

MOTOR CYCLE, WEEK ENDING 17 NOVEMBER 1973

THE BIG BSA BANGS ON

"THEY MAY BE FOLKLORE, but they don't half go". Roughly translated, that is how a French magazine's preview of this year's 24-hour Bol d'Or marathon described the pair of BSA B50 roadsters entered by Mead and Tomkinson, the Hereford dealers.

True enough, those Dying BSA singles - an unexpected choice for raring – have written themselves into the pages of history. Over the years there have been changes and modifications, but basically there are just two machines. For each, however, there is a choice of engines, depending on whether the regulations specify FIM Coupe d' Endurance or ACU production-machine trim.

Mike Tomkinson first became involved with long-distance racing back in the mid-1950s. when Howard German persuaded him to enter a Velocette Venom for the Barcelona 24-hour event. Shared by German and Stan Dibben, the Velo finished second in the 500 cc class. even after an hour's sojourn in the pits while the cylinder head was changed.

"Barcelona has been an obsession ever since," confesses Mike. "We'll win it yet. Often we have felt confident, only to strike trouble. Twice we have been second overall.

The first time, with partner Peter Darvill and Howard German on the Velo, was a hollow success, for we were well out of touch with the marvelous little winning OSSA. Indeed, we finished second only because so many others had dropped out.

Our other second place, with Clive Brown and Nigel Rollason on the BSA, was much more heartening because we split the two factory Laverdas.

Tiresome

"One of the most tiresome things about long distance events is the lack of uniformity in the regulations, and the different interpretations placed on them.

"We could read through the regs for a foreign meeting and set up the bikes accordingly. But when we arrive, everybody else has a special, bearing little relation to the standard job.

"For a continental meeting, we'll have to stop kidding ourselves it's a production machine and join the anything goes brigade.

"The production machine TT is another matter. There, we are hampered by ACU policy, and the two strokes have the edge. If only we could use a bigger carburettor I'm sure we could get the extra 3 to 4 mph we need.

"Also, they insist on the standard BSA silencer. It's liable to fall to pieces in racing, anyway, you can't get replacements for it.

For Spa and the Bol d'Or we have a very effective system of our own, carried on springs and passing under the engine."

Mike Tomkinson insists he is not really a tuner. His main concern is to make the machines so reliable that they come into the pits only to refuel and change riders.

So, learning from failures, he uses Nimonic 80 exhaust valves and American W and S valve springs. As three crankpins have let him down, he now has a more robust pin of his own, with parallel instead of tapered shoulders.

That has meant new flywheels, and the opportunity was taken to eliminate the large holes alongside the crankpin - because in one of his engines a crack developed there.

Originally, Mike obtained a special camshaft from BSA development engineer Cyril Halliburn. He has had a number of copies made for sale, though warns they are suitable only for an open exhaust.

Accidental

For fast road work he recommends the B50 Motocross camshaft. "It's so good," he says, "I don't know why BSA bother with anything else!"

Several of Tomkinson's modifications stem from accidental discoveries. At Barcelona one year, a BSA Victor crankshaft oil seal failed. To his surprise Mike found that the primary chaincase emptied itself into the engine through the main bearing because of the crankcase depression.

To keep the bike in race, he called it into the pits and drilled a hole between the chaincase and the crankcase, at a lower level so that the oil could circulate. It worked perfectly.

The following year he had a gearbox that required topping up at every pit stop wasting two minutes each time. So he decided to use the same oil for the engine, primary chaincase, and gearbox, a conversion that has solved a number of problems.

However, the system is not entirely happy on a multigrade oil, though Mike prefers a mineral-base oil for the gears. So he has settled for Shell SR SAE40 - not easy to come by but extraordinarily oily.

The conversion was done by cutting away the upper part of the vertical rib on the inner face of the inner timing cover, so that the camshaft flings oil into the gearbox. To maintain the level, a hole drilled horizontally in the lower part of the rib, approximately on the axis of the selector-quadrant spindle.

Another accidental discovery has boosted the revs. From BSA, Mike obtained a cylinder head that had been scrapped because the cutter for the inlet port had gone too deep. As an experiment

he fitted the head to bike to be ridden by Clive Brown and Phil Gurner in this years' Spa 24 hour race.

It finished seventh, covering 2,300 miles and lapping at over 100 mph without a fairing.

It might have finished higher, had it not stopped twice to change tyres that had thrown the tread, and again to deal with aeration of the front-brake hydraulic fluid.

Even at those speeds, the BSA averaged 50 mpg at Spa. At the Bol d'Or it did even better – an incredible 60 mpg!

A lot of work has been done on the clutch. In early races It burned out quickly, so more oil has been fed to the plates.

A trough riveted to the inner primary chaincase catches oil thrown up by the chain and drains it through a jet into an undercut ring on the rear face of the clutch drum.

Drillings through the drum lead the oil to the plates, and a multiplicity of small holes in the plain plates spread it around.

Most recent development is the short stroke (86x86mm) engine used by Brown and Gurner in the September Bol d'Or event.

It was an attempt to boost the revs – which in fact, the scrap head had already done at Spa. And though Mike believes the short-stroker may prove marginally quicker, he can't be sure.

Certainly, Clive Brown was keeping up with the leading seven-fifties from the start when a piston holed. At first, Mike blamed "grotty French petrol." But a similar mishap in the Thruxton 500-miler put the spotlight on the real trouble.

A larger carburettor was filling the cylinder more fully, and the compression ratio should have been lowered to suit. From now on the camp will use 9:1 for continental meetings, perhaps 9.5:1 in Britain.

"If only NVT were interested", says Tomkinson. I could virtually guarantee them the world 24-hour 500 cc record or the Maudes Trophy.

"For the Maudes, we would aim for a silver replica in the TT, then put the bike through a 24-hour race without a major rebuild. I would love to do it but it would be too expensive without factory backing.

The B50 engine is vastly underrated and could be the basis of a world beating roadster. It has a good frame, handles perfectly, and it is astonishingly economical to run. But there are some nonsenses in this so-called "Gold 5star" that should be thrown away.

"First, the styling is appalling. Next, it needs a better exhaust system. Finally, it should have had a transmission shock absorber in the rear wheel.