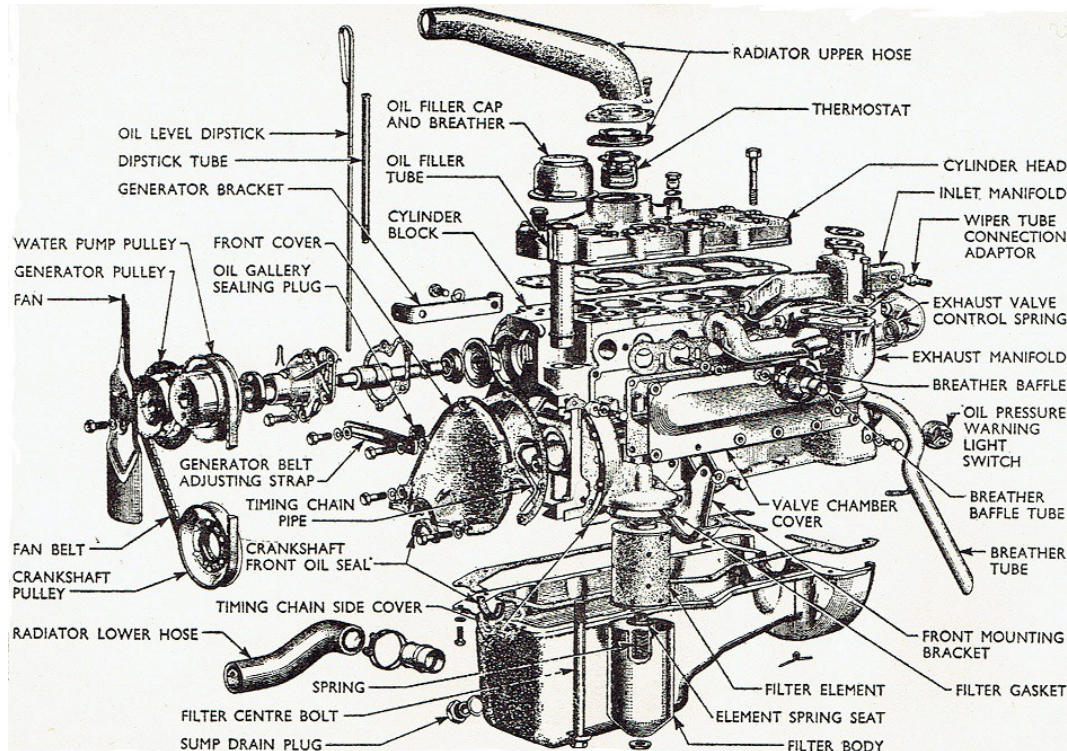


Aquaplane: From Oulton Broad to Oulton Park.

When it comes to motor sport, Great Britain – or to be more precise England – is a world leader and has been for several decades. It is widely acknowledged by historians that much of this is down to the availability of two very tunable 4 cylinder side-valve engines of humble backgrounds and a club that encouraged drivers to build and race their own cars. The first of these engines is the 750 cc Austin Seven, made in their millions from 1922 to the Second World War. The other was the 1172 cc Ford first seen in the 1934 Ford Model C and manufactured in modified form until 1959. The club responsible for creating this interest being the 750 MC.



Exploded View of the Ford 1172cc Engine.

This is how Colin Chapman, Eric Broadley, Frank Williams and Tony Southgate all started. From this came Lotus, Lola, Williams F1 and all the Grand Prix and Le Mans cars designed over the years by Southgate. In addition to this was the plethora of kit cars; originally they would have used the Austin or Ford chassis but soon Buckler space frames (*Historic Review Vol. 3 Issue IV*) would be readily available for those who wanted better handling. Many kit car manufacturers disappeared without trace but others such as Speedex (later Marcos), TVR, Ginetta and of course Lotus went from strength to strength. As unlikely as this may seem this boom was partly due to the government and the fact that the Treasury exempted kit cars from purchase tax: which remained the case until the introduction of VAT in April 1973.

As reliable as the 1172 Ford engine was, its designer had never intended it to be very quick, but there were those who could remedy that. The main protagonist in this field – or should that be broad – was Aquaplane of Oulton Broad near Lowestoft headed by Harmer Copeland. Ford had also manufactured a marinised version of the engine and Copeland used one of these for hydroplane racing which was growing in popularity. The following article written by John Stavely appears on the Small Ford Spares website which is part of Paul Beck's Vintage Supplies of North Walsham:

A Brief History of Aquaplane

By J Stavely

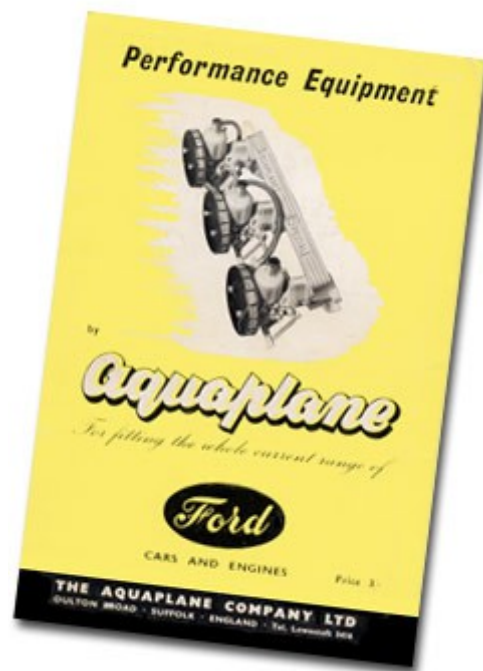
Founded in the mid-1950s, Aquaplane first specialised in the manufacture and sale of tuning equipment for Ford and BMC engines from its base in Oulton Broad. Aquaplane's founder, Harmer Copeman, had started racing motorboats on Oulton Broad in 1936 whilst still a student at Loughborough Engineering College. He had immediate success, taking second place in the first heat of the prestigious Daily Mirror Trophy against sixteen of the country's top hydroplane racers. An early indication of his tuning abilities, perhaps, was to be seen from his disqualification by the engine inspectors after the second heat.

Power boats were to be an important influence in the formation of the company after the war when the Darby-One Design, an inboard-engined hydroplane powered by the 10 hp. Ford sidevalve engine, became popular on Oulton Broad after its introduction in 1947. The Ford engine was cheap and in plentiful supply, and since all the hulls were identical it was immediately apparent that the way to win was to extract more power from the humble but robust 1172 cc. Ford. Harmer Copeman's Squib was soon the boat to beat and despite the handicappers continually moving him backwards he still managed to win by continuous development of his engine. Soon other drivers were clamouring for similar tuning parts and the business grew rapidly.

There were not enough powerboat racers to sustain this growth. The fifties however saw an enormous interest in Specials. These were small sports cars built using the mechanical components from old small saloons fitted to homebuilt or proprietary chassis, or simply a fibreglass body fitted to the Ford chassis. Soon their builders were seeking more power and ringing Lowestoft 5416 for a catalogue. The best-known proprietary chassis was undoubtedly the space framed Buckler, of which more than 500 were built. Many were used for trials or racing, both of which activities were to create important markets for Aquaplane. Further recognition came in 1957 when Morgan decided to fit their 4/4 Series II Competitions model with 1172 cc. Ford engine equipped with an Aquaplane head and twin SU's as standard.

By the 1960s the biggest market for tuning equipment was for improving the performance of standard saloon cars such as the Ford 100E Anglia, Prefect and Popular and later the 105E Anglia. By then Aquaplane were advertising themselves as "Manufacturers of the largest selection of Performance Equipment for Ford cars in the world". To stay at the forefront of this market required continuous development and testing, both on the dynamometer and

on the road. Aquaplane avoided making exaggerated claims for the extra power obtained but relied on their reputation gained in all forms of motor sport. Although Ford equipment was the mainstay of Aquaplane's business they also manufactured tuning equipment for the A series BMC engine and the Morris Minor series II and 1000. As an interesting aside, Harmer



Copeman's final racing boat, Barracuda, was powered by the supercharged 4 litre Lycoming engine and he also owned three 800 series Cords, an American, front-wheel drive car fitted with a vee-eight Lycoming engine. This side valve design suffered continual overheating problems and he overcame these by designing and building alloy Aquaplane heads to replace the standard cast iron version, which had inadequate water passages, and the Aquaplane version became popular with Cord owners far and wide.



Triple S.U inlet manifold for straight six Ford

The extensive range of equipment now available from Aquaplane was either manufactured in house at the works at Camps Heath, Oulton, or manufactured for Aquaplane by outside suppliers. The latter included a range of instruments labelled as Aquaplane but manufactured by Smiths with both mechanical and electronic rev-counters and the quaintly named Aquaplane fuel consumption ratemeter, which was actually a vacuum gauge. The mainstay of the business was the Aquaplane Superhead and associated manifolds, available for most of the Ford small car range up to the Cortina, but manifolds were also available for the Consul, Zephyr and Zodiac with a triple SU set up for the six cylinder versions. The Aquaplane lightweight alloy flywheel was manufactured from heat-treated, high tensile alloy in two versions, with steel pressure face insert for road use and a competition version without the insert. To accommodate the increased performance available Aquaplane also manufactured a range of high capacity oil and water pumps and cast alloy oil coolers, with both full flow and bypass types being supplied for the sidevalve Fords depending on the application. Valves, heavy-duty valve springs and racing and sports camshafts were also available, but the Aquaplane Twin Exhauster and Deep Note Converter may have been more cosmetic than a practical performance booster! Aquaplane never deserted its marine roots and continued to produce marinising equipment for the 1172 cc. Ford engine, including a marine water pump assembly and a clever water-cooled inlet manifold, with adapters to allow the fitting of single or twin carburettors of almost any make.

Aquaplane had grown in less than 20 years to be possibly the best-known performance equipment manufacturer in Britain, but it was still located in what had been the back garden of the Copeman family home, The Gables in Sands Lane, Oulton. Despite this success, in 1972 Harmer Copeman decided to sell up, perhaps tempted by increasing land values. The Aquaplane business was sold without premises and moved to Old Buckenham in Norfolk, where it only survived for another three years, despite development of new lines including equipment for the B Series BMC engine. Fortunately there were still enthusiasts for the well-made equipment from Oulton Broad and it has been feasible to remake the patterns for some of the original range, which is still in production today.

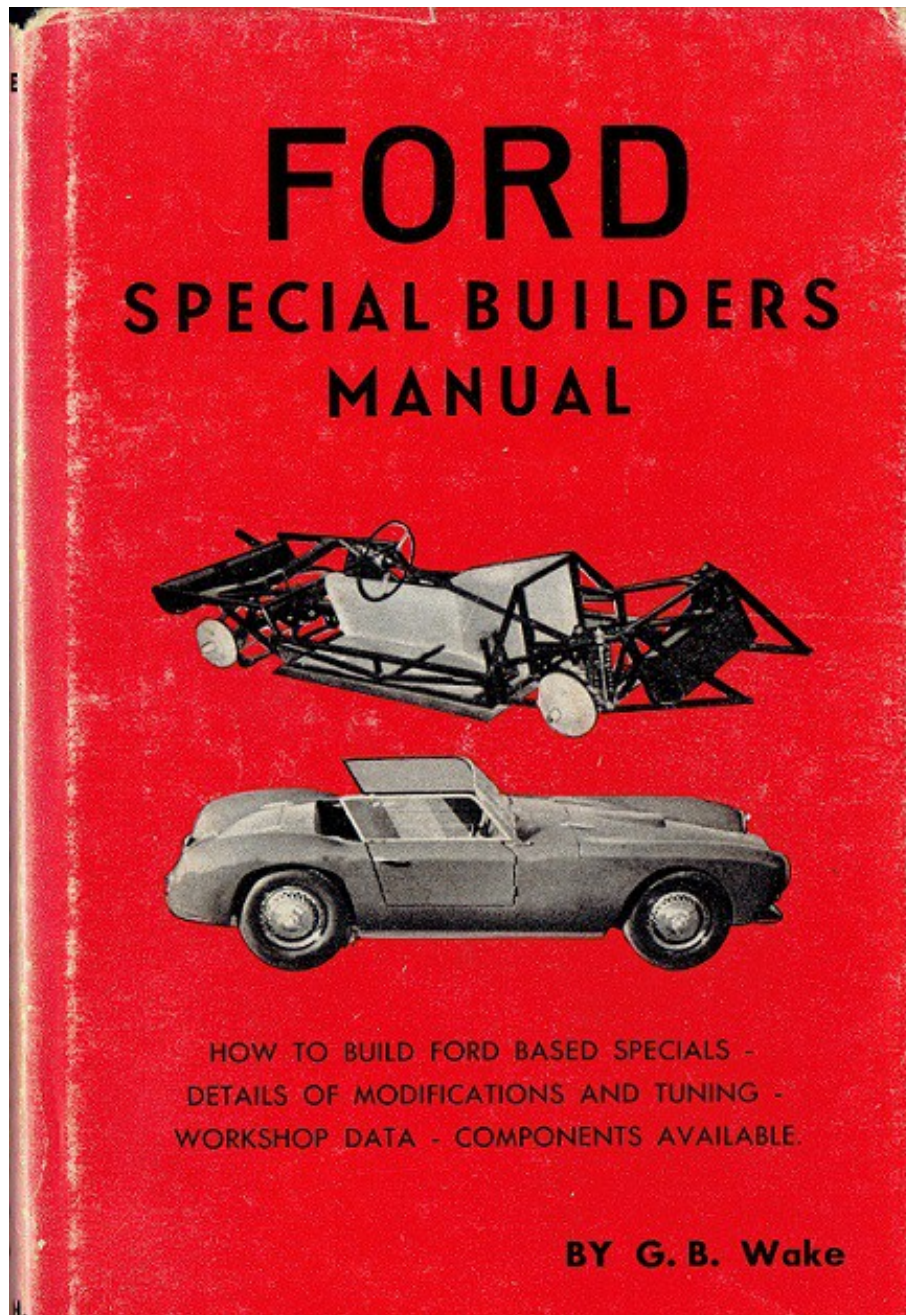
-

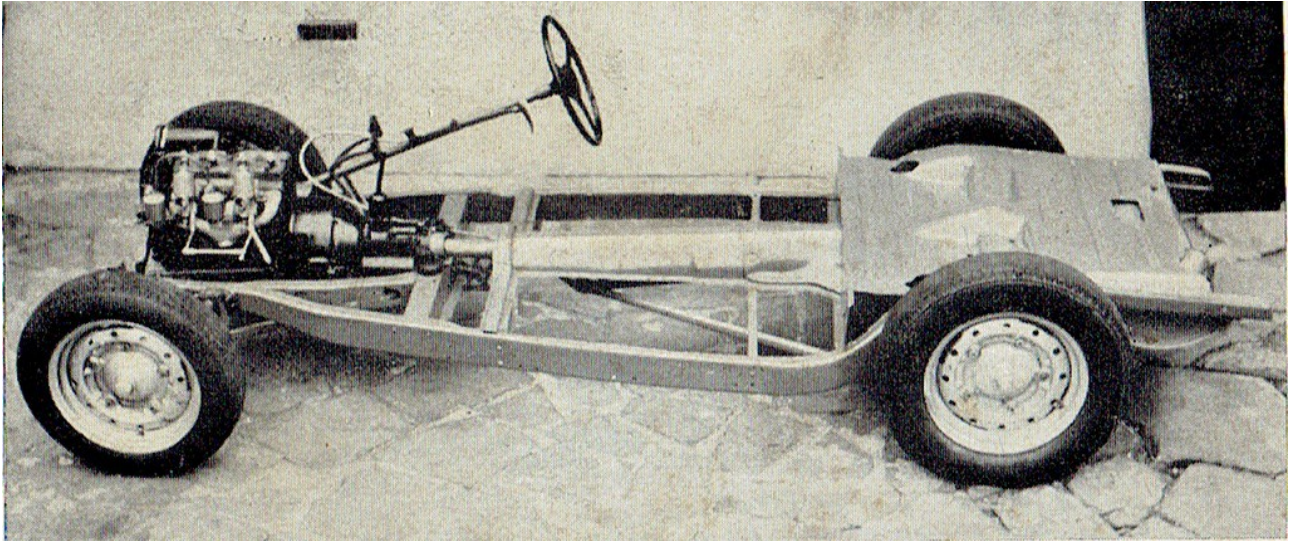
Since that was first published Aquaplane has gone from strength to strength. The manufacturing rights were acquired by Gary Miller who trades as Belcher Engineering of Rickinghall near Diss. For many years Belcher's have been recognised for their expertise in pre-war Fords such as the Models A,B,T and V8, following this Aquaplane was sold to Paul Beck Vintage supplies of North Walsham. With the enthusiasts renewed interest in period stockcars, early kit-cars, specials and trials cars demand is rising. Likewise the humble 1172cc engine itself is now sought after, there are many – including your editor – who regret scrapping them in the past!

-

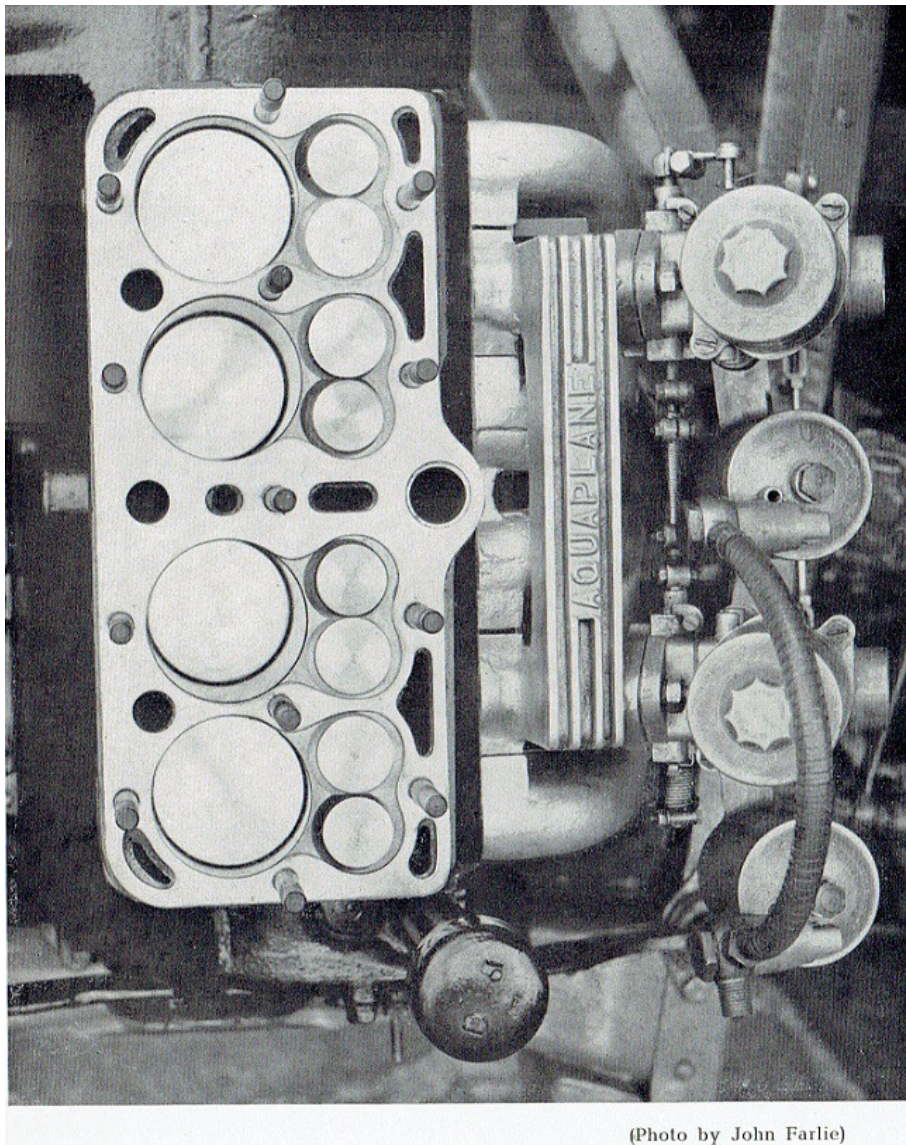
The Ford Special Builders Bible.

For one Guinea (twenty one shilling or £1.05) anyone contemplating building a Ford 1172cc special would have been foolish not to invest in the Ford Special Builders Manual by G.B. Wake. Magazines of the time would have printed articles on building your own car but this publication was the one to have. Mr. Wake goes into great detail on how to turn an upright Ford Popular into something of a head turner, this was a time when new cars were out of the reach of the average workman. As you would expect several unfinished projects have come to light over the years but this book must surely have played a role in all those that were finished.





The book shows a rather clean rust-free chassis....



(Photo by John Farlie)

..with an equally clean Aquaplane modified engine.

--oo0oo--

The Digby Baker Munton Special.

One name that regularly crops up in E.C.M.C. history is that of Sydney John Digby, to be forever known as “Digger”. This gentleman was part of the club from day one, as Clerk of the Course he presided over the three meetings at Fersfield and our major meetings at Snetterton, whilst the minor ones he competed in himself. Another name that comes up – albeit not so often – is Monty Baker Munton of Munton & Fisons the world renown maltsters in Stowmarket.

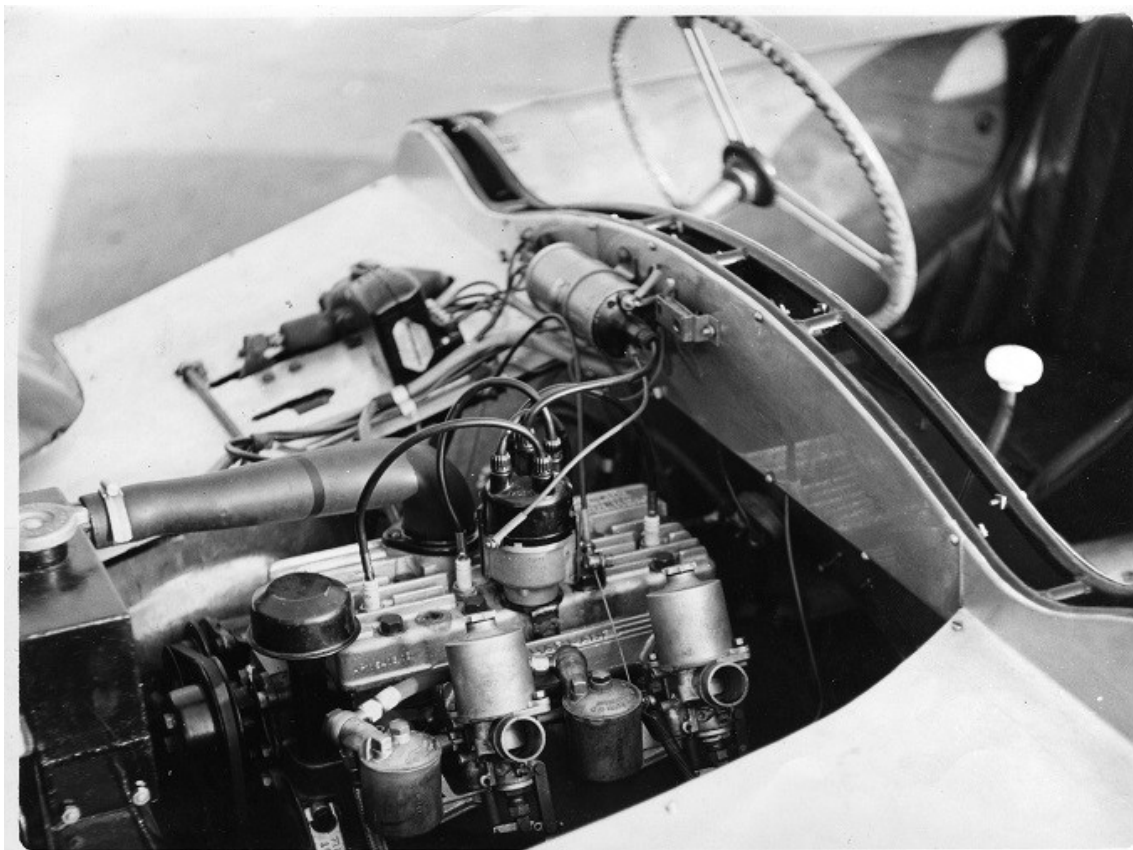
Together these two gentlemen constructed their own sports car known as the Digby Baker Munton Special or DBM for short. Registered SRT 777 (July 1955) this was powered by an 1172cc Ford sidevalve engine with Aquaplane modifications. It is not known who built the aluminium body but as a guess it could have been either Jim Keeble or Charlie Carr; both of Ipswich, although there is no actual record it is probable that this clothed a Buckler space frame. What happened to the car afterwards is equally unknown but hopefully it is languishing in a shed somewhere!



Above & Below. “Digger” in the DBM before receiving its paint.
At this point it sported a full-width windscreen.



From this angle the DBM bears a strong resemblance to the fibreglass R.G.S. Atalanta.



Aquaplane head and cast aluminium manifolds with twin SU carburettors.



“Digger” at Snetterton, behind is Bert Gosling's Austin powered Buckler.



This was the S.M.R.C. meeting of 25th March 1956



Lining up for a sprint at Snetterton. By the time this photo was taken the DBM had gained a set of bolt-on wire wheels.



The sprint started at the Hairpin and ran anti-clockwise. The building to the right was the filling station on the A11.



Photograph Richmond Pike.

Again at Snetterton, this time a WECC meeting (date unknown). It is thought that the driver is Lance Macklin.

--oo0oo--