

THE VINCENT THREE-WHEELER

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MPH 327

Page 15

It was in the early 1950's when Philip Vincent (Managing Director of Vincent Motor Cycle Company) commissioned Shattocks, of Atlanta sports car fame, to build a mid-engined, rear-wheel-driven, sports car, powered by the 998 cc vee-twin Rapide motor-cycle engine.

It was not intended as a racer, but an ultra fast roadster; however, in spite of its all-aluminium body, it topped the scales at around eight hundredweight, which kept the 45 bhp engine working pretty hard. Its maximum speed of over 90 mph clearly showed the advantage of the pear shaped body, as the same motor in a five hundredweight motor-cycle sidecar outfit, would not reach this speed. As a successful sidecar racer in my own right at that time, the thought of fitting the more powerful version of the vee-twin engine - the Black Lightning, was already passing through my mind, but was not to actually happen until some five years later.



The three-wheeler with the author in the passenger seat. Photo supplied by Ted Davis.

The chassis was constructed from four inch steel tubing, independently sprung front axle with four quarter elliptic springs incorporating an anti-roll bar, rack and pinion steering and hydraulic brakes; the whole package being fastened by a triangular form of chassis to the power unit, which was located along the centre-line immediately behind the driver and passenger seats. The rear and driving wheel was mounted in the, basically standard motorcycle triangulated frame using a single hydraulically damped suspension unit; unfortunately, the use of the standard frame restricted the rear tyre to four x 18 inch which was totally inadequate particularly on wet roads; most dramatically when the more potent engine was fitted. By the same token it did have the advantage of a speedily changeable overall gear ratio as did the Vincent motor-cycle, and could have two of any of a large range of sprockets permanently fitted to the twin rear brake drums and changed around in the rear frame without the use of tools, in a few minutes. The front wheels were 14 inch Morris Minor.

The 16-gauge aluminium body could have been produced in resin bonded glass fibre with some saving in weight and improvement in appearance, had it eventually gone into production. Fuel and oil were both gravity fed; air cooling was provided by ducts, one running from an aperture at the front feeding air to the front cylinder and crankcase, whilst scoops either side, just behind the doors, fed air to the rear cylinder.

Lack of a reverse gear (it used the standard motor-cycle four speed transmission with positive stop hand shift) and self starter would have been two major problems had it reached the production stage. These two items did not, however, affect one's enjoyment when driving, although several passengers have admitted since that 'enjoyment' should have been pronounced 'alarming'. One such passenger was Paul Richardson, then Technical Services Manager of Vincents, who shared in a somewhat alarming incident when the steering wheel came completely adrift whilst we were doing some 90 mph along the Great North Road (near Stevenage); fortunately, we were able to brake to a standstill without further incident.

The cost of producing this one-off example was around £2,000 - not much at today's prices; it was, finally, sold by Harpers (successors to Vincent's) for a paltry £100.

It was 1954/5 before my ambition to up-rate the power unit was finally realized, when, with bike sales declining, we were taking a second look at projects other than two-wheelers old and new and, as Chief Development Engineer with a background of racing sidecar outfits, what was more natural than to have a go at racing the three-wheeler?

First move was to remove as much weight as possible and then to install a 70 bhp Black Lightning engine. (An over-the-counter Black Lightning motorcycle sold to two enthusiasts in New Zealand for the, then, asking price of £400 had just collected the world's fastest title, solo and sidecar, at 174 and 185 mph respectively.) The result was quite startling! A long black line-not always straight-indicated, approximately, which way we had gone, emanating from the poor little four inch Avon motor-cycle rear tyre. At a top speed approaching 120 mph, straight line stability, like the fast cornering, was bordering on the alarming, although inside front wheel lifting problems experienced with most three-wheelers were conspicuous by their absence.

Clearly the proper way to handle 70 bhp plus was with four wheels, which was a later development and is the subject of another story, or, possibly, front wheel drive, ie Mini-style and one wide section tyre at the tail end, the "Greenwood" front wheel drive Mini three-wheeler was raced very successfully some years later until banned by the ACU as being unfair competition to the sidecar outfits. However, with continuous development, the ultra low, light and streamlined, 100 bhp racing sidecars of today handle superbly and go extremely rapidly, Silverstone being lapped at 100 mph and Brands at 90 mph during 1975 and this with rider and passenger aboard!

Our first competitive attempt at firing off the three-wheeled projectile was at a local car sprint at which we were black flagged on our first run, the Marshal thinking we had lost both rear wheels - the zig-zag handling did nothing to convince him we hadn't!

A rather amusing incident whilst I was testing along the A5 was told by a group of Vincent Motor-Cycle Club members heading North to the annual rally who, at that time, normally expected to be "Kings of the Road" and usually were, when they came across this - what was to them probably another abortive Villiers or Excelsior two-stroke powered, economy three-wheeler. Somewhat surprised to find it doing 60 mph plus they immediately roared past, only to be re-passed at 70 plus; with no more ado they opened the taps to near full chat and re-passed, only to be re-passed again; by this time 100 mph plus was showing on everyone's clocks. The faster men of the group on their Black Shadows were really getting "steamed up" now and had dropped down into semi-racing riding positions. The sight of half a dozen Vincent Black Shadows apparently escorting this strange looking device from outer space, all doing well over 100 mph, must have provided a local farmer, just cautiously creeping across the road with his tractor, with quite a talking point for the pub that night. When the group of Vincent riders eventually saw the power unit in the little silver car, all was forgiven.

The next outing was at a Snetterton practice day, when I managed to lap just inside the sidecar lap record, albeit using up a little spectator area in the process; 117 mph coming up, down to the old hairpin, faster than my racing Vincent-Watsonian sidecar outfit which was also powered by a Black Lightning engine. It was during these exercises and subsequent four-wheeler applications, we discovered how much harder one could work the motor than when the same motor was installed in a bike. The use of Filtrate colloidal graphite engine and transmission oil kept the power unit happy, whilst Linklyfe was used to lubricate the, normally loaded, standard motor-cycle rear chain. A slightly harder plug was found necessary, K.L.G. coming up with the answer this time. My old sidecar passenger, Ernie Allen, now proprietor of 'E. G. Allen Continental' car spares, passengered, as he had in sidecar racing days, during these and subsequent competition attempts. His only comments were usually religious and brief and not often printable.

Two weeks later race day dawned, our old sidecar and three-wheeler competitors looking aghast at this complete departure from the remaining few racing three-wheelers, which were usually somewhat vintage Morgans, powered by JAP vee-twin engines. What could have the start of a new era ended as a huge joke and was, in fact, the Vincent three-wheeler's last public appearance for many years. The flag was down and we lay in mid field into the first bend-a fast right hander. It was while accelerating out that we lost one cylinder; thinking we had possibly only to stick a plug lead back on or something similar, Ernie and I leapt out almost before we had completely stopped, uncached the hinged tail section and heaved it up, only to snap the hinges and shoot the whole damn thing clear over the front of the car, much to the amusement of the few frozen spectators.

It was nothing so simple as a plug lead; we had, in fact, seized the rear camshaft which left both valves on the rear head shut. Nothing daunted, we fired up on the remaining good pot and continued the race reduced to a poor 500 cc single, now tail-less and looking like a shot up or down duck.. Our progress was now so pathetic some "wag" in the pits said afterwards that he couldn't understand why they allowed road sweepers on the track during the actual racing.

Not a very impressive competition career, but then it was to lead to something more competitive, which is the subject of my next story, "Four wheels powered by two Vincent cylinders".