

Working for AMC

In their factory at Plumstead, Associated Motor Cycles made AJS and Matchless machines and, from 1963, Nortons. In this article Brian Slark gives a vivid picture of conditions and methods at the plant

It was almost inevitable that I would end up working at 'Colliers', as Associated Motor Cycles used to be known in the south-east London area. Along with all the other kids in my neighbourhood, I was crazy about motorcycles, and would obtain old copies of the green 'un or blue 'un and pore over the racing results. This usually ended in an argument over the merits of AJS, Norton and Velocette racers.

It didn't help that one of the AMC testers lived opposite our school and would arrive home for lunch every day on the latest model with, at the most, three miles on the odometer. I wonder how many readers have actually seen a new motorcycle – no, not one made in Japan six months ago, but a spanking new one that ticks and pings when the engine is shut off, smells of solvent, cutting fluid and fresh rubber, and sparkles with deep, shiny enamel and chrome. Design-wise, AMC bikes may have been long in the tooth, but their finish was second to none.

Well, after teenage exploits and a spell in the National Service, I ended up at the employment office of the AMC works in 1958, hoping for at least a sweeping job. But after a brief interview that revealed I had precious little experience except in twisting a throttle, who should walk in but Hugh Viney, the trials ace of his day, and one of my heroes. I will always remember his penetrating steel gaze and the phrase he muttered through that famous pipe in his mouth: 'So you want to ride motorbikes, do you?'

My first job, creating the de luxe models, was not as exciting as it sounds. I had thoughts of installing wild cams and megaphone exhausts, but my hopes were dashed when I was handed a big box of brake lamp switches and tail lamps, and another box of pillion footrests. Crazy as it seems, the procedure went like this:

After being road tested and

cleaned, a completed bike would be pushed across the street to the packing shop in the new building, where the non-export machines would be saddled with pressboard panels and yards and yards of corrugated paper and hairy string. The only uncovered parts were the lower halves of the wheels and tyres, so that a bike could be wheeled around for delivery by rail to the dealer who had purchased it.

I would then have to push a machine all the way back, wait for the lift and go to the third floor (fourth in American parlance) and into the factory, where I had a little 'cage' to work in. The factory levels were divided into work areas by expanded steel panels extending from floor to ceiling, and giving some measure of security.

Once I had the bike on the stand, the string and cardboard would come off, pillion rests were bolted on, the stop-lamp switch and wiring installed and the tail-lamp changed. Presto, a de luxe edition – all for the heady price of 17s 6d (87½p) over the original cost of the bike. This was my first insight to the incredible use of labour at AMC – material was expensive, people cheap.

Colliers made the majority of their parts in-house, unlike many other manufacturers who merely bolted together finished components made locally. The exceptions were the ferrous castings: cylinders and cranks came from Bircal in Birmingham, and the alloy castings – heads, hubs, cases – from Stones of Deptford.

The old factory was an early example of pre-cast concrete construction, and pieces had been added on over the years until there was no room for expansion. It was incredibly crowded, with every inch of space used for something or other. Even the landings by the stairway would have a man working at a bench, checking new castings or welding various components.

The building was four storeys



high, and the roof was also utilized, for the welding and cable shops and storage of incomplete machines. Components were moved from floor to floor via a couple of small lifts, and from station to station by little old men in worn suits and flat caps. Often one would keel over and die on the job, so they just loaded him on his handcart and wheeled him away!

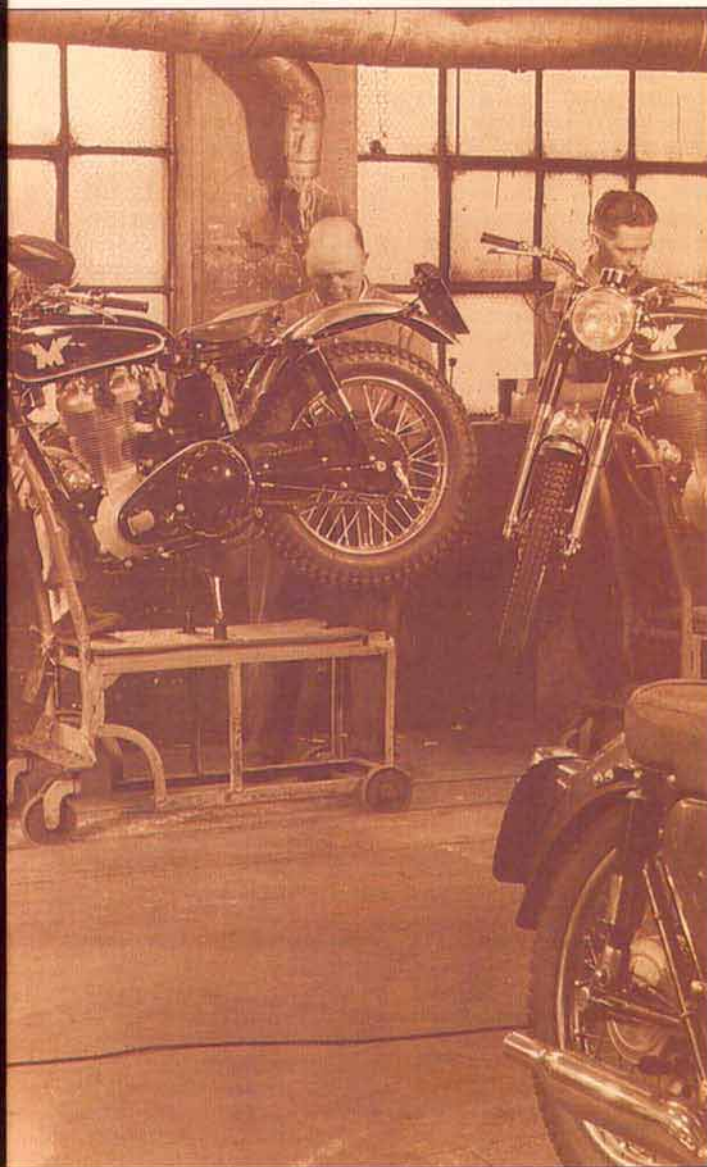
Apart from the assembly, engine and gearbox shops, the factory was a dungeon. All the windows were protected by wire mesh, and still had the paint from the World War Two blackout over them, so it was very dismal in the machine shops.

The polishing shop was pitch-black, with rows of big electric motors running the grinding and felt wheels. A rough casting had to be cleaned up with a coarse emery wheel before polishing, and that produced a lot of metal dust. Each polisher had a naked light bulb over each wheel and a crude dust extractor that exhausted on the roof to pollute the neighbourhood. The younger men would wear a dust

mask, but the old workers just inhaled the stuff and would spit occasionally to get rid of the grit.

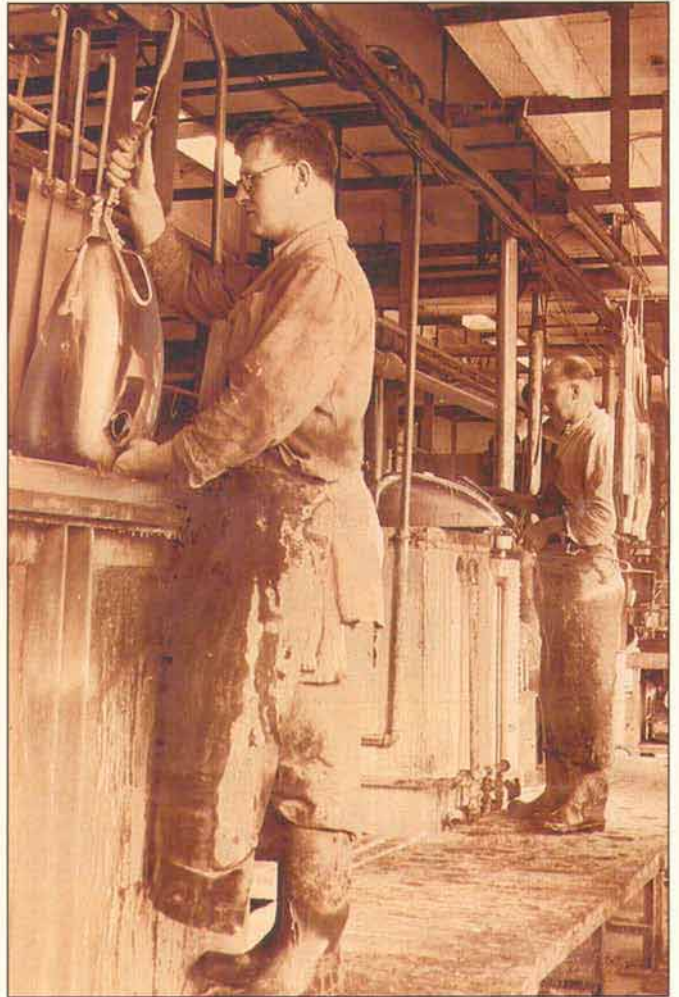
Parts came and went all day in a seemingly endless stream. For instance, the petrol tanks were pressed out in two halves on the ground floor, loaded on a handcart and trundled through the maze of machinery to the lift, and up to the third floor to be trimmed. From there they would go to the roof for welding and bonderizing, down to the first floor for painting and stripping, and up to the second floor assembly shop to receive the caps, taps and panels or knee-grips. Finally they would be installed on a bike or taken across the street to the spares department.

All new bikes were road tested for at least 12 miles. This was carried out in all weather, which was often wet and occasionally snowy. If the bike was acceptable – and it usually was – it was cleaned, the decals stuck on, and the machine was moved across the street to the packing shop. If it was an export model the front wheel, controls,



Left: 350cc Matchless trials models are produced in the competition shop in 1959

Below: 'the factory was a dungeon': petrol tanks are nickelled in the plating shop



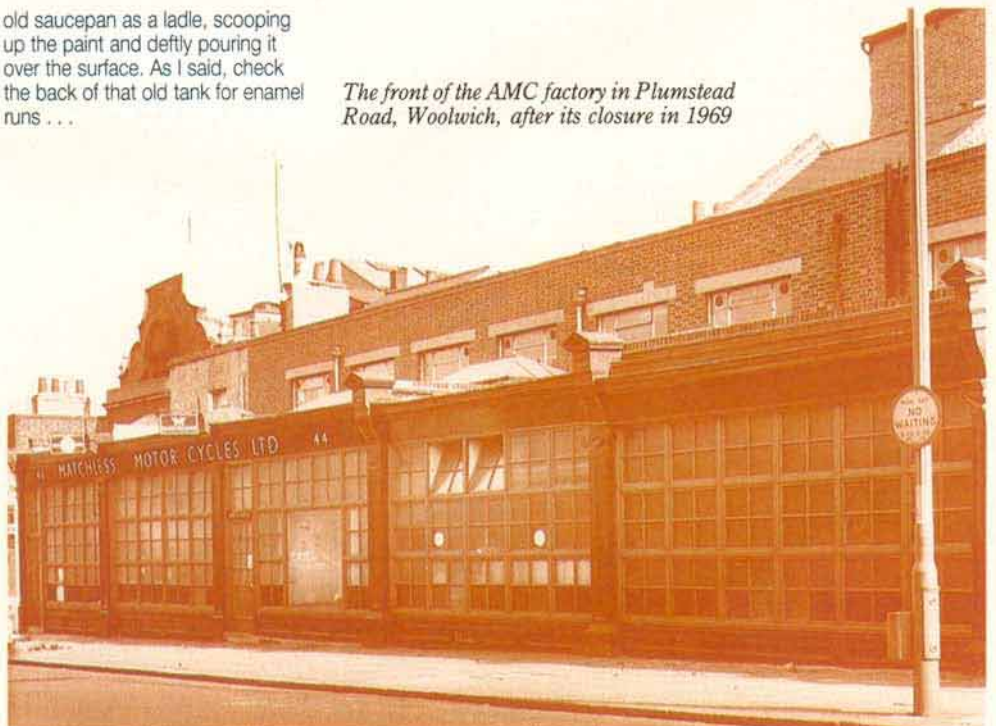
footrests, and other parts were removed, and the disassembled bike crated up – another example of wasted effort.

Present-day owners of AMC machines are very proud of the fine original enamel finishes on their bikes, while others strive to achieve such an appearance on restored machines. The problem is that they don't use the correct method. Have you ever noticed the little enamel 'drips' on the rear edge of a petrol tank or mudguard? That indicates where the part was dipped in a bath of paint and hung on a conveyor belt to go through the ovens. At one time three coats of stoving were applied, but this was later reduced to two. The frames were about the only pieces that were sprayed by conventional methods.

I was always fascinated to see the blue or red tanks for twin-cylinder machines being painted. Imagine two men down on their knees over an old bathtub full of blue paint, one of them holding a new tank by putting his fingers down the filler cap hole. The other would then use an

old saucepan as a ladle, scooping up the paint and deftly pouring it over the surface. As I said, check the back of that old tank for enamel runs . . .

The front of the AMC factory in Plumstead Road, Woolwich, after its closure in 1969



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The majority of machine tools in the factory were extremely worn out, or just quaint. The Norton oil pump test rig was an incredible device, consisting of a row of drill presses that spun the pumps, which were fed with oil. The operator would run something like ten pumps at once, and rush back and forth, checking them for binding; naturally there was oil everywhere. AMC soon deemed this

unnecessary, but when the untested pumps were fitted to engines, the friction was so great that the pump worm gear on the crank would strip. The frame shop was another place to witness turn-of-the-century methods. The frames actually consisted of a mass of small forged lugs with a few pieces of tubing between them. The steering head forging – no light piece on the duplex-frame jobs – would be sandblasted to remove rust and scale.

One of the countless old men would clean out the bores in the lug for the frame tubes with a file, and install the tubes, which were coated quite heavily with pink flux. Small holes were drilled – amazingly, the drills were powered, by air as a

matter of fact – and a locating pin was driven in.

Next, the head lug and tubes were taken to a corner of the shop, where a stack of bricks formed a hearth for brazing the components together. Using a gas torch held in a stand, an operator heated the forging to a bright cherry red and, with a long stick of brass, the tubes were securely brazed in. After cooling off in a corner, the assembly was sandblasted again to remove the flux, and the little old man attacked it with a file to remove any excess brass around the joint and make the locating pin smooth.

Then he installed the top frame tube, and the whole process started all over again until the front frame loop was complete, with lugs for everything brazed and pinned in place. Finally, he would start on the rear loop. Now you can understand the comparative simplicity and ease of manufacture of the all-welded Featherbed and Commando frames . . .

Peter, an immaculate little man wearing the inevitable brown coat, had a tiny shop on the roof of the factory with a fine view of the River Thames and countless chimney stacks. Peter was *the* cable man, producing every control cable for production and spares. When I wanted a cable made for an ISDT

bike I would go up on the roof, give him the measurements and watch him make a perfect cable in seconds.

He used special punches to form a ball at the extremity of the inner wire, and would deftly dip the end of the cable with the nipple into a pot of flux, then into a pot of molten solder and back into the flux again. He would do this with lightning dexterity, giving the cable a little flick to remove any excess solder. His final test was to coil up the cable and pull and push the inner wire to check for free movement.

'That will give no trouble in your Six Days,' was his final word, and we never did break a cable in those events.

The assembly shop was not without its alternative uses. It was a place where you could get your shoes repaired, tickets for any London show, condoms, tobacco, and sage advice on the care of chrysanthemums. When a group of dealers was expected from America, the machines were kept on the assembly line until the word was given that the party was approaching, whereupon the management would proudly show them how the line could produce a completed machine every 20 seconds or so!

Currency in the factory was, in my case, a half-ounce of tobacco, as the majority of workers smoked, and rolled their own. If I wanted something that I had fabricated for my scrambles bike painted or chromed, a packet of Golden Virginia would open any door.

Although boredom was obviously

Left: 'every inch of space was used': AJS twins get the finishing touch



Left: Jack (left) and his father Bert Colver became institutions at AMC for their riding and mechanical abilities



present in a mass-production plant, pranks often relieved it. When the single-cylinder models were started up for the first time, the magneto chain cover was left off in case the timing needed adjustment. Before installing the cover, we would give the chain a blob of grease for lubrication. This grease had the stickiest, stringiest consistency imaginable, and worked fantastically if you filled an old cigarette carton with it and laid it on the floor. When the packet was stepped on, the grease would squirt out, stick to the sole of a shoe and defy all efforts to remove it.

This was known as a 'treadie', and its opposite number was a 'throw-up', in which a cigarette carton with the grease on the outside was deftly thrown onto the ceiling. The heat would then send it gently to the floor, while it would leave 'cobwebs' in the air for unsuspecting people to walk into.

Later I became one of six men who road tested new bikes. I was in my early twenties, the youngest AMC tester ever, and also fairly naive. One particularly wet morning my older and smarter colleagues were standing around the lift out of the rain having a smoke, but I headed upstairs into the warm testing shop. I was promptly told to go to the Norton factory, 120 miles away in Birmingham, to pick up some vital parts. Now I knew why the rest of my 'friends' had been loitering downstairs . . .

Testing the production bikes was quite uneventful, the day's quota being seven twins or nine singles. I used to ride the scrambles and trials models over a rough track on the slopes of Shooters Hill. An old

Burgess straight-through silencer was slipped on the end of the exhaust pipe and a pair of trade plates bolted on, but we had no lights, horn or turn signals to worry about. The factory employed a lot of local people and made a major contribution to the area's economy, so no one ever complained about noise or speed – we had virtual immunity.

Testing went on in all weathers, even in the toughest winters. Then we would bring the bikes into the warm shop, and the ice and snow would melt everywhere. Once again, two men would carefully clean them for packing, removing mud and grit from under the mudguards and the nooks and crannies.

One of the better jobs was working for the experimental shop on 'mileage', which consisted of going out on a bike and clocking up 300 miles a day. We did 150 in the morning, came back for lunch and fuel, and rode another 150 in the afternoon. At that time roads were of the two- or three-lane variety, and there was no speed limit outside the city. Our instructions were to ride as fast as we could, but not deliberately to destroy bikes.

A good 650 twin would run pretty fast when wound up – well over 110-115mph if a special engine had been installed – and with heavy trucks travelling at 20-30mph, you can imagine the near misses that took place. It was easy to run up the miles, and the schedule gave you an hour or two spare in the morning and afternoon, time sometimes spent at Brands Hatch watching the

Show-offs

THE time and effort spent in preparing the Earls Court Show models was quite incredible. Work would start on them about three months before the show, with usually three men taken out of the engine shop and given a separate area to assemble two virtually identical ranges of bikes, one wearing AJS badges and the other carrying Matchless emblems.

Sets of castings for the engines, gearboxes, primary cases, hubs and other parts would be examined for cosmetic blemishes, until a complete perfect set was found. The castings would be bolted and screwed together with no internals, and their surfaces hand finished with files and emery cloths until they were totally smooth, with all the joints made flush.

Then, after disassembly, the castings were carefully sandblasted and acid-dipped to give the alloy that special 'white' finish. Covers were polished to a brilliant shine and assembled with stock internals, but without oil. The carburettors and magnetos were also special show jobs, with deep paint and chrome-plated screws.

The cycle parts went through the same treatment, receiving three coats of stove enamel, flawless chrome plating and careful assembly. The primary chain was removed to prevent engine damage when hundreds of show visitors inevitably tried the bikes, and a light spring was installed on the gearbox end of the disconnected clutch cable to give a nice sweet pull!

practising, or playing snooker. I would usually go home and do some work on my scrambles bike, but I always rode back to the works in second gear after the time the foreman checked the oil tank temperature with the back of his hand and found that it was cold!

My initiation to mileage testing took place in the company of two very rapid road racers, who instructed me to follow them at all costs. I had never ridden so fast in my life, negotiating roundabouts on the silencer and miraculously squeezing between trucks on three-lane roads.

I remember a really scary occasion when our convoy passed some

labourers who were working in a ditch. The first big twin passing them at well over the ton with its silencer at ear level sent them ducking. The second one got them mad, and by the time I arrived they were swinging shovels – it was a miracle that I avoided being decapitated.

After I had been a tester for a few years, Hugh Viney transferred me to the competition department. I was doing fairly well at scrambles, so he thought I could be of more use there.

The competition shop was in a long narrow building opposite the main factory, backing onto the railway line. We had the front half, with real windows that looked into the street, while the road race department occupied the other half, with a basement below that housed a couple of dynamometers. The dynos exhausted into a railway cutting, so if a train was waiting to enter the nearby station, the passengers were treated to the sound of a Matchless G50 running at full noise.

The G50/AJS 7R engines were run on the dyno with the power taken from the crank, then installed in a chassis and road-tested. Dealer plates were bolted on, a straight-through silencer slid up the megaphone and secured with rim tape, and away we would ride on a 25-mile round trip to Brands Hatch.

The policeman directing traffic in the centre of Beresford Square, Woolwich, a busy intersection complete with street market, would hear you coming and stop everything to let you roar through. The surface of the square was cobblestones laced with tram-lines, so if it was wet a great deal of care had to be taken, and you also had to miss the cabbage leaves and occasional apple or pear. The old factory adage was still in effect: 'If you drop it, don't come back'.

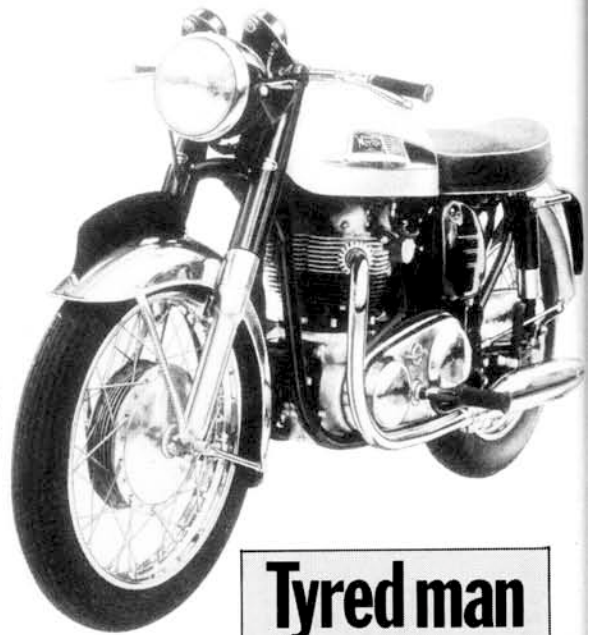
Below: 'our scramblers were pigs to ride': Dave Curtis at Shrubland Park in the fifties



An exhaust silencer is put through the rough grinding process at Plumstead in 1948

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Pretty: 650cc AJS 31CSR in 1962 form



The competition shop built all the trials and scrambles bikes, including the Scottish Six Days and ISDT machines. Contrary to general belief, we did not have the run of the factory's facilities, as production requirements enjoyed first priority. We had very few power tools – a drill press and the occasional use of a lathe, but no welding equipment. Everything was therefore done by hand, with a hacksaw and file.

For a long time the sales department dictated how the bikes should look, and it virtually took an Act of Parliament before we were allowed to angle the rear shock absorbers and make a lighter, stiffer subframe. A good 500cc pushrod single would produce 42bhp at the crank, using a 1½in Amal GP carburettor. Occasionally we would run a 600 TCS version if a track had deep sand or was very muddy, as this motor gave a lot more mid-range power than the 500, but was not as fast at the top end.

Before Vic Eastwood joined us as a motocross rider in the early sixties, and work started on a lightweight 500 which finally evolved into the G85CS, our scramblers were pigs to handle. All the good riders at that time seemed to be farmers with arms the size of thighs!

We would test a rebuilt works scrambles bike on the slopes of Shooters Hill, using an old rutted track known as the Red Road. Being young and stupid, I once headed for the Red Road on Dave Curtis's new bike with visions of world championships in my mind. I had been competing regularly on my Mabsa – a works 500cc Matchless engine in a BSA Gold Star chassis – and thought I was hot stuff.

I had not fitted a silencer as I wanted to see how much power Dave's machine really had, but after I got into third gear and leaped over a hump down the hill, the machine started to hop from side to side. I snicked into top gear and wound it on a bit, which helped until the

Too rough: mighty 750cc Norton Atlas in 1964

chopping began again. Before terror set in, I remembered the expert's words of advice: 'If she tries to swap ends, just give her some more.' My problem was that I didn't have any more throttle to give!

I vaguely recall seeing the old men in the adjacent allotment gardens drop their forks in disbelief as I roared by, with skinny legs flapping and eyes bulging. With a lot of rear brake and prayers I managed to stop the beast, and collapsed on the ground with my legs shaking like jelly. My ride back to the factory was very sedate, and I had a great deal of respect for the big men of four-stroke motocross from then on.

I think the best all-round bike that Plumstead made was the Norton 650SS Manxman. The 500cc Dominator was smooth but very overweight, and the 750cc Atlas just too rough. Their prettiest bikes had to be the 650cc AJS Model 31 Matchless G12 twins in CS or CSR sports form, resplendent in polished alloy and chrome, and red or blue paint.

I eventually left AMC in about 1965 when the business was in severe decline. They had been good days, with good workers, but the tools we worked with were old and the management just plain bad ☐

Brian Slark later worked for BSA and NVT in California before launching British Marketing, the well known Norton parts business, in the mid-seventies. He has since sold British Marketing (see Classic Bike, December '87) and now runs Classic Marketing Ltd in Hesperia, California

Tyred man

THERE was always rivalry between the assembly and testing shops, as the testers were on an hourly salary as opposed to piece or bonus work on the assembly line.

I had first-hand experience of this when Hugh Viney came up to me one morning and casually mentioned that I needed some Six Days experience. I assumed I was going to Wales or the Scottish Highlands on a prototype ISDT model, but my dreams were shattered by a chorus of jeers from the entire assembly shop staff. My 'Six Days experience' was to work there as a tyre fitter, on the factory's production competition bikes, as the regular man was sick.

To make it worse, the machines being built were CS models with two security bolts in the rear wheel and one in the front. Armed with one 6in Dunlop tyre tool, I attacked the ceiling-high pile of tyres, often causing a cry of, 'He's pinched another one!' to echo through the shop.

I had to mount 84 pairs a day – that's 168 tyres and tubes. The first couple of days my arms were dropping off, but if I got behind, the cry of 'More wheels!' by thirty-odd men would spur me on.

Nobbled!

THE most modern part of the factory was the gearbox shop, ably run by one 'Nobby' Clark. Nobby was a resourceful bloke, who managed to build a very nice five-speed box from existing parts.

After making quite a few 'on the side' and ensuring that they were reliable, he proudly approached the management with his creation. His reward was to be curtly reminded that their bike didn't need five ratios, and they had designers to do that kind of work anyway!

Hugh Viney, who employed Slark, was one of the factory's top trials riders. His humorous introduction to the job of fitting 168 tyres and tubes in a day was to mention that Slark needed some Six Days experience...

