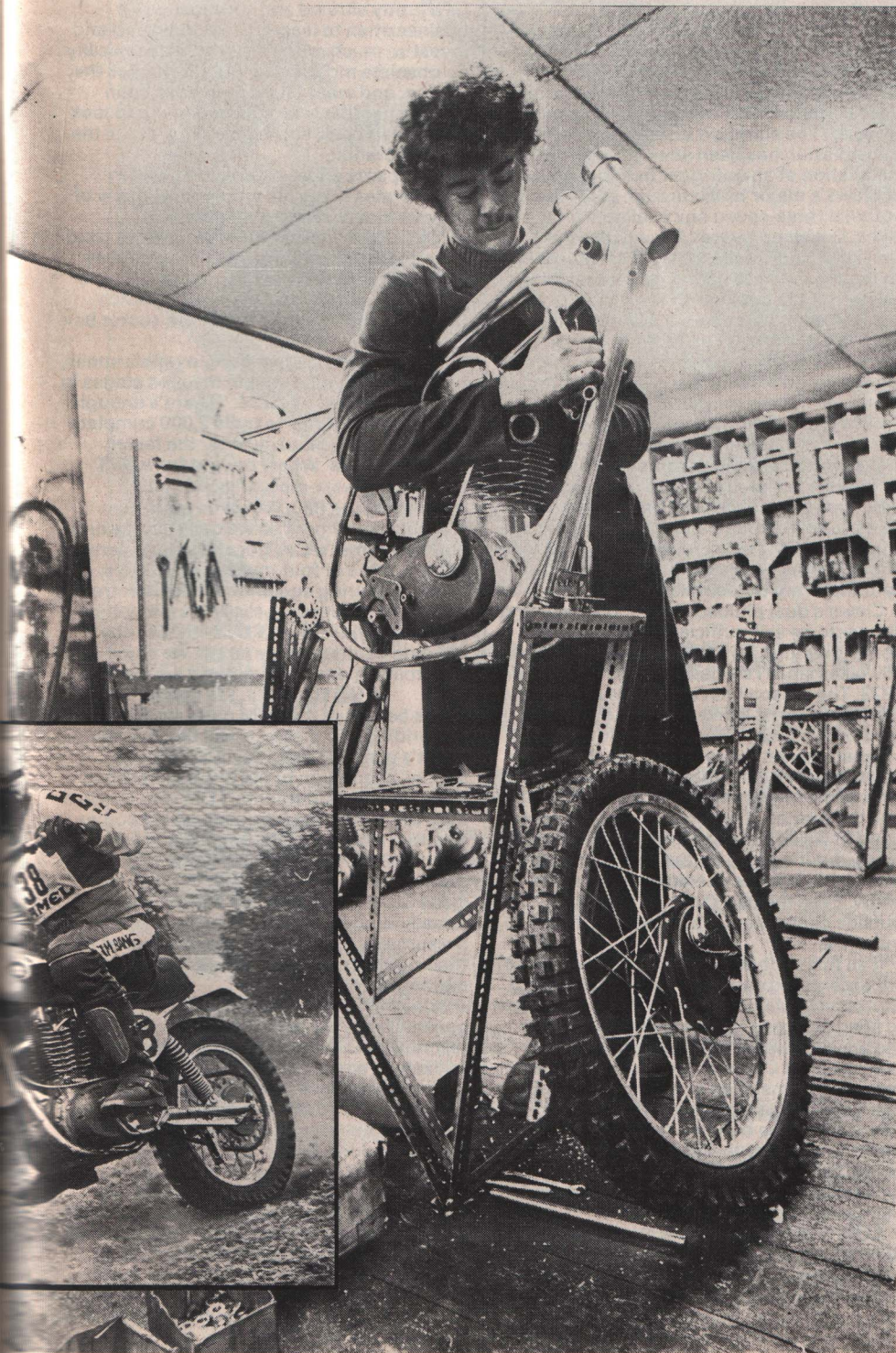
64 **bike**



# 80,000 Clutch Plates

*Alan Clews is a shrewd man whose hand-built  
the face of international moto cross.*

**Photography Duncan Cubitt**



at the rate of a handful a week. The machines are based on the B50 design and parts, but Clews works such drastic modifications into them that the original BSA influence is high on undetectable. The end product works, too. When an American off-road magazine named *Dirt Rider* sampled a CCM the result was a verbal orgasm that included such gushing phrases as:

*Hands down, the 500 CCM is the finest four-stroke dirt machine ever produced . . . Our 500 CCM test bike was never bested in a drag race. Big Maicos, Huskies, Pentons, whatever. The CCM has as much horsepower as any of them, but puts it to better use . . . The CCM is the only dirt machine built today that has absolutely no corners cut to save expense.*

Alan Clews's achievement in earning this kind of eulogy is nothing short of staggering. It's the equivalent of developing one of the old 650 BSA twins (that ceased production at the same time as the B50 when the parent company crashed) into a machine to match the four-cylinder Japanese roadsters of the late seventies — and making it competitive enough to be a front runner in the Bol d'Or.

This is no exaggeration. The last time a four-stroke won a world moto cross championship was in 1965 (a BSA in the hands of Jeff Smith). Seven years later, at the time of the B50's demise, the two-strokes had over-run moto cross racing. But last year, Clews's works bikes scored two third placings in 500 cc GP racing, in the hands of Vic Allan, and would have won the final round of the season in Luxembourg but for a couple of irritating detail failings on Vic Eastwood's bike. He was riding a special three-speed prototype of what is now the 1977 production CCM, and he was leading the first leg until the throttle jammed open with only a few minutes of the race remaining. In the second leg, he was leading again when the clutch centre nut worked loose, allowing the clutch to burn out just three laps from the finish.

The significance of these results is that, with every respect to their abilities, Messrs Allan and Eastwood are no longer fresh young riders soaring in an upward direction. What could a CCM — or any properly designed moto cross four-stroke, for that matter — achieve in the hands of a rider like the five-times 500 cc world champion Roger De Coster?

*Left  
CCMs are hand-built motorcycles. Complete bike  
in moto cross trim costs between £1,400 and  
£1,500 depending on specification.*

*Inset  
John Banks, CCM's main GP runner this year,  
puts the big beat of four-stroke power to the  
ground.*

# The Man Who Bought 80,000 Clutch Plates



It seems that the CCM successes set many too people in the moto cross business thinking in this direction. Two-strokes in moto cross have always had problems in getting their power to the ground, which is what has led to recent experiments with cantilever suspensions and extreme angles of rear shock absorber mountings. Four-stroke power, being less fierce, but more persistent, sidesteps most of these troubles, as the CCMs have proved.

Already, there will be a Yamaha four-stroke entry in the forthcoming GP season which opens in Austria on April 17. The bike will be based on the XT500 dual purpose machine tested elsewhere in this issue, and is backed indirectly by Yamaha themselves through their energetic European HQ in Amsterdam, and by the Swedish importer. However, such is the revival of interest in four-stroke power in moto cross that no less than three former world champions are involved in the XT500 project. Bengt Aberg, champion in 1969 and '70 on Husqvarna two-strokes, is the rider, Torsten Hallman is the Swedish Yamaha importer, and Sten Lundin is the team's development engineer. Now if Mike Hailwood, Phil Read and John Surtees suddenly banded together to get behind an unusual new project in road racing you'd suspect they'd latched on to something good, right? That's the measure of the interest that four-strokes are arousing in moto cross once again, and much of the revival is down to Alan Clews' pioneering efforts. That's why I suggested earlier that he might be pointing the way to a revolution in machine design in his particular sphere of world championship racing.

Five years of intensive development have

made the old B50 into a modern and competitive CCM. Almost the only standard B50 parts that Clews retains for his machines are the inner crankcases. Other parts are either modified BSA components, or freshly made by CCM or to special order by outside suppliers. The head and the barrel are modified, the valves are changed if special engine characteristics are required, the con rod is stronger, a different piston is fitted, or the standard BSA one is modified, the ignition system is a simple electronic constant loss arrangement (although a bike with generator is available for enduro-type applications). The outer engine cases are cast in magnesium, and the CCM oiling system uses a pressure feed to the rocker boxes, a luxury that the original B50 never enjoyed. The standard BSA four-speed transmission has been strengthened by the installation of an outrigger bearing, but one of Clews's major breakthroughs is in the optional three-speed box available on the '77 bikes. Designed by well known gearbox specialist Rod Quaife, one of its features is a splined mainshaft mating with a matching splined clutch hub, which is a great improvement over the old BSA taper fit. Such is the torque of a CCM motor that the three-speed box proved more than adequate for Eastwood's demands in Luxembourg last year.

CCM make their own magnesium hubs, and even provide their own front fork, a move which is rare even among the largest factories. Frames are crafted in Reynolds 531 tubing by Eatough Motocross Components, also based in Bolton, and the dry weight of a complete CCM moto crosser is claimed to be about 220 lbs — the same as many contemporary two-strokes.

Clews's dual philosophies in bike building appear to be self-sufficiency, and quality above quantity. He said: "We've made about 700 bikes since I started with the first one in 1972. The reason I haven't made more is that I don't construct a bike made of pattern or proprietary pieces. If you look around at the off-road market today, you'll see that many bikes use the same hubs, wheels, engines — almost the only things different are the tanks and the frames. If we bought a lot of these parts in we could make three times as many bikes, but it's got to be the best for me, and if it's not the best we can do I don't want to know. Even the parts that we buy from outside contractors are made specifically to our order."

If all this sounds uncommonly like the sentiments expressed in *Zen and the Art of Motorcycle Maintenance*, that book we seem to keep plugging in *Bike* these days, that's the way it is with CCM. By the time this reaches print Clews's 13-man work force may well be installed in new premises about five times bigger than the old Industrial Revolution type building they've occupied up to now, but he insists that quality will continue to be his guideline even though he'll have the facilities to meet demands for increased output.

CCM (it stands for Clews Competition Machines, incidentally) will be able to produce more while remaining largely self-sufficient because among the materials he's bought from the old BSA empire are machine tools involved in the manufacture

of the B50. In fact over the last four years he's spent about £100,000 with BSA — or with NVT Engineering, the latter-day inheritors of the BSA debacle. He started in a small way by buying 20 B50 engines a month. That was a fairly low-risk operation, but later came the chance to buy up 200 power units — the last existing batch of completed B50 motors — the vast quantity of spares, 100 tons in all, already referred to, and the machine tooling used in manufacture of the bike. Now you'd have to be a pretty shrewd and courageous — businessman to leap in at the deep end and invest so much money in what is technically an obsolete motorcycle. But Clews took the plunge, and what might then have been called a gamble is rapidly beginning to look like shrewdness, such is the progress of the CCM operation.

The spares are stacked wall to wall in metal crates in the old warehouse, many of the containers still carrying the BSA M/CYCLES stencil on the side. They're piled so high that the only way to see what they hold is to actually climb up on top of them, and walk over a world made up of clutch plates, cylinder heads, flywheels, rocker box covers.

Clews stands there picking over his spoils, his mind running ahead to the next stages in the development of CCM. "There's enough material here for us to build 2,000 complete bikes, as well as looking after the faster moving spares. What I bought from NVT represents every piece they had left concerning the B50. We've now got cam grinding equipment so we can start making our own cams, we've got a couple of vertical millers, three or four multi-spindle drills, a lot of measuring equipment, a few centreless grinders and lathes — really it's everything we need to build the CCM. With the tube bending equipment we've got we could also start making our own frames if we wanted to."

The benefit of the CCM parts stockpile to road-riding B50 diehards will be obvious, and it's a market that Clews is happy to supply, in addition to the more glamorous moto cross requirements. CCM also do what they call a "fast road engine" which comes as either a 550 or a 580, and has the full finning of the standard B50 instead of the distinctive staggered finning of the moto cross CCM. A few specials builders have already bought these engines — and have presumably been toning up the muscles of their right leg in anticipation of big single starting rituals.

Ironically, while Clews has been the pacemaker in the revival of four-stroke technology in moto cross, his bikes are unlikely to win a world championship. It's a simple question of money. It costs Alan Clews about £20,000 a year to go GP racing, and that's an intimidating sum for a small company. John Banks, the 32-year-old former world No. 2, will be his main runner in the world series this year. But if Banks repeats last year's CCM successes, the most likely result will be that one of the Japanese companies will plough vast sums into a four-stroke moto cross engine, and buy up the best riders to get to the world title. Being small like CCM may be beautiful, but at times it can also be very frustrating. ●