



In this company at least, the management takes a passionate interest in the product

BSA

in Britain and an engine designed for convenience becomes instead a bit of a liability. Choosing an inexpensive power plant almost inevitably means basic electrics – no battery and hence no indicators – and before long the concentration on cost-cutting leaves you with a product which is not the best on the market!

At present, BSA is assisting a company in India in the setting up of a production line for the GT50 Boxer range; this is part of the government's long-term plans there for making the nation industrially self-sufficient. I must admit, I think it a matter of regret that, yet again, British skills and knowhow are being used to help other economies to the potential detriment of our own.

Since researching and writing this article, things have changed at BSA. Bertie Goodman has retired, to be replaced by his son Peter, and Ken Sprayson, formerly with Renolds Tubing and well known as a welding wizard, has joined the firm. As a result, there are some new projects in the pipeline, the first of which is the construction of new Featherbed frames – Ken Sprayson has the original drawings. If this succeeds, there may be more "new-old" frame projects to follow. Another result of Ken Sprayson's having joined the firm is an improvement in the standard of welding on BSA's current production frames. We wish them well.



... and when the result is a production line, no matter how small, of motorcycles it can be seen to be a healthy and necessary interest.

ARMSTRONG

Raising the flag

FRANK MELLING looks into the newest name on the British motorcycle scene.

□ "Whatever else you can say about Armstrong, no-one can deny that we are the British motorcycle industry. We make more bikes than every other British motorcycle manufacturer put together and we have got a whole range of machines in series production. No-one else is in that position."

Alan Clews' assessment of Armstrong's place in the British motorcycle industry is typically blunt, but, equally, it is also honest. It is true that there are other British bikes being made at present, or with plans well advanced for manufacture,

but no-where, other than Armstrong, will you see bikes rolling off the shop floor in anything approaching continuous output.

Even in the Bolton factory, what constitutes series production would probably be called a prototype build by Japanese standards. So how is Britain's largest and most successful manufacturer of motorcycles faring?

The answer is two-fold. Within the company's own short term aims, great things are being achieved. In world-wide terms, Armstrong rates alongside the host of small Italian marques which are

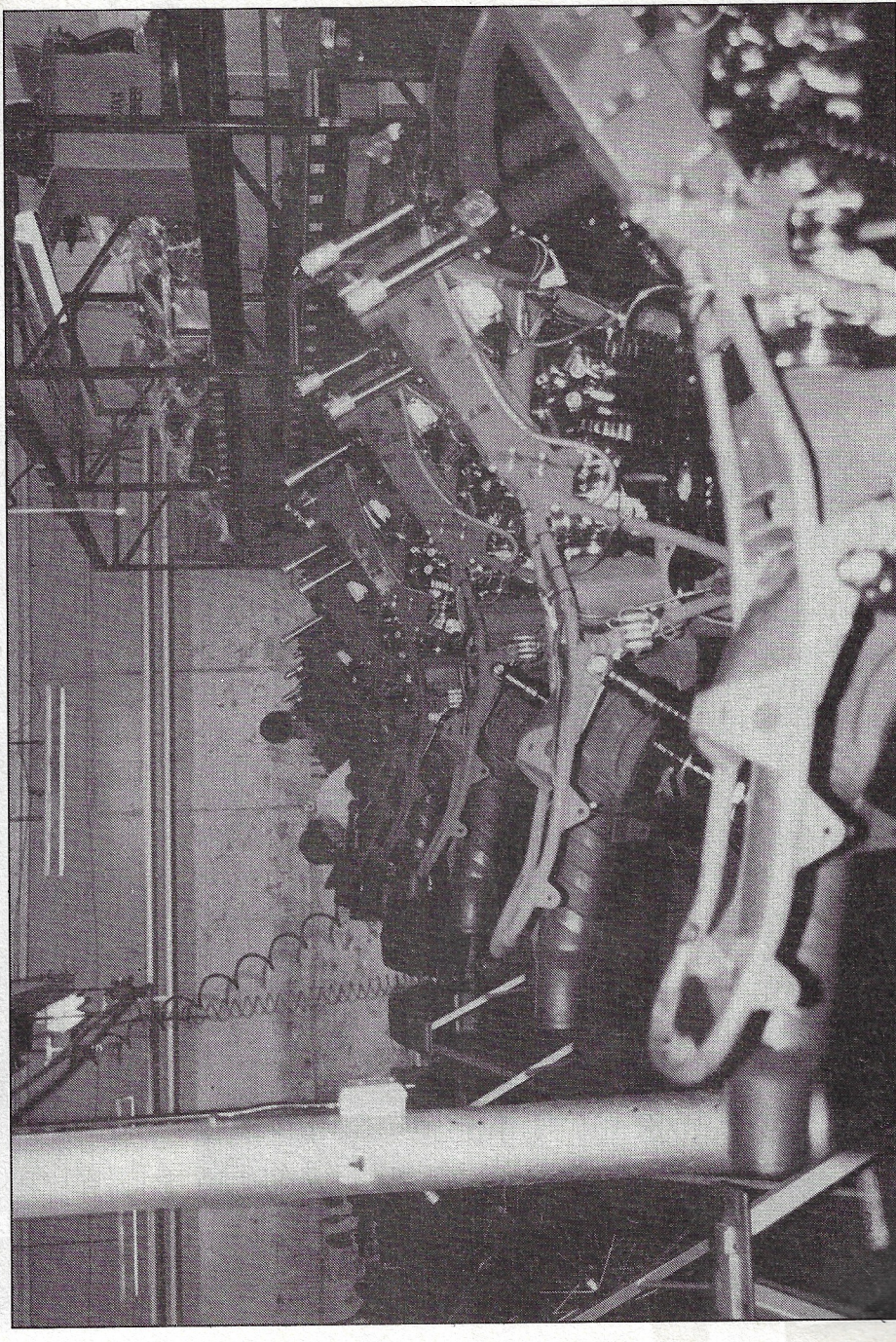
putting bikes together from proprietary parts purchased on the European market. What makes Armstrong's achievement noteworthy, is that the company survives without any government protection in a country where the Japanese stranglehold on motorcycle sales is at its strongest.

It does survive because of a combination of factors. First, and probably most important, is that it has a financially sound parent company with many diverse and profitable interests.

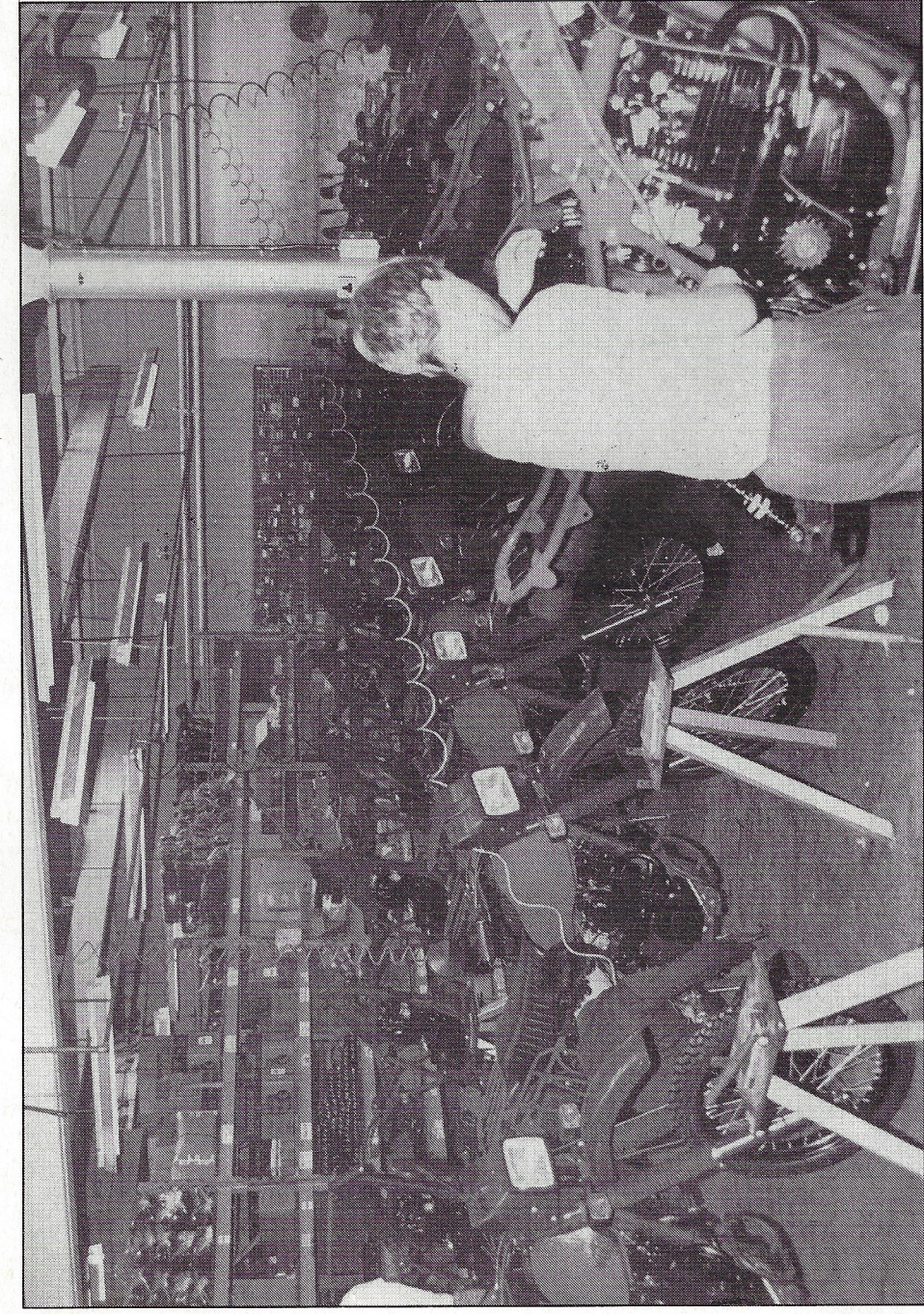
Second, the management has been sufficiently shrewd to spot tiny holes in the overall picture of motorcycle sales and to fill these more effectively than the Japanese. Third, Armstrong are helped by the desire of other companies to remain independent of total dependence on Japanese products.

The last element is represented by Can-Am – a Canadian based manufacturer of snowmobiles and competition motorcycles. Can-Am in turn are owned by Bombardier, who hold a major interest in the Austrian engine manufacturer, Rotax. Thus, in purchasing a motorcycle powered by a Rotax engine, Bombardier – or Can-Am – are supporting themselves.

Can-Am have a small dealer network in Canada and the US which needs a modest number of motorcycles in the summer months. At this stage, it would



The Armstrong factory is still within the traditional British "craft" tradition.



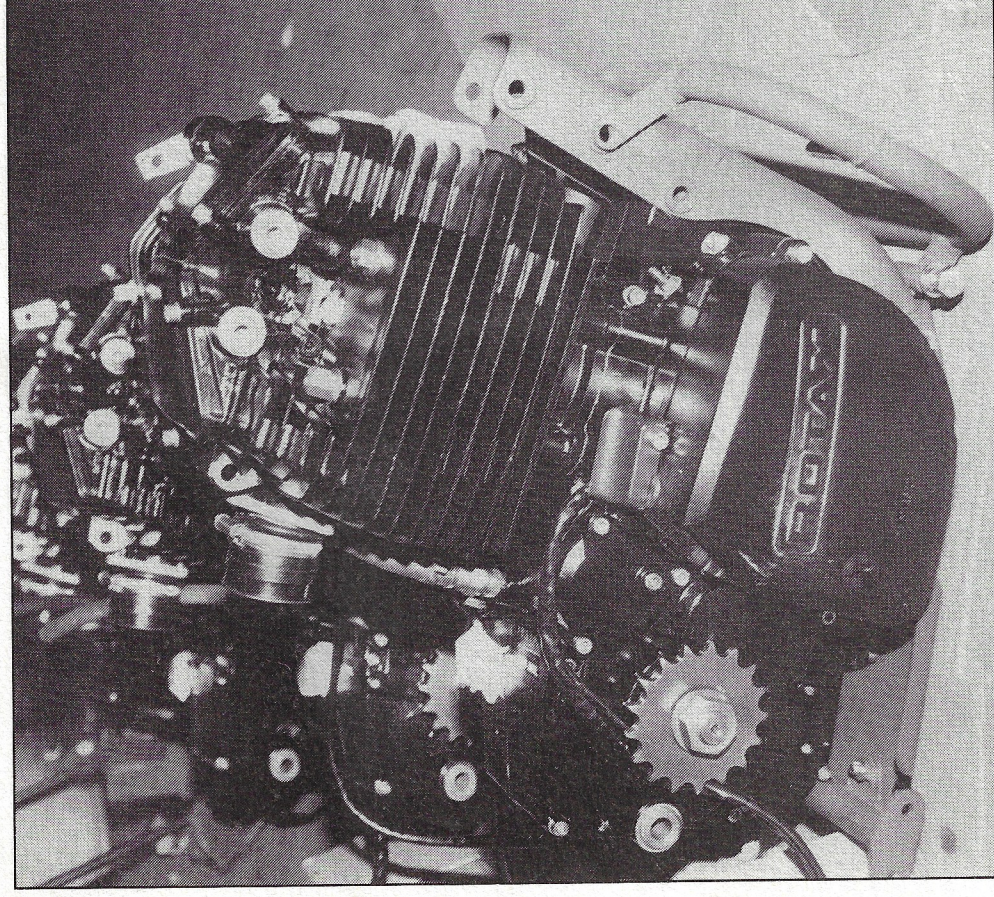
The machines seen here represent a week's batch of Army bikes – 30 or so. The exact total is an Official Secret.

ARMSTRONG

be tempting to say that Can-Am purchase Armstrong motorcycles merely because they use Rotax engines, but such an assessment would be simplistic. There are many other small manufacturers using Rotax power units and Aprilia in particular, are much bigger than Armstrong.

The key factor lies not only in the use of an approved motor but also in the large degree of input Can-Am's development team – led by ex world motocross champion Jeff Smith – have in the finished product. As this article was being researched, Armstrong's chief development rider, Austin Clews, was with Jeff Smith in America evaluating the new model range and the telexes between the factory and Smith were almost non-stop.

Again, Can-Am's success in North America is one of niche seeking. In this case, they concentrate on the enduro market in which the Japanese have only a nominal interest and where the main opposition comes from Husqvarna. Certainly, the Rotax power-plant is every bit as good as the Husky motor and in the hands of Australian ex-patriate Geoff Ballard the Can-Am/Armstrongs have



Rotax engines are used, keeping the European content of the finished motorcycle high. Even in soft tune, the 500cc, 32bhp thumper can top 90mph.

got some excellent results.

The motocross bikes are not so successful and the key reason for this is that they are not as well developed.

Lacking a top-class rider in Britain or North America, the bikes are satisfactory but no more. In 1986, "satisfactory" is not enough to give good market penetration.

The most successful machine in the range is the 560cc four-stroke Armstrong – another machine with no real Japanese opposition and one which receives the bulk of the development effort in Britain.

One of Armstrong's strongest selling machines in the past has been the trials bike but last year – despite having a very talented rider in John Lampkin – the factory was caught badly wrong-footed by having a twin-shock bike when the competitive machines were all mono shocks. Somewhat frenzied development work has led to a new model which was launched at the Trentham Gardens Dirt Bike Show.

Nevertheless, Armstrong's success with Can-Am has earned the company the coveted Queen's Award to industry – only the second time a Bolton-based firm has won this award in 19 years.

Hand fabrication is the order of the day – the secret is to do it efficiently and well.

Armstrong employ 60 staff at present, of whom four are chassis engineers and six development craftsmen. This gives the company a viable design and development base in chassis engineering but does leave them vulnerable in terms of power-unit research or manufacture. This weakness is shown in the comparative lack of success of the Armstrong road racing machine in grand prix road racing thus far.

Although a technically interesting machine, the two-stroke tandem twin is representative of a project which is under-developed and suffering from a lack of funds. Alan Clews was at pains to repeat the well-known racing adage that you need the best bike, the best rider and the best support to win a grand prix in any form of motorcycling. Remove any single element and you have to depend on large slices of luck.

The road racing effort is continued because the parent company feels that it is good for the group image and one senses that perhaps people outside motorcycle sport are more excited by domestic successes – even if accompanied by GP failures – than those more intimately involved, who would like to see

Armstrong dominate British road racing and the grands prix. To be fair, Armstrong have achieved a lot of success in Britain winning the Circuit Promoters Championship in 1984 and holding first and second place last year. No doubt these results meet the criteria for worthwhile publicity for the whole group.

In contrast to the road racing effort, when Armstrong do go all out to master a problem, they can produce most encouraging results. Nowhere is this more apparent than in the case of the recently won contract to supply motorcycles to the British Army. Almost every aspect of the contract is covered by the terms of the Official Secrets Act, but Alan Clews was allowed to say that Armstrong are building "in excess of 1,000 units" and these are manufactured in batches of 30.

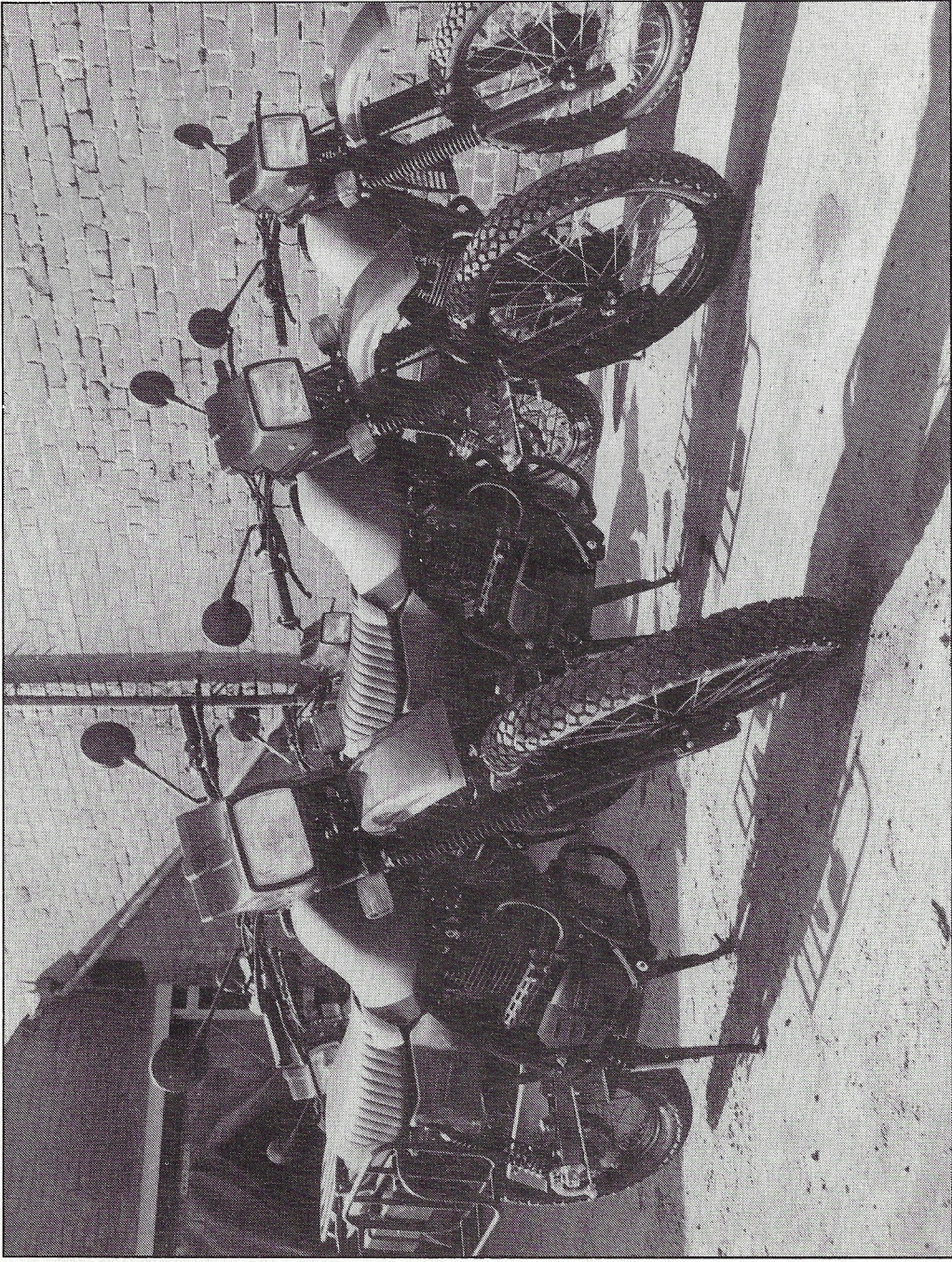
The contract specification asked for a rugged, reliable, general purpose motorcycle with a maximum weight not exceeding 155kg and able to carry substantial loads without affecting handling or performance. The bike had to be "user friendly" and offer guaranteed durability even under severe conditions. Finally, there had to be a 10 year guarantee of spare parts supplies and the chosen manufacturer had to be considered to be sufficiently financially viable to be able to provide support for that period.

From the outset, Armstrong decided that they would win the contract and they submitted an initial specification along with 14 other competitors. The opposition was later reduced to three, and all the machines were accepted for a 16,000km test lasting for three months. Seventeen different users from every branch of the armed services and civilian testers evaluated the machines in and around the Army test areas based on Aldershot.

Throughout that period, the Armstrong did not lose a single "battlefield day" – the military unit of measurement where a fighting vehicle is incapacitated for more than a day – and such minor problems as did arise were dealt with by Armstrong's engineers within a matter of hours. Clews says: "We prided ourselves that whenever a problem did occur, we had a man in a car and heading south to solve it instantly. Four hours after the 'phone call, we were there. I don't think the MoD can fail to have been impressed by the back-up we provided."

The final product was a low-compression 500cc four-stroke single based on the Rotax motocross unit. Since this engine gives 48bhp in 560cc form, to describe it as lightly stressed in its 32bhp, 500cc Army guise, is not an exaggeration. It also has the advantages of running on virtually anything wet and being happy to accept almost any oil which was to hand as a lubricant. These factors, plus a meagre fuel consumption, are vital in battlefield conditions.

Matching the reliability of the engine is a strong, simple twin-shock chassis employing Ohlin dampers and Marzocchi



A trio of Army bikes, which will be road tested before they are accepted for military use. Armstrong were determined to win this contract and they did so by good design and hard work.

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forks to give good off-road handling without the need for the careful maintenance that a single-shock rising rate design demands.

Even with the "soft" engine, the performance is surprisingly brisk with 90mph being available all day - a top speed which was amply quick enough to satisfy military demands for rapid communications and escort duties.

The military bike has led to civilian derivatives with electric starts for Sheffield Parks' warden and interest from the Post Office and Peter Welsh of the Despatch Riders Association. Armstrong have also begun to think of a police version of the bike. The idea for this machine came from tests of the factory Armstrong motocross machine, which, when geared for maximum speed, managed almost 120mph. Since the Rotax engine has counter-balancers, it is exceptionally smooth and also much lighter than a BMW twin. Viewed in this way, an electric start 560 police bike

might just be a viable proposition.

Given the chance, Armstrong have proven that they can manufacture motorcycles which are effective in their given role and are value for money. The problem is that they cannot yet compete head-on with the Japanese in the marketplace. Clews is openly critical of this state of affairs.

"The Japanese motorcycle industry is so well entrenched that we have difficulty meeting their selling prices even with racing bikes. In the past, riders have been educated to wait six months before buying a bike, confident in the expectation that the price would drop dramatically. This led to a position where we could never meet Japanese prices. Fortunately, ridiculous discounting seems to be dying out but immense damage was done while it was at its peak simply because we could not match this method of marketing and so were starved of sales.

"The same problem occurs with road bikes. There are simply too many bikes available and although our long-term corporate plan is to re-enter the road market, we can't do it at present when there are so many surplus bikes about.

"The British government and people have got to ask themselves what they want. Cheap bikes now or long term prosperity. We provide a modest number of jobs in a depressed region. We have a very low turnover among the workforce and we are training staff who could work for other British motorcycle manufacturers. And we're doing this without any protection or help. If we had the same support the Italian industry enjoys we could do even better.

"At present, the British content of our bikes is 60-70 per cent - and that means not only work for our own factory but also for other British manufacturers. With an increased volume, we could do much more.

"We still have the skills of motorcycle manufacturing in Britain. People who can look at a bike and say 'Yes, I understand how the Japanese have done that and maybe I could improve on it.' In 10 or 15 years, all those people who understand motorcycle manufacture will be gone and then the choice of having a British motorcycle industry simply won't be there. It'll have gone too - forever."

TRIUMPH

If the Bishop of Durham can do it, why not PETER ATKINSON. Remember folks, he's just kiddin' ...

□ Although Les Harris is no great respecter of the press, it would be pure arrogance on my part to ignore the continued existence of the Triumph Bonneville. It is, after all, the last surviving representative of our once great British tradition for building charismatic motorcycles. The Turner Twin has struggled on for nearly fifty years now - I say struggled because the term evolution is an inappropriate one in this case, implying as it does some kind of natural development: despite its great age, the Twin's original characteristics remain very much a dominant feature of the bike.

The parallel twin is an inherently pretty format, especially in the hands of Val Page, Edward Turner or any one of half a dozen Italian engineers I could name, and like any good design, it appears to work best when kept simple.

Unfortunately for the rider, the 360-degree cranked and unbalanced type has certain devious tendencies which cause the bum-bashing and finger-tingling sensations we know so well. And, although more power has been extracted from the Triumph Twin than from most other middle to heavyweight twins, those that have outstripped it in the performance stakes have done so more reliably and with less noise and rider fatigue.

Why then has Les Harris chosen to continue the production of this portable message parlour? Part of the answer obviously lies in his longstanding affection for the bike but, sentimentality apart, Harris has for many years been employed in the manufacture of Triumph components and with no bike to make bits for (following the demise of Meriden), his business would have suffered quite dramatically. There will always be people who want to buy their own small piece of England and Harris was no doubt conscious of this when he made his bid for the license to produce the Bonneville from new owner of the Triumph name, John Bloor.

In order to manufacture the bike at a profit, it was vital that a process be developed whereby a minimum of workers could, without loss of quality, assemble a maximum number of machines; for this reason, most of the detail changes from the specification of the last Meriden-produced model have been aimed at simplifying the production process. Thus, Paioli front forks, developed to match characteristics specified by Triumph, are fitted - the original Triumph forks would have proved too costly to manufacture.

It would seem that the initial target of ten bikes a week, using five fitters, has been achieved - my local Triumph dealer has already sold quite a few of the new models. But the hungry question remains: who are these people who are prepared to fork out for a power unit which, barely acceptable in a road bike of the Forties and Fifties, was already losing the fight, in terms of power and refinement, to Gilera and BMW back in the Thirties?

It must surely be that this, one of the most aesthetically-pleasing engines ever produced, is evocative of an age with which we closet nationalists can identify - a time when public amenities were free of mindless graffiti and children could walk to school without the threat of being molested. No specific year springs to mind (probably because I wasn't around at the time, and must feed my imagination instead on Ealing Studios films) but I can just see it now, the Bonneville racing through gas-lit streets while clouds of steam belch from a huge black locomotive speeding across a wintry landscape. (I got that from The Ragman's Daughter, by the way!)

Originally designated the Speed Twin, the first part of the name has since become rather meaningless what with today's monotonous high-speed motorways and sensation-free transport.

The Bonneville gives its rider far greater satisfaction when its exhaust note is allowed to modulate on winding A roads and is only too happy to oblige should the driver of a Morris Minor, or something similar, demand a lesson in lunacy!

The Bonnie is one of the few remaining motorcycles that doesn't appear to be ashamed of its bicycling ancestry. I think it's rather sad, then, that Les Harris has chosen to incorporate the tank and side-panels of the latterday Meriden models. Admittedly, the styling is modern and attractive, but it does little justice to the overall nostalgic nature of the Triumph machine. For the same money, the pragmatically-minded motorcyclist would do better buying one of the reliable and better-designed machines on the market, one capable of outperforming the Bonnie in every way.

Yet, in spite of the wonders of modern technology, the Triumph is by no means a write-off. With just a little imagination, its undoubted charm could be exploited to produce a machine with a character that no other motorcycle can hope to match. There is almost certainly a market for replicas of vintage motorcycles - made from new materials and with reworked

internals - and, if the car industry is anything to go by, there is no need to go too far back in time for the product to have a fairly broad sales appeal. I would think that veteran and vintage machines are too impractical to imitate: few motorcyclists are willing to dally with hand gearchanges and, in any case, why waste time tooling up for a folly when an authentic classic is still being produced?

As one would expect, the Japanese are already exploiting the disenchantment that many motorcyclists (and most governments) have with the mania for excessive straight-line speed. They are doing this by incorporating nostalgic elements into the design of some of their new single-cylinder machines - the Honda XBR 500 and Yamaha SRX 600 being the most notable examples. Yet, in spite of their efforts, the Japanese will never quite capture the spirit of the era they wish to emulate, just as they will never be able to reproduce the "essence of Harley-Davidson", because the spirit of a motorcycle comes from deep down in the bowels of its engine.

The replication of the Triumph would no doubt pose a few technical problems: most people would probably not appreciate the familiar oil-stains on the drive and newer motorcyclists could be put off by the vibrations. A better breathing system might eliminate the former problem, while vibes could be cured by adopting a different crankshaft format: it was recently suggested that a 72 degree crank might provide an acceptably smooth ride, so why not try it out?

Engine reliability could well benefit from a drop in capacity to around 600cc. The slight drop in peak performance would then allow for the replacement of the twin front discs with a decently proportioned TLS drum. A black and chrome Smiths-type clock and solid fork shrouds would help maintain the image while essential details, like the electrics, could be as up-to-date as anything on the market. In this way, the Triumph's aura of traditional craftsmanship, solid reliability, and comfortable and unhurried power would remain intact.

The ubiquitous Anglepoise lamp, designed in the Thirties, is a good example of a product which has survived and maintained its popularity through this kind of treatment. In its cost-rationalised form, it is sold by the trillion through the Habitat chain, and this in spite of newer designs (incorporating better lighting technology and greater positional flexibility) which have since come onto the market. Like the Anglepoise, the Triumph has a distinct identity of its own which, given the right sort of treatment, will ensure its survival for many years to come. It's a machine that need make no outwardly obvious claim on modern technology as its future lies in its powerful expression of past values and attributes.