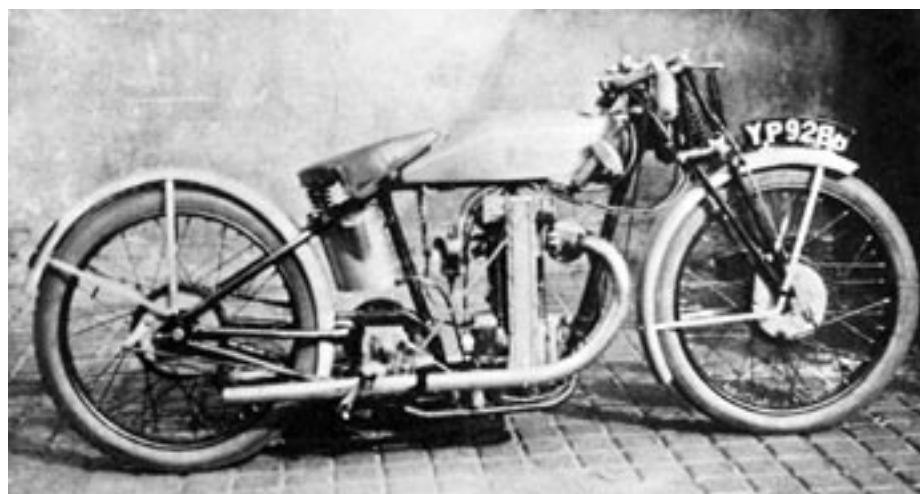


Edward's original design of an overhead camshaft engine, which contained a number of interesting features. These drawings were published in The Motor Cycle dated 16th April 1925.

shaft which acted also as the camshaft. It was driven by bevels from the right-hand end of the crankshaft. A second smaller diameter bevel, slightly higher up the camshaft, drove a transversely-mounted magneto at the rear of the casting. The cams were formed on the upper end of the vertical shaft and the valves were operated by short, horizontally-located tappets. A phosphor bronze gasket was interposed between the cylinder head and barrel, the two being clamped together by a yoke, one end of which was attached to lugs on the camshaft casing, and the other joined to the crankcase by two screwed members connected by a sleeve nut. Again, these holding-down bolts were not directly threaded to the crankcase mouth, although a slightly different arrangement was used.

As in the previous design, the cylinder head could be removed to leave the valve mechanism undisturbed. Although the cylinder head had only a single exhaust port, it led to a circular finned 'muff' across its front. An exhaust pipe emerged from each end of this muff, at right angles to the frame, before sweeping back, one each side of the frame, to meet up with its respective silencer. Internally, an aluminium alloy piston with two compression rings, and a fully floating gudgeon pin, gave a compression ratio of 5.75:1. The crankshaft, with a conventional flywheel assembly, was supported by a double roller bearing on the drive side, and by a self-aligning ball race on the timing side. Total loss lubrication was effected by a Best and Lloyd oil pump fitted at the base of the camshaft. It supplied oil directly to the top of the camshaft, which fell into a well from which centrifugal force fed it through small holes in the leading faces of the cams. From here, it drained down into the crankcase.

The cycle parts comprised a rigid loop frame into which the engine was mounted using a three-point fixing, a bolt-up clamp anchoring the top of the camshaft casting to the lower tank tube to form the additional point of attachment. A Webb girder front fork provided the front suspension and both



The first Turner Special, the engine of which was an improved version of Edward's earlier design. A complete machine, he entered it in the 1927 London to Exeter Trial, and also raced it at a 'path' race meeting in the grounds of Crystal Palace.

his new engine to *The Motor Cycle* offices in Tudor Street, EC4, where it was inspected by Nitor, one of the magazine's staffmen. The new engine had a face cam arrangement, no doubt influenced by the design of the engine used by Dougal Marchant to record a speed of 100.81mph over the flying kilometre during April 1924. Dougal used a much modified 348cc Chater Lea engine to achieve, for the first time, 100mph from a 350.

Listed as the Turner Special, Edward's latest design was described as an experimental prototype, the only similarities it shared with its predecessor were that the engine had the same bore and stroke dimensions (74 x 81mm), the same cubic capacity (348cc), and its cylinder barrel sunk into the crankcase mouth. A long, narrow, oblong casting up the right-hand side of the engine now carried a vertical

wheels were fitted with 7 inch diameter internal expanding brakes. The gearbox was a proprietary three-speed Sturmey-Archer, with a hand change gate fitted to the right-hand side of the one and three quarter gallon nickel-plated saddle tank. The machine shown in an accompanying photograph appeared to be in semi-racing trim, having a straight through exhaust pipe, dropped handlebars, no kickstarter and a saddle that sloped to the rear. Registered with the London County Council for road use, it bore the registration YP 9286.

It was intended that the Turner Special would be in production by early 1928, and to test it in open competition Edward entered it in the 1927 London to Exeter Trial held on New Year's Eve. A report on the trial appeared in the *The Motor Cycle*, its rider being his best friend, Alf Russell. Russell left London soon after midnight on a bitter cold

The production version of the race-winning machine, which was made in limited numbers and marketed as the Grand Prix model.



The Grand Prix model was undoubtedly attractive in appearance, and surprisingly fast. It could also prove quite a handful, as demonstrated by Bob 'fearless' Foster at this Ansty meeting in 1949!

and we feel that we will be making a contribution to the general situation if more racing machines are obtainable. It was the stated intention of at least two well-known riders to use Italian machines in the TT unless they could obtain Triumph racing machines, no other suitable machines being available, and this brought the matter to a head, as obviously these are not good times for British skill to be used for promoting foreign competition.

"Notwithstanding the pressure on our works for standard machines, this company has decided to divert a portion of its productive effort to the manufacture of a limited number of these racing machines for sale to suitable riders. The price of the machine retail will be £270, plus Purchase Tax, and it will, of course, include the spring wheel, rev. counter and all accessories.

"We shall try as far as possible, through our dealers, to ensure that these machines get into the right hands, and that they will also



be made available overseas, but as currently we cannot forecast the demand accurately, we are going to confine our activities to making a really good job of a limited number rather than endeavour to sell in quantity".

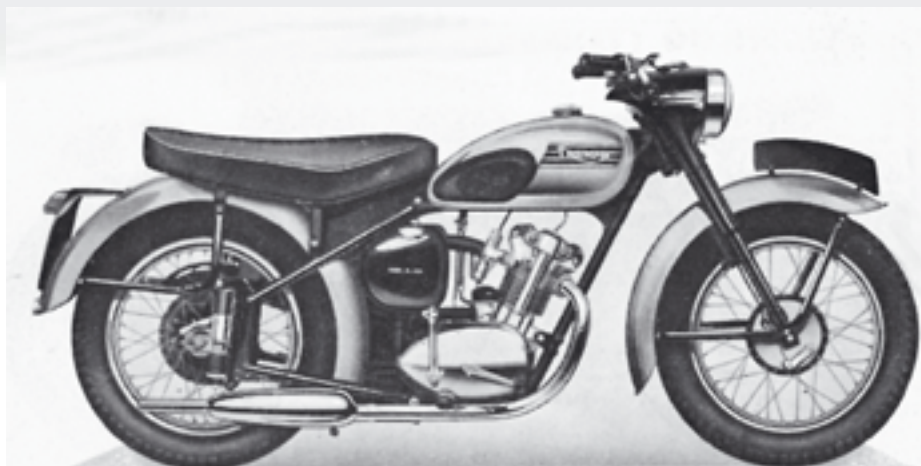
A few weeks later a full description of the over-the-counter racing twin was published by the motorcycling weeklies, acknowledging that, henceforth, it would be known as the Grand Prix Triumph to

Chapter 10: Johnny Allen's record-breaking saga

Introduction of the 199cc Tiger Cub provided the company with another lightweight of slightly larger capacity, more suitable for carrying a rider and pillion passenger at a respectable cruising speed, with good fuel consumption. It would also compete more successfully with the lightweight two-strokes available from Triumph's contemporaries which dominated the lower end of the market.

The 149cc Terrier was to continue in production; the engine big end assembly changing to one of the shell bearing type to fall in line with that of the new Tiger Cub. Many regarded this as a retrograde step, believing that a shell bearing would not be as forgiving in the event of oil pressure fluctuation, a belief that subsequently proved correct. The Terrier continued in production for a further three years with only a few minor modifications, and was dropped from the range in August 1956.

The Tiger Cub engine was an enlarged version of the Terrier unit, with a revised big end assembly as mentioned above. The engine had bore and stroke dimensions of 63 x 64mm compared to the Terrier's 57 x 58.5mm, its integral four-speed gearbox having different gear ratios. A larger bore Amal carburetter was needed and a larger section (19 x 3.00 inch) tyre, with the option of an upswept exhaust system. In common with other models in the Tiger range, the frame and cycle parts were painted black and the petrol tank and mudguards finished in the new shell blue sheen colour that would



The T20 Tiger Cub was an enlarged version of the Terrier, accomplished by increasing both the bore and stroke to give a capacity of 199cc. It was finished in the 'Tiger' colours of that time, officially known as shell blue and black. Like the Terrier from which it was derived, it, too, had plunger-type rear suspension initially.



The trials version of the Terrier, built by Jim Alves in the workshop adjoining his motorcycle business in Glastonbury, Somerset. He modified a second-hand model bought in from a customer in a part-exchange deal. Meriden was not associated with this project in any way and had no intention of making a similar model.



Above (both photos): Another engine that bore allegiance to the wartime generator unit was that of the 499cc TR5 Trophy Twin, also introduced at the 1948 Motor Cycle Show. Britain had won the prestigious International Six Days Trial that year, to which the Triumph works team had contributed by finishing unpenalised. One of the team, Allan Jefferies, had been riding what amounted to a prototype version. The Trophy twins had a single carburetter, and a 'soft', low compression version of the Grand Prix engine. The machine shown is a 1949 model that has been restored by Ken Middleditch. (Author photos)



Motorcycle manufacturers were always keen to get their machines associated with movie stars for publicity purposes. Bill Johnson must have had good connections with the studios to be able to get Rita Hayworth to pose on a screen set with Edward and Bill Johnson on this early post-war Speed Twin.

background and experience, he filled the post of President admirably and had similar views to Bill Johnson when it came to running an ultra-smart and highly efficient business.

Later in the year a lease was obtained on a building in Joppa Road, Towson, a suburb of Baltimore. On 1st October 1950, McCormack, his secretary, Phylis Fansler, and Earl Miller, an accountant, moved into their new premises to commence operations, supported by an advertising campaign in the motorcycling press. As the advertisements proclaimed, Triumph now had two separate operations, one in the east and one in the west, and, in theory at least, nationwide representation. The new distributorship took over something like 60% of Johnson Motors' territory and in an area that comprised 70% of the total population. Johnson was, if anything, relieved about this and, in compensation, was made a Vice-President of the Triumph Corporation

and given a token share in the equity. It was largely an honorary position as he had no personal involvement in the day-to-day running of what was soon referred to colloquially as 'TriCor'.

One of McCormack's early TriCor appointments was Jack Mercer. An anglophile, Mercer was well-known in Britain for his freelance contributions about the American motorcycling scene in *Motor Cycling*. He also sold British motorcycle books and magazine subscriptions. A very likeable man, full of bonhomie, he was the ideal person to take on TriCor's eastern territory as its sales representative. A month after starting he was joined by Rod Coates, who was appointed TriCor's Service Manager. Rod brought with him a wealth of first-hand practical experience as both a development engineer and an experienced competitor. Because of his engine tuning abilities he was also put in charge of TriCor's racing department.