

MGAs at Le Mans 1955

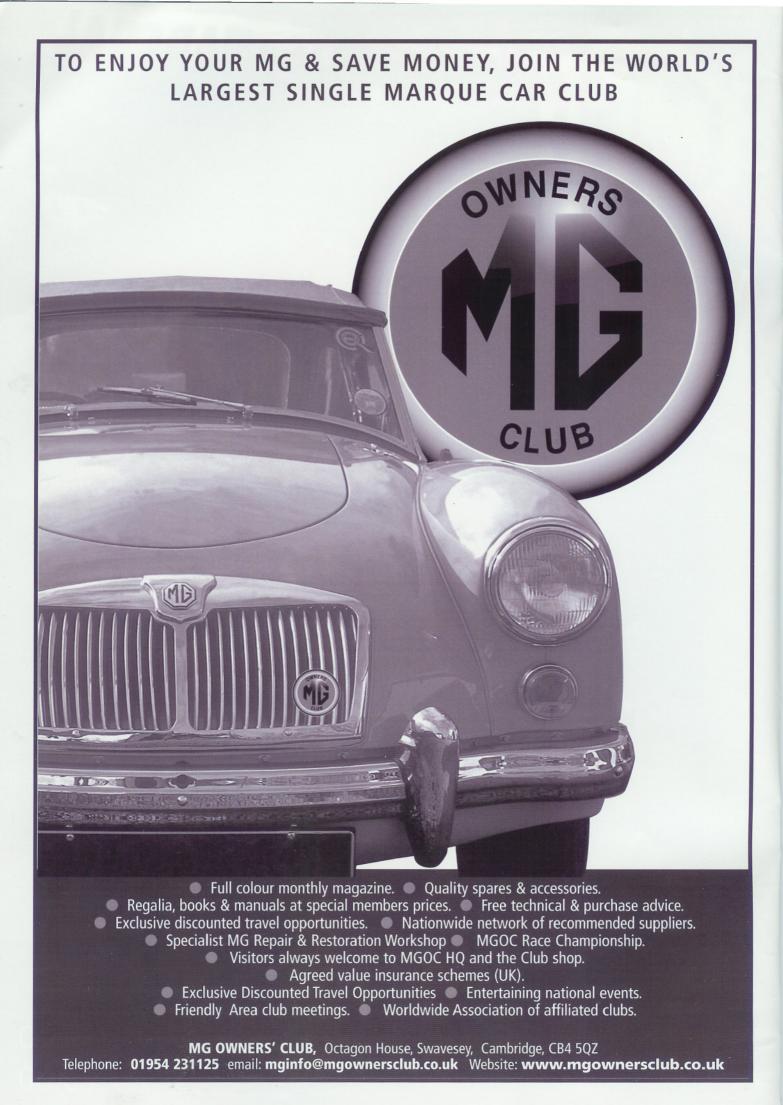
The story behind the entry of 3 MGAs to the 1955 24 hour Le Mans race, produced to celebrate the 50th aniversary.

Brian Moylan

£2.50 €3.50

PROJECT

BODGIES A



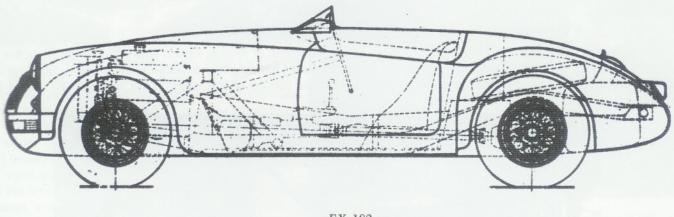
Introduction

The appearance of the MGAs at Le Mans in June 1955 was a triumph for John Thornley, the Managing Director of the MG factory and Syd Enever, Chief Designer.

The seed was sown in 1951 when Syd Enever had a special body built to put on a TD for George Philips to race at Le Mans (EX172). The body was later tried out for a record-breaking car which was designated EX175, but wind tunnel tests proved it to be unsuitable. Nevertheless Enever and Thornley were convinced that this body shape was the way to go in designing a car to follow the out-moded T Type Midgets. Unfortunately MG was now part of BMC whose boss already had the Austin-Healey in production in Longbridge and refused permission for another modern shaped sports car to be built within the BMC group.

By 1954 it was obvious that MG could not survive with just its available range of models. John Thornley's insistence that MG should be allowed to produce a modern MG eventually paid off, and agreement was reached. He followed up that success with the request that the Racing Department, which had been closed in 1935, should be re-opened in time for the announcement of the new car to ensure it received maximum publicity. It says much for Thornley's standing within BMC that this was also agreed upon.

Plans were immediately made for work to proceed on the car based on EX175 that Syd Enever and his small team had been clandestinely working on in a corner of the MG factory. It was to be ready for announcement in the beginning of April 1955 and for a team of them to enter the Le Mans 24 hour race in June of that year, however the time scale proved to be too short for BMCs Body Branch to tool up for the new body shape and a sufficient number of cars would not be made for them to race as production cars under the new name of MGA. They were therefore to race in the prototype class as EX182.



EX 182

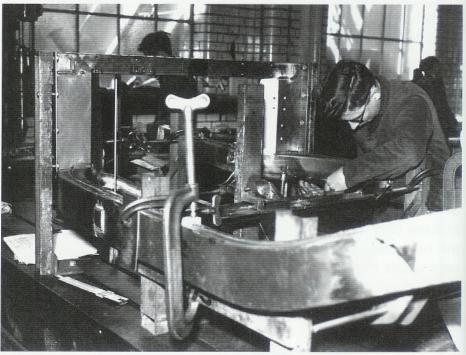
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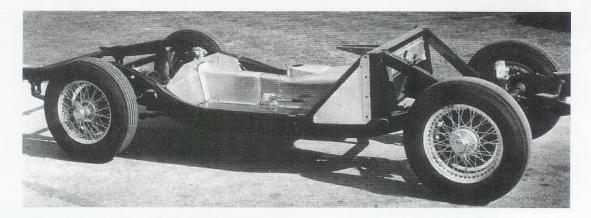
From Drawing Office to Prototype

EX182's body was made entirely from 18 gauge aluminium, with its sleek lines enhanced by an aluminium Tonneau Cover and the racing 'Aero' Screen, and the hump in the bonnet to clear the rocker cover of the TD engine of the earlier EX172 was unnecessary on the new model with its 1500cc BMC unit. As the TD Chassis of EX172 was unsuitable for the new car it was found necessary to design a new one that would allow the floor and the seats to be within the chassis rather than on it. This new design incorporated box section longitudinal members with tubular cross-members and a 'goal post' structure to lend stability to the scuttle.

The Le Mans chassis were hand built in the Development Department. The members were made from steel cut from from 6ft x 4ft sheets from the factory steel store, shaped over wooden formers that had been made by the department's carpenter Harry Herring, and then arc welded by the departments technicians. Four chassis were built for the 3 race cars and the test car, they were numbered EX182/39 EX182/40 EX182/41. Only two of the cars had firm entries, with the other on the reserve list, but past experience showed that it would almost certainly make the start line-up. The completed chassis had aluminium floor boards, propshaft tunnel, heel boards and scuttle panels. A single battery carrier bracket was used, and the car would run with a single twelve volt battery instead of two six volt ones which were to be standard equipment on the production cars.



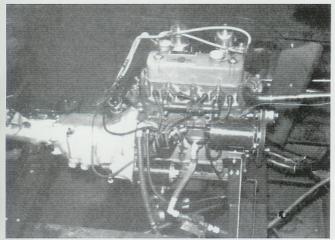
The front suspension was by lever-arm shock absorbers, with the addition of Andrex friction type coil springs sat in the springpan, supported by two 'wishbones' mounted in rubber bushes to a pivot bar, which was bolted to the chassis. Steering was by rack and pinion The whole suspension set up was a slightly modified version of that used on the previous MG model, the TF.





The build sheet for the engine contained 64 instructions of modification: No head gasket would be fitted, and to ensure a gastight seal the special twin port cylinder head was lapped in to the cylinder block using fine carborundum paste by the two main engine builders seen here, Jim Cox and Percy Standen. The waterways between the block and the head were closed off with alloy plugs so that if the head should raise slightly during 24 hours of running at high revolutions then coolant would be prevented from flooding the engine. Instead coolant flowed from the block to the head through a pipe bridging them at the rear of the engine.

2 x 1 3/4" Carburettors were used, and the special inlet manifold was ground out to match. A plan to have four carburettors, 2 either side of the cross-flow head, was found in testing to be non-viable, so the ports on the non-carburettor side were bridged by a balance pipe and this proved to greatly improve the efficiency of filling the combustion space which was polished and modified to give a capacity of 39.5cc. The inlet and exhaust ports of the engine were polished and enlarged to an exact dimension and shape. The manifolds similarly treated and the two components matched up and doweled into position. The sump was enlarged and oil filtration was improved by the use of a modified oil filter from a Riley engine. Provision was made for oil cooler pipes. Flat top pistons were used with fully-floating gudgeon pins. With the compression ratio at 9.3 to1 the engine was designed to give 80bhp at 5500 revs and a rev limit of 6000 rpm. To ensure reliability, every nut and bolt on the engine, internally and externally, had to be drilled and wirelocked, or secured by a locking plate. Four engines were built; EX182/42, EX182/43, EX182/44, EX182/45



The Heenan & Froud Dynamometer was located in a corner of the Development Department. It consisted of an iron framed test-bed on to which the engine and gearbox was bolted. Cooling water was supplied to the engine on a 'dead loss' system into a tank, a large and noisy fan blew on to the front for cooling. A short prop-shaft connected the gearbox to a water-brake. Petrol was gravity-fed with a gauge registering the fuel consumption. The engine was controlled by the technician standing at a control table with a lever to operate the throt-tle and a watercock to regulate the flow into the water brake, which exerted a load on the engine. Instruments registered the oil pressure and temperature, and water temperature, with a large rev counter and a meter to monitor the load applied to the engine. After a 58 hour running-in period the technician applying load. As the load was decreased the engine ran faster. Initial testing revealed the optimum

profile for the carburettor tapered jet needles which were then produced by SU Carburettor designers and the special Lucas distributor was adjusted to its best firing position. The load was applied to allow the engine to run at progressively higher speeds with load and engine speed being noted at every 100 rpm up to the safe maximum of 6000rpm. The power is calculated as

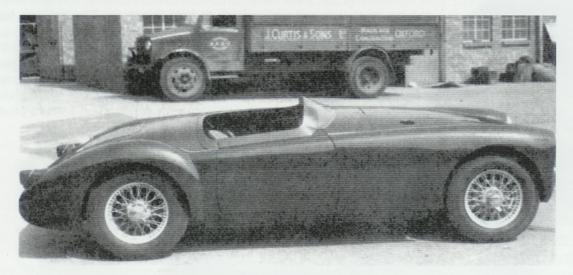
load x rpm and final result was a figure of 82 bhp at 5500rpm

k (the bed constant)

The body had been produced on early tools and required hand finishing before being mounted onto the chassis. This work was being progressed at the same time as the chassis and engines, with a team devoted to each part of the project The panel beater carefully removed every blemish.. Quick release fasteners were fitted for the full length undertray, the tonneau cover and the battery access cover. Holes where the bumpers on the standard car were fitted were to be filled in and the depression where the bumpers would have rested was faired in. Holes where the control cables, and pipes and electric passed through the bulkhead from the engine to the dash board, were cut and the dashboard itself was made to accept the ammeter, the oil pressure and water temperature gauge, and the special fuel gauge for the 20 gallon



tank .The 5 inch rev counter had a red tell-tale hand that registered the maximum revs that the driver had used. The bonnet had two security straps. When this preparation was finished the body could be painted.



The prototype was rolled out of the Development Department. It was the first sight that many of the factory workers had of the car that they were expecting to come on line shortly. The news also that the Austin-Healey was being brought down from Longbridge to be built alongside the MGs, effectively making the Abingdon factory the centre for all BMC sports cars, was received with much optimism and hope for the future of the Company.

Testing the Prototype



On April 28th 1955 the EX182 test car was taken to Silverstone for its first test run. The Racing Department's newly appointed manager, Marcus Chambers presided over the proceedings and on hand were John Thornley and Capt. George Eyston, with Alec Hounslow, Doug Watts, Ron Bettles and Dickie Green to look after any running repairs.

The testing would be carried out by two very experienced drivers. The first was Ken Wharton a man who had driven a BRM to third place in one of its earliest Grand Prix race races in New Zealand, and again in the Grand Prix at Albi again achieving third. He was Hill Climb Champion several times between 1948 and 1953, setting records on Shelsey Walsh eight times. As a rally driver he was Competition Manager of Ford and in 1953 on the Monte Carlo Rally he slid off the road and landed on a Citroen. His apology to the French driver was met with 'Think nothing of it, I myself am on top of a Renault!' In 1957 he returned to New Zealand where he lost his life in a racing accident. The other was the well known MG racing driver Dick Jacobs whose association with MGs went back to 1937 when he



Ken Wharton in EX182

bought his first MG, a J2. His first factory drive was in the Daily Express Production Car Race at Silverstone in 1949 driving one of a team of TCs. That was the start of his unofficial career as an MG works driver and his presence at the Le Mans test day provided invaluable additions to Wharton's findings. That weekend he drove a Magnette at Silverstone winning his class, which was his fifth consecutive win at Silverstone in the 1,500 cc class, all in MGs.



John Thornley and Alex Hounslow give last minute instructions

The honour of driving the first test lap went to to Alec Hounslow, to warm things up and to be sure that that there were no obvious faults. It was typical April showery weather, but the track was not wet enough to hold things up. The car was handed over to Wharton with instructions not to exceed the 6,000 rpm maximum

Ken Wharton settled himself into the drivers seat and already found that it was not comfortable enough for the driver to sit in for a stint of two or three hours at a time. Later, more discomfort was brought about by engine fumes getting into the cockpit. Jacobs took over and confirmed this and other findings, particularly relating to the suspension set-up which resulted in the inner wheel lifting on corners producing a large amount of oversteer.



Tests also suggested that the planned 3.7-1 differential ratio, which would be fine for maximum speed on the Mulsanne straight, would be an embarrassment when negotiating the hairpin at the end of that straight consequently the milder 3.9-1 was used, which in conjunction with a close ratio gearbox was the optimum combination.

Running in the Wet

Towards the end of the test the hard braking from 100mph for the Silverstone corners took its toll and the heat generated caused the brake fluid to boil and the linings to lose their efficiency. This was put down to a lack of ventilation and was something else that was added to the list of faults to be remedied before further testing

Two weeks later the drivers were called for a second test day, this time Dick Jacobs was joined by Johnny Locket, another of the drivers who would be driving one of the cars in the race. The problems that beset them on the previous test were all ironed out.

Oversteering was almost obliterated on all but the most ambitious of drifts into tight corners, by the fitting of modified rear springs and a modification to the front suspension. The seating position was changed along with the pedals and steering wheel. Better sealing between the engine compartment and the cockpit solved the fume problem and fresh air was provided by ducting air from a ventilation grid let in to the body to the right of the radiator grill. Improved



engine cooling was achieved by an air intake at the rear of the bonnet scooping air into the engine compartment. The brake drums and back plates had holes cut in them with scoops fixed over them to help in heat dissipation and prevent the ingress of grit or stones.

The drivers put in 90 laps of hard driving and at the end of the day declared that the car was ready for the race. Meanwhile work was progressing at a fevered pace on the three race cars to bring them up to the same standard and even better with some last

minute refinements.



From Abingdon to Le Mans



Sunday June 5th saw the team ready to go, with the cars being shepherded by the transporter which had been purchased and prepared to Marcus Chambers' instructions by Appleyard of Leeds. The cab provided ample room for the driver and, if required two passengers. Just behind them was a small but functional kitchen to keep the team fed throughout the 24 hours of the race. Then behind that the main body of the vehicle with its work bench and tools, further along the sides there were fold up beds for the off duty drivers and mechanics and lining the top were fixings to carry spare wheels. For the journey to Le Mans the transporter carried the array of spares thought prudent to have with them.

The team made a splendid sight with the highly polished cars in British Racing Green presided over by the matching transporter proudly proclaiming its purpose with the BMC rosette and the logos of all the car companies that made up the British Motor Corporation. The team that had made it all happen stood together for their photograph with the cars that between them they had designed and built. They were from left to right: Harold Wiggins the department's machinist; Dickie Green who had been brought in from Aston Martin for his racing know-how; Doug Watts - shop foreman; Alec Hounslow - superviser, whose experience went back to the time when he was riding mechanic to the great Grand Prix driver Nuvolari in 1934; Syd Enever - Chief Designer whose brain-child it all was; then the three technicians Jim Cox, Cliff Bray and Gerald Wiffen, three of the men with the expertise to weld and bolt it all together.





The team was ready to go with Alec Hounslow to lead in car No.40, followed by Jim Cox in 41,Cliff Bray in 64 and Doug Watts bringing up the rear in the practice car. Dickie Green drove the transporter with Gerald Wiffen as his passenger Marcus Chambers and Syd Enever travelled down in a Riley Pathfinder.

The race cars were not as tempermental as a car highly tuned for shorter races, but nevertheless preferred to be driven at a moderately high speed. Along the way, on a corner that unexpectedly tightened up, Jim Cox found his car getting away from him, he over-corrected and the car span the other way. Doug Watts in passing called out 'Hang on to it Jimmy', which Jimmy did, coming to rest against a grassy bank with no more damage than a slightly bent number plate. Alec meanwhile sped along in the lead unaware of Jim's mishap and the rest of the team deemed it judicious not to bother him with it.



Before reaching Dover it was thought worthwhile to fill up with petrol, for it was generally believed that British high octane fuel was better than any that could be obtained on the continent.

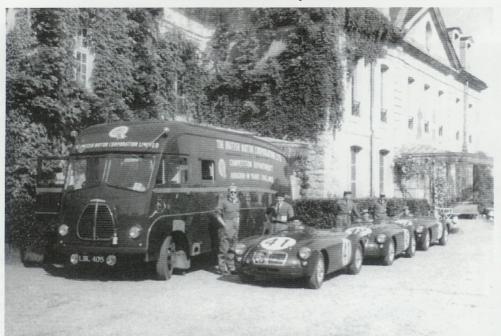
That evening the Le Mans entourage assembled in The Burlington Hotel near Dover among them John Thornley with his wife Joanne, Sammy Davis and Captain George Eyston, plus pit managers, transport managers, lap scorers, sundry advisers and experts, and the drivers, some with their wives. Altogether when the cavalcade disembarked at midday the next day in Calais there were three MG Magnettes the Riley Pathfinder filled to the brim and Sammy Davis in his Austin-Healey. Inevitably not all of them cleared customs at the same time and it was arranged that the convoy should re-assemble at Etaples for lunch.

The race cars led by Marcus Chambers in the Riley didn't linger over the meal and were away before the rest of the party. This proved to be fortuitous because when the rest of the party finally got on the road they had not gone very far before they went through a violent storm. The rain came down in torrents reducing visibility to zero, branches and even whole trees were blown into the road. Fortunately nobody suffered any harm and the only damage to the cars was a hole in the side screen of Sammy Davis's Austin-Healey. They eventually arrived at their destination, The Chateau Chene de Coeur in time for dinner which was taken in a nearby restaurant, Les Rosiers, which was to be the scene of many a convivial meal before the week was out



what happened. The diagonaly but off exhaust pipe duly denoted some down draft and the send blew up in a small dated. This problem was solved simply by cutting the and of the rost source.

Pre-race Preparation





Tuesday morning, the cars were to be prepared for scrutineering. Particular attention was paid to the engine bay, with any trace of oil polished off and stray cables being tidied away, then the task of washing and polishing. While the the mechanics were dealing with the cars, the drivers were being rehearsed in the art of the Le Mans start. This required the drivers to line up on the opposite side of the track and then, on the signal, race across, leap into the car, start up and GO!

Scrutineering took place in one of the towns main squares. The degree of preparedness and the immaculate cleanliness of the cars was a credit to the mechanics, who were themselves spruced up and resplendent in their matching green overalls. It drew compliments from the officials and the crowd of admiring onlookers. One of the issues that the scrutineers were keen check was whether or not the cars' exhausts would disturb dust and inconvenience following competitors. The test for this was to place a tray of fine sand under the exhaust, start the engine and see what happened. The diagonally cut off exhaust pipe duly directed some down draft and the sand blew up in a small cloud. This problem was solved simply by cutting the end of the pipe square.



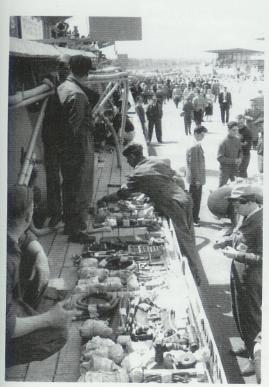


Cars and crews returned to the Chateau. After lunch at Les Rosiers the pit crews were put through their paces practising routine pit drill: Bonnet to be unstrapped, oil checked with a can of oil at the ready, clean the windscreen and lights, and carry out a wheel change (in the race the wheel change proved to be unnecessary, as the cars ran through the 24 hours on the one set of tyres).

The next day, Wednesday, dawned with rain pouring out of the heavy dark clouds. The first practice session was to be that evening and the cars were given a thorough going over.

The Chateau's out-buildings had been cleared as make-shift workshops while outside, when the rain abated, advantage could be taken of the transporters facility for working under the car. The long ramps were laid in position for the car to run up into the back of the vehicle. The rear ends of the ramps were raised to the same level as the back of the transporter to be supported by trestles, and the car was then reversed on to the ramps making it safe and easy to work under the car. Evening came and after a meal taken as usual at Les Rosiers the team drove to the circuit for the first practice session. The first item of news to greet them was that the third car had gained a few places on the reserve list, thanks to Moss shunting off Behra. The MG was allocated a double pit which they had to share with Lance Macklin in his Austin-Healey.





The pit crew laid out the spares. Three sets, one for each car and any item used had to be taken from the appropriate set of spares. Darkness came and there were frequent pit stops to have lights adjusted and re-adjusted until the drivers were satisfied. Car number 41 threw a fan-belt, boiling away most of the water before it made it back to the pits. With no more incidents, practice was over for the night

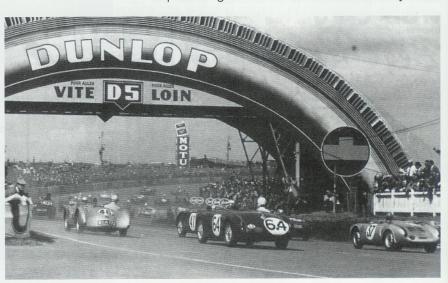
The next morning the cylinder-head of car number 41 was removed to check for any possible damage, but there was no evidence of the engine starting to seize up when it had started to run dry, so it was replaced and gave no more trouble. That night Johnny Locket took the car out again for more practice and to give it a thorough testing. The next pit along from the MG shared pit was occupied by the Arnott team. During practice the Arnott crashed, which let the third MG into first reserve, as well as giving them the opportunity to spread themselves into the now vacant pit. On Friday they were relieved to be given the news that the third car number 64 was in. More pit and Le Mans start practice then the team retired early to get some sleep in preparation for the days to come.

The Race



Saturday the 12th of June 1955. By mid morning the three team cars led by the transporter made their way through the crowded Le Mans streets to the circuit. At last they were settled into their pit with the transporter behind them dispensing lunch. The drivers were: No.41 - Johnnie Locket and Ken Miles: No.42 - Dick Jacobs and Joe Flynn; No.64 - Ted Lund and Hans Waeffler. Their objective was clear, John Thornley wanted them back next year to compete for the Biennial Cup, a highly prestigious award presented by the Rudge Whitworth wheel manufacturers. To qualify for this it was necessary for a car to complete the race at an average speed set for their class. In the 1,500cc class that the MGs were racing, the target speed was an 80mph average for the race. If they were successful then next year the cars would have automatic entry to compete for the cup against other qualifiers from their own and other classes. The winner would be the car that improved on its handicap by the greatest margin. In practising Le Mans starts in the courtyard of

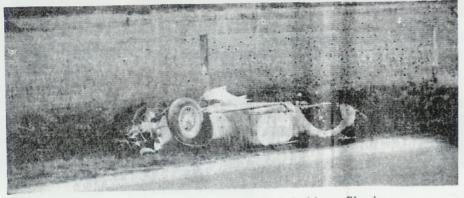
the Chateau, Dick Jacobs was reprimanded by Sammy Davis for not trying hard enough but Jacobs had been perfecting the art during his racing career, and promised Sammy Davis that he would be the first MG away from the start. The cars lined up opposite the pits ready for the start. The last minute instruction to the drivers 'Don't get carried away in the frenzy of the start' with so many cars faster than the MGs leading them into overrevving their engines. True to his promise Dick Jacobs was the first MG off the grid and led under the Dunlop bridge and on round the Tetre Rouge corner into the Mulsanne straight. Now he remembered the fate that awaited the driver who overrevved his engine. The long straight stretched in front of him but he resisted the temptation to go flat out, to the extent that he was overtaken by the other two MGs.





As they went past the pits Ted Lund was leading, followed by Johnnie Locket and Dick Jacobs in that order. They were happily cruising round, well inside their target lap times of 5min 45secs. With only one and a half hours gone and another twenty. three and a half to go Sammy Davis had the 'SLOW DOWN' sign hung out. Two hours went by with everything going to plan in the MG camp, the time was approaching for the first change of drivers. Suddenly the comparative calm was shattered. There was confusion on the track opposite the pits. A Mercedes hit the back of the Macklin Austin-Healey and launched itself into the Grandstand, disintegrating as it went, tragically killing over 90 people, and injuring many more.

L'ACCIDENT DE LA MAISON-BLANCHE

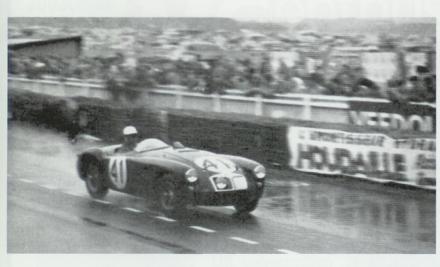


Voici la voiture M. G. 42 qui a capoté à la Maison-Blanche

Meanwhile the race continued. Miles and Waeffler took over cars No. 41 and 64 respectively from Locket and Lund at 2 A.M.. Waeffler was unable to keep to the required average leaving Lund with a slight deficit to make up when he and Locket regained their steering wheels at 5 A.M. In his efforts to make up time Lund inadvisedly attempted to overtake a TR2 on Arnage, colliding with a Jaguar that had tried the same manoeuvre earlier in the race and was abandoned with its rear end sticking out over the track. A quick visit to the pits revealed that the chassis had been knocked out of true. This was compensated for, as much as possible, by adjusting the track. The wing was beaten out to something like its original shape, a new headlamp fitted, and off went Lund with yet more time to make up. Of the 60 cars that had started the race only 26 were still running. The MGs were lying in 15th and 19th places .

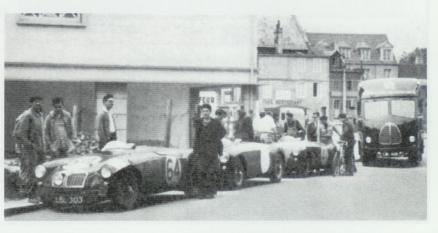
In the midst of this mayhem it was realised that Jacobs was overdue. Conflicting reports filtered through and eventually it was confirmed that he had crashed at White House corner. The car was on fire and Dick Jacobs had been thrown clear to tumble and slide for some considerable distance down the track. He was rushed to hospital where he received treatment from the medical staff, who were already under severe stress from the scores of victims of the earlier crash. He remained there until being transferred to the Churchill Hospital in Oxford, where it would be six months before he was well enough to be discharged, and another three months being able to walk only with the aid of sticks.





At 11a.m .Locket in No 41 had chalked up 200 laps and was now 12th, with 2 hours to go. No 64 with Lund back at the wheel called at the pits, fearing that the steering had deteriorated but a quick inspection showed nothing more amiss. He continued at unabated speed to complete the final nine laps needed to gualify. The laps were reeled off and within the time both cars had succeeded in reaching their target. At last the chequered flag signalled the end of the race and the first car to cross the Line was No. 64 with Ted Lund at the wheel, soon to be followed by Johnny Locket in 41, but this was not their true positions. No. 41 had covered 248 laps at an average speed of 86.17 mph to finish 12th overall and 5th in class while 64 had covered 230 laps at 81.97 mph 17th overall and 6th in class. Ted Lund in 64 had been timed at 119.5mph on the Mulsanne straight.

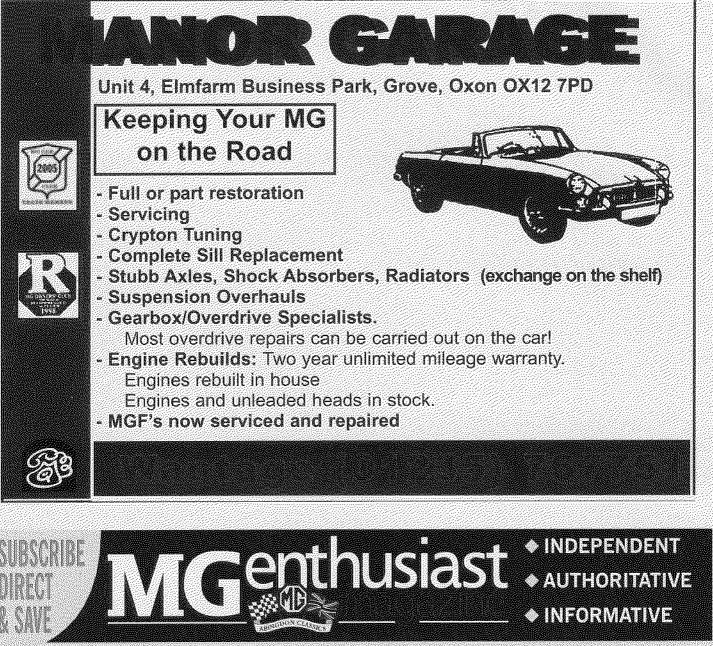
So John Thornley's goal had been achieved, and both cars had qualified for the Biennial Cup. Alas it was a qualification that would not be taken up. The cars were entered for the Ulster TT at Dundrod later in the year, and in this race two racing drivers were killed. The bad reputation that the sport was receiving caused BMC to withdraw MG as a works team from Sportscar Racing. Individual entries were made in subsequent years, whilst the Competition Department went on to achieve great fame in the world of International Rallying.



Autographs

Boian J. obglen 67/4 Bray ~ Q.







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