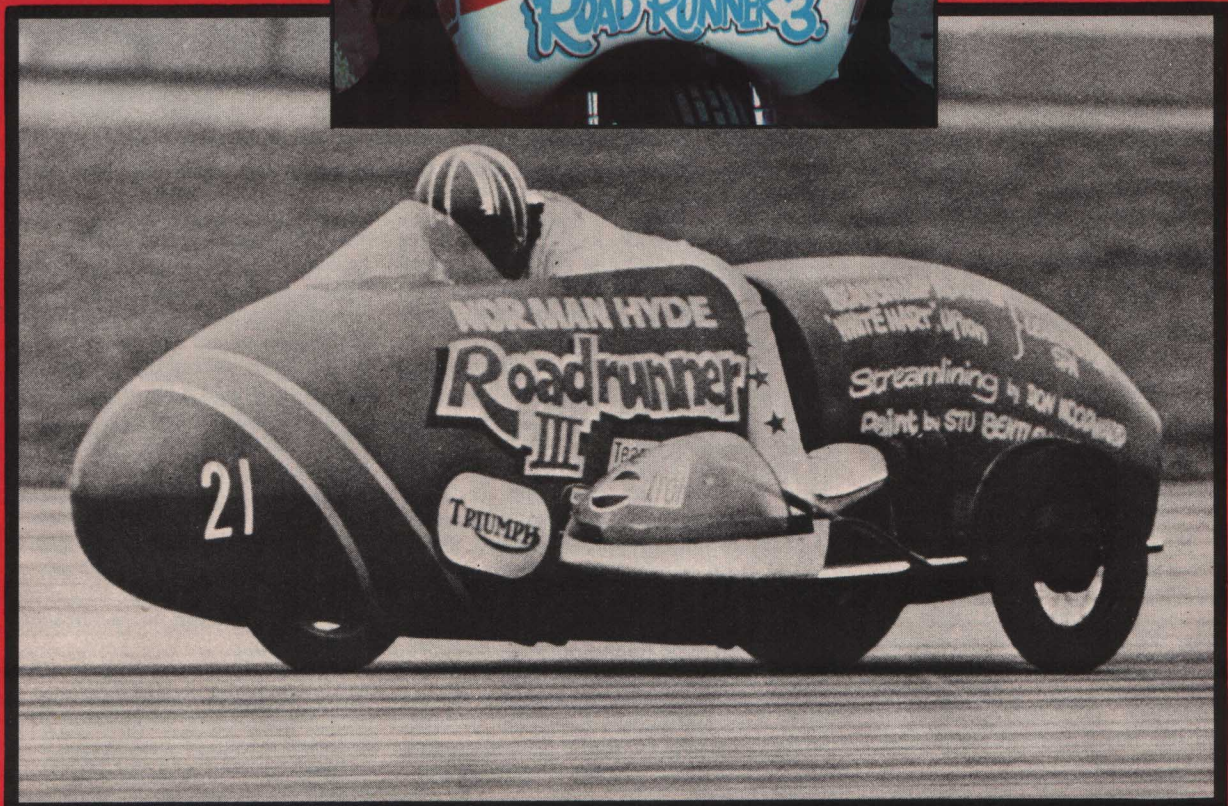


LIVING ON TRIDENT POWER



Norman Hyde designs, builds, races and breaks records on Triumph's big triples. Not even the agony throes of Meriden could end a beautiful affair.



Breaking the world sidecar speed record at 161.8 mph.

PROFILE BY MIKE NICKS

bike 19

HAVE YOU EVER wondered why you see so few modified and customised Triumph Tridents? I mean, the Honda four has always been perhaps the biggest sales rival to the Trident, and you find plenty of those sporting glass fibre tanks, snaky exhaust pipes, low bars and rear-set rests, twin disc brake conversions and different rear shocks. But the Tridents are nearly always standard.

My theory says it's because the Trident is such a basically "right" concept in the very form that it leaves the factory. It handles, goes and stops as well as almost any other stock motorcycle you can name. It's a fast bike that comes supplied with all the necessary gear for riding it fast — you don't need to chuck away stock Trident bars. And is there really a custom exhaust system that will improve on what is already the most soulful sound in street motorcycling, the grainy cry of that triple-cylinder engine?

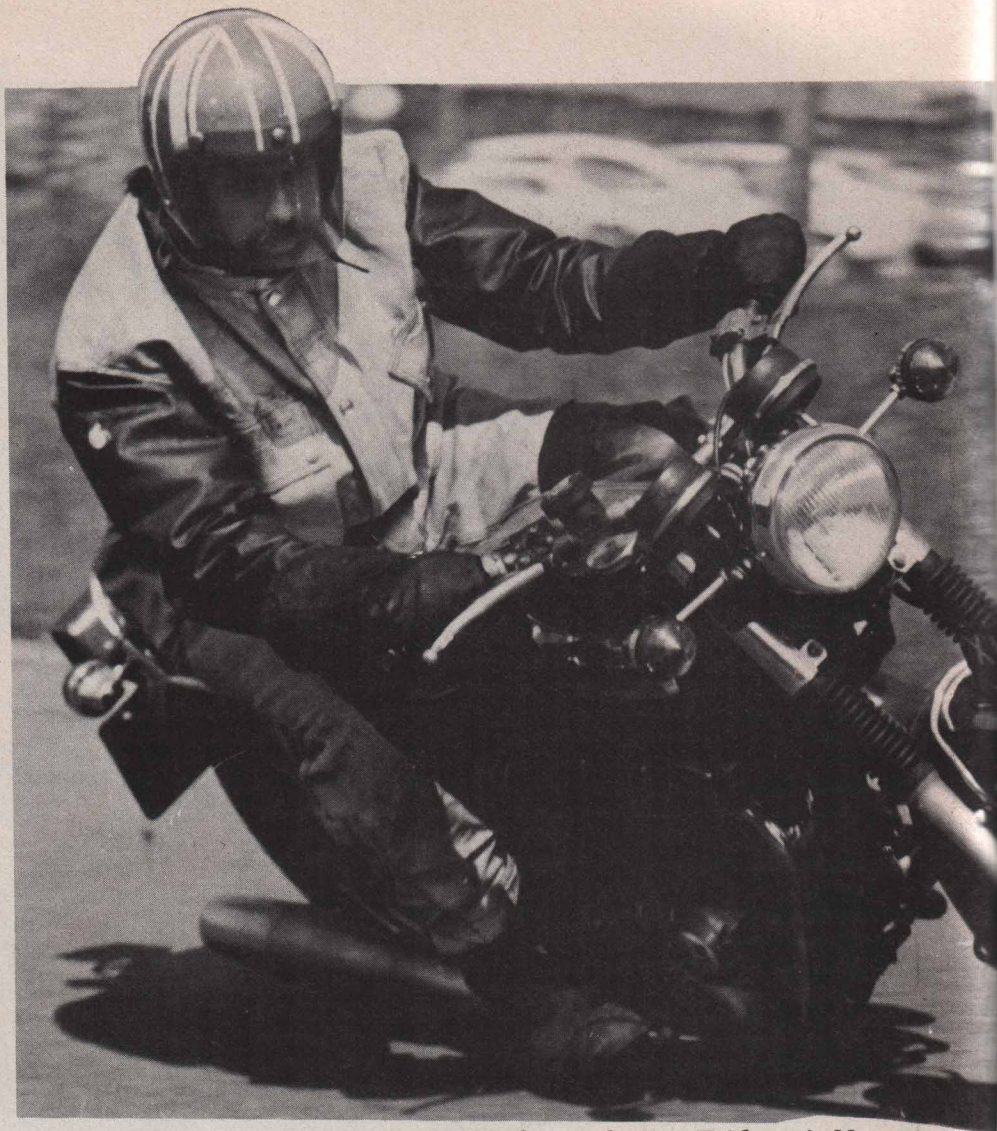
Someone else who shares these pro-Trident feelings is Norman Hyde, who's well known as the Triumph development engineer who goes record breaking and drag racing in his spare time. Of course he's biased, but it's worth telling the story of his life with Trident power, if only to remind the biking public that behind the murky troubles besetting the British industry, there lurks a really fine motorcycle.

It's the Trident, for example, that is the world's fastest sidecar machine, and it was Norman who gave it that honour when he rode his drag bike, with chair attached, at a 161.8 mph average over the flying kilo in 1972. That involved reaching terminal speeds of around 170 mph . . . on *three* wheels, remember. In both solo and sidecar trim the same bike has helped him become the owner of more short distance world and national speed records — a grand total of 18 — than any other rider. Add to these achievements his work in making a bored and stroked 975 cc version of the bike into one of the quickest quarter milers in the country, and you have a man whose opinion on Tridents just has to be respected.

He says, for example: "The Trident is an under-rated motorcycle. It's got the best brakes of any superbike, it handles well, and it's a much, much more reliable machine than the Triumph twin ever was. I have to sit in on service meetings every month to hear any complaints there might be from all over the world, but really they're very few. The Trident is just good old-fashioned Triumph design — it's simplicity. Anyone who can take a Triumph twin apart can do the same with a triple."

Proving that the British still do it first on occasions, the Trident was a pioneer among the so-called "superbikes" when it was sprung on a largely unsuspecting world in 1968. It beat the 750 Honda to the market place by several months.

Norman, who's now 29, got involved with the triples late the following year, when Triumph decided to build a batch of them for the 1970 Daytona 200. He had



Development engineer responsible for road going Tridents is Norman Hyde's workaday role, and when he's not laying hot rubber on the drag strips he spends some time wearing his boots out on the roadster triples.

actually started work at Triumphs about five years earlier, when he joined the firm to do a three-year degree level course in production engineering. When he finished the course, he successfully applied to work in the Triumph experimental department, which was run then as now by chief development engineer Doug Hele, the highly respected creator of the Trident with the now retired Bert Hopwood.

Said Norman: "At that time, if Doug wanted any prototype parts done he either had to go through the drawing office, which involved a lot of red tape, or draw it himself. As I was called an experimental draughtsman then, my first task in the experimental shop was to start a file of our own drawings. It was a much more direct system of working, and it meant that proper records were established of everything done. The file is going strong to this day, and since 1967 about 2,000 drawings have been built up in there."

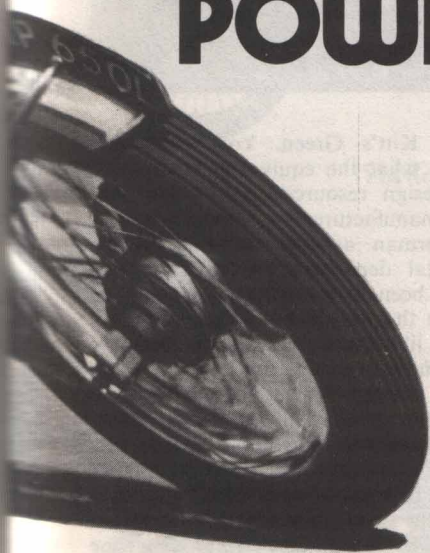
Once the big BSA-Triumph racing programme was launched with the 1970 Daytona race, Norman was sucked into it full

time for two unforgettable years. The Trident — or Rocket-3 as the bike was known in BSA form — didn't win that Daytona race (Honda got it with Dick Mann riding) but the bikes proved mighty quick, made incredible noises, and it was obvious they had a lot of potential.

What followed can only be described as almost unreal, looking back from bleak old 1974, when Britain can't produce anything like a championship bike in any class of tarmac racing. If you're very new to motorcycling, and missed it, then I'm really sorry, because it was just magnificent to see the Tridents and Rocket-3s win almost every race that mattered in world-wide 750 cc competition.

The whole success show climaxed in 1971, when the triples not only got Daytona, the F750 and production TTs, the Bol d'Or and a load of lesser races, but went on to beat Agostini and the 500 MV twice on British short circuits — Race of the Year and Race of the South — and finished the season by taking the big Champion Spark Plug classic from the Japanese at Ontario in

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California, the ultimate place to show that you're No. 1 in motorcycle racing.

Norman recalls: "It was an amazing time, and the spirit in the experimental shop, where the racing programme was run, was great. The mechanics were working 70 hours or more a week, yet everybody always made a point of keeping costs down, staying in small hotels and keeping the bills low, because we all realised that the accountants could turn round at any time and say that racing was just money down the drain."

Part of his job then was to maintain records of the racing activities, and he showed me charts recording that of 124 machine starts by the works bikes in that glorious year of '71, the retirements numbered just... twelve.

When BSA Triumph's financial crash came that winter, the racing programme was cut back, later to be axed completely. But by that time Norman was well into developing his own Trident dragster. From running a very successful supercharged 350 Triumph, he moved up to triple-cylinder

power in 1970. The Trident gave Norman his first ever nine second quarter in July last year, when it turned a 9.92 at Santa Pod. Since then the bike has moved down to the low nines and has topped 150 mph in terminal speeds, helped by the rubbery grip of a wide 6.60 x 15 in M and H slick originally designed for VW car dragging in the States.

It was while Norman was still running the stock size 741 cc motor in 1972 that he hit on the idea of going for the world sidecar speed record. "It was held by George Brown and his Vincent at 158 mph," he said. "I'd already done 150 mph with an ordinary fairing on the front end, and I decided that the record was within reach if I could get more power and less drag. So an 830 motor was created just for that attempt.

"Rod Quaife helped out. He had made some prototype barrels for Tridents with a 71 mm bore — 67 mm is standard — giving an actual capacity of 831 cc. So I used one of them, and then got a fantastic alloy full enclosure fairing made by a guy named Don Woodward, who did the Daytona petrol tanks for the racing Tridents, and also used to be chief panel beater for BRM.

"The fairing was actually welded up in six sections, but it was so beautifully made that you could only see the joins from underneath. It wasn't tested in a wind tunnel, it was just a rule of thumb effort built in six weeks, but it worked fine. In fact the whole record attempt turned into a bit of a last minute panic, because the only testing I did with the bike was at MIRA three days before the records meeting at Fairford in Gloucestershire.

"I managed to get the world record in three runs. On the first run I did 158 mph with the wind — not good enough. I went back and dosed the motor up with nitro and took it to ten grand in every gear, really screwing it. That run was 160 mph into the wind. I knew then that all I had to do was get the same speed on the way back. On the flying kilo you're only in the traps for less than 15 seconds, but that last run seemed to take a lifetime. The motor was getting hotter and hotter and in the end the revs were starting to die a bit. I knew that the motor had to rev to eight-three in top for me to get the record, but it went up to eight-five and I knew I'd done it then — I didn't have to wait for it to be confirmed by the timekeepers.

"It was a really odd business, getting that record. I knew I was scratching to get there, so I had to keep my chin flat on the tank in every run, and there was a slight handling problem in that the front wheel was lifting at top speed, which must have been around 170 mph. I know it sounds ridiculous to say this about running a motorcycle up and down in a straight line, but I was so shagged after each run I had to lie down."

But it still wasn't a bad performance from someone who's never ridden a sidecar outfit on the road to this day!

Norman's motor grew to 975 cc in the

middle of last year. He and a sidecar road racer, Mick Wortley, both had Triumph crankshafts welded up and reground by a firm in Birmingham. But in Wortley's first race, the weld peeled and locked the motor. He then tracked down Omega engineering in Warley, Birmingham, and they did a similar, but better, job for just £25.

"They'll do a crank to any stroke you like for that price," said Norman. "We chose 82mm — 70 mm is standard on the Trident — which means the bore and stroke of the engine is now the same as a 650 Bonneville, but we've got the Trident's better cylinder heads and much stronger bottom end."

From his days with the 750 cc engine, Norman still holds the British flying kilometre speed record for the class at 165 mph, the highest speed he ever got from the bike in solo form. But with the present big motor, he feels the bike might be capable of breaking a record at over 200 mph, a feat never yet achieved in Britain. Also skulking around in the back of his mind is a wonderful sounding idea for building a double-engined Trident drag bike, running unblown but on really heavy nitro loads, just like the Yanks. Imagine the noise *that* would make. Money, or the need for it, will probably smother both heady projects unless some really heavy sponsorship comes along.

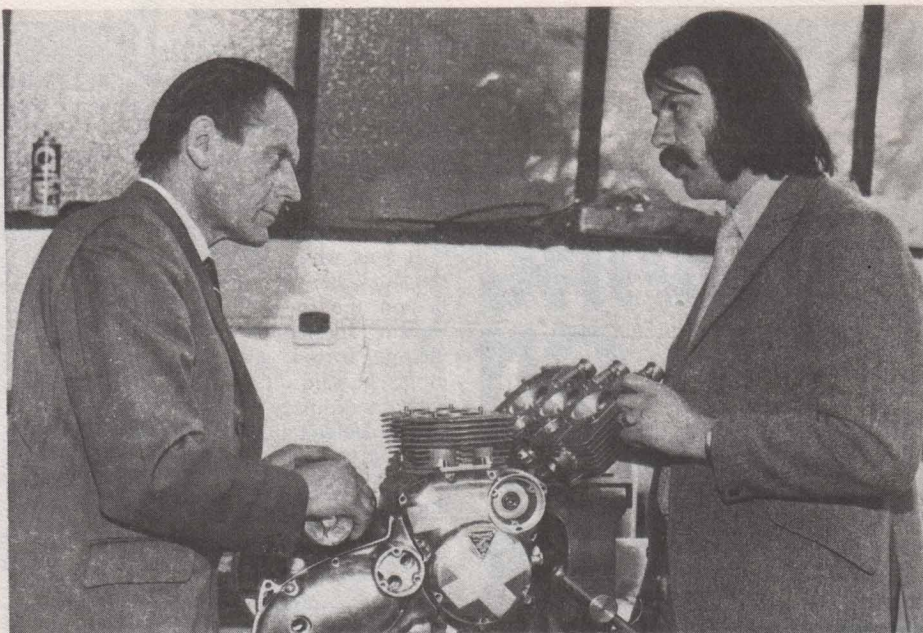
He insists that his approach to drag racing is "amateurish", and certainly his bike, a low bellied mean looker, hasn't got the neo-custom finish of many strip machines. But he's attracted an impressive list of sponsors, headed by Triumph themselves, and also including Castrol — he and John Hobbs are the oil company's big two in bike dragging — Arthur Bennett, the well known Triumph dealer in Atherstone, Warwicks, and even a pub. Seems that Norman and wife Di were enjoying a hazy night out at the White Hart Inn in Ufton, Warwickshire, just a couple of miles from their home in Radford Semele. The conversation turned to motorcycling, and before anyone could really judge what was happening, the landlord walked to the till, extracted £25, and handed it over as sponsorship money!

But it's as development engineer responsible for the road going Tridents that Norman earns his main money, operating from a building at Kitts Green, Birmingham, the former BSA research centre, now that the experimental department has been moved from its traditional home at Meriden.

He's been working on production bikes since 1972, a vital task indeed when it's remembered that it involves keeping one of Britain's only two remaining superbikes in the big league with the Japanese, West Germans, Italians and Americans. So what can we expect from future Tridents? Obviously Norman's position limits what he can say, but in any case it's fairly common knowledge that a revised Trident with an electric starter will be announced this autumn, and that contrary to previous press reports it

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Hyde discusses technicalities with the man who made it all possible, Doug Hele, creator of the Trident. Norman is one of the four engineers in Hele's experimental department.



will remain a 750. A larger version, probably an 850, is expected early in 1975 (and many must be the Triumph freaks who wonder why it couldn't have been out in time to beat the Z-1 Kawasaki to the shops a couple of years ago).

I asked Norman if a 975 Trident, based on knowledge gained from his dragster, could eventually be expected. He pointed

out that his drag bike is really a private venture, but he added: "Anti-pollution legislation is going to mean that bigger engines will be necessary if motorcycles are going to retain their present performance levels. I think the Trident will be in the queue, and I'm hoping to use some of the lessons gained from my drag bike to this end."

He was able to unwind a little more on some of the less sensational matters affecting Trident development. "One of our main concerns has been to reduce noise. The early Tridents were really quick and would do mean two way speeds of at least 120 mph at MIRA. But their noise level was 98 decibels. We have to be down to 80 decibels to sell in the States in 1975, and the problem has been to get down to that level without losing performance, or at least to lose as little as possible."

Apparently, they've done it alright, and the end result will be revealed soon.

He went on: "People don't realise the time that development takes. Although it won't actually look that different, there will, for instance, be 500 new items on the next Trident that have to be drawn. We have to test items such as plastic clips against metal clips, different brake pad materials, different generators, different makes of chain, just everything you can think of on a bike, really. You find some new parts don't fit and have to be remade, and when you get everything together you always want to alter something again. The whole thing can easily take a year or 18 months, especially when you remember delivery problems and general world shortages."

Triumph's design and development team at Kitt's Green consists of chief designer Brian Jones, who has about 25 designers and draughtsmen, and Doug Hele's department with its four engineers (Norman Hyde being one of them) and about ten chargehands and fitters. The Triumph Wankel project, which seems so promising, is also

run from Kitt's Green. You can't help wondering what the equivalent figures are for the design resources of the big four Japanese manufacturers.

But Norman assured me that in the experimental department at least, morale has never been higher. "Basically, it's the same team that worked at Meriden. We've got people like Fred Swift and Arthur Jake-man in our workshop, and they're more than just fitters, they've got really good ideas of their own. This is one of Doug Hele's philosophies, that there are no gaffers in a technical discussion. We don't work on a formal, rigid system. It's a bartering system where you give and take, and we all have mutual respect for everyone else's ability."

While Norman is loyal to and appreciative of the talents of his immediate colleagues, he's by no means blinded to the faults that have caused the collapse of so much of the British motorcycle industry, faults that must be avoided if the industry is to survive into the future. Indeed, the problems that led to the recent withdrawal from Meriden by Norton Triumph appeared to put his own livelihood in jeopardy.

"I had the option of taking redundancy money and leaving Triumphs. I thought of starting up a racing service with a mate, but then we realised we weren't going to make a fortune at that because we knew nothing about two-strokes. Then we tried to open a bike shop, but we got beaten to the only suitable place we came across."

But an intelligent man with a good record can usually find a lucrative slot somewhere, particularly if he's an engineer and lives in the Midlands. So I asked Norman what it was that really made him stay on through those morbid months. He said: "Outside of Norton Triumph there's nowhere else in the country that makes bikes in a big way these days. So I suppose the final answer was just that I like motorcycles." ●

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