



DICK JACOBS' M.G. MIDGET



The "dog fights" between **GEORGE PHILLIPS** and **DICK JACOBS**, when both were racing M.G.s, were legendary. Nowadays, "Phil" is one of the world's leading motor-racing photographers, and Dick is famous as an entrant—of racing M.G.s. George Phillips spent a few days in one of the latest of the line of Mill Garage cars, and below is his verdict. Guess who took the photographs!

To all enthusiasts attending various meetings this season, the two immaculate Dick Jacobs M.G. G.T. racers need no introduction. Although these cars had only half a season's racing, they have built for themselves a formidable record. Out of 10 starts they collected first and second in the class no fewer than four times, another first in class when only one car was entered, and in the remainder of the events they have been well placed in more than half the races; neither car has ever failed to finish and all this on less than 1,000 c.c. In an effort to demonstrate to our readers how this is done, I visited the Mill Garage at South Woodford, E.18, recently and borrowed half of the "Jacobs train" for a short time and really had some fun.

First let us find out more about these cars: basically, they are standard M.G. Midgets, so much so that wings, doors and side-panels are all normal body pressings and married to this is a delightful extended hard top and an equally attractive bonnet. This also has received the treatment, and as a result is considerably lowered—not only



THE GUV'NOR—Dick Jacobs.

does this make the car a real good-looker, but the result is very functional. The shape is no happy accident but the result of extensive wind-tunnel tests and, coupled with the M.G. know-how collected over many years in the record-breaking field, it can be said without any doubt that this car is the result of perfect co-operation between two people. On one hand Syd Enever of M.G. who, in my opinion, knows more about getting a quart out of a pint pot than anyone breathing (remember Goldie Gardner's fabulous record-breaking M.G.). On the other, Dick Jacobs, who has a wealth of experience in this type of post-war racing, and when a person with this amount of knowledge makes suggestions to someone like Enever, then the result is never in doubt—it can't be anything but good!

The cars were delivered to Dick at the beginning of June 1962 and, although the factory had co-operated to the limit with Jacobs, they had still to be raced, which, let's face it, is the only test for a

racing car. As things turned out, the boys had not been far out in their calculations and it was found that only minor alterations to the suspension were necessary. These consisted of replacing the ordinary bump rubbers with Aeon rubbers, softening the rear road springs and substituting slightly stiffer Armstrong damper settings, thus improving road-holding enormously, and when a heavier anti-roll bar was fitted to the front end, the results were completely satisfactory and this has never been touched since.

The engine is, of course, the fantastic A-type B.M.C. unit, which is fitted to so many of the Corporation's products, with a bore of 66.9 m.m., plus the permissible .040 in. rebore, and a stroke of 76.2 m.m., the final capacity being 979 c.c. for which a modest b.h.p. of something in the region of 75 is claimed. Naturally, a special camshaft is used and a Weber type 45DCOE feeds fuel through a well-designed inlet manifold into the 10:1 compression head.



As readers well know, this formula adds up to fast, exciting and, what is more, reliable racing, and although this engine is very potent it is quite reasonable in its demands. For example, it will start and run from cold on Champion 63Rs, the plug on which it actually races, Esso Golden fuel will never produce a pink and Castrol R keeps everything whirring merrily round close to the 8,000 r.p.m. mark with no complaints.

Coupled to this by a very efficient Borg and Beck clutch (more of this later) is a delightful close-ratio four-speed gearbox, the ratios of which have been well-chosen. It is a beautiful box to use, and the only criticism one can offer is the same as ever: no synchronesh on bottom. Finally, to the back axle—and here we find a typical Jacobs touch. Ever since I can remember, Dick has always favoured a lower axle ratio than most, and this car is no exception, his choice being 4.875 to 1, that gives 14.4 miles per hour per 1,000 revs. in top—but what is more important, it gives very good acceleration out of bends, etc.

The spare wheel is carried in the rear compartment which, because of the eight-gallon petrol tank being fitted under the floor, gives quite an enormous amount of room behind the seats. The car is completely equipped, all the appropriate gauges, windscreen washers, trafficators, in fact the lot, with the exception of pile carpets. So much for the car, now let's see how it performs.

On taking over the car I must admit I had difficulty in "putting it on" the first time, but it made me appreciate the fabulous Le Mans-type starts Alan Foster made on many occasions. Anyway, in fairness to myself and the M.G., there is quite a bit more of me than of Alan! However, once inside the car the amount of room comes almost as a shock. There is sufficient for two people of my size! The driving seat, and position of steering wheel and pedals is faultless, the seat-back is raked just that right amount to allow the arms to be comfortably extended, visibility is perfect, the narrow screen pillars never encroaching, and the gear lever sticks up just where it should be, positively asking, nay, demanding to be used. Yes indeed, there is no doubt about it, this is a thoroughbred. And now for trial run.

My instructions were; "Don't use the choke at any time and when cold give the accelerator half-a-dozen jabs and start". This recipe was unfailling, even with the racing plugs in. A few minutes in the seat blipping the throttle to warm up, and away: I had been warned that getting into bottom gear from a standing start sometimes presented difficulty; I am now in a position heartily to endorse this observation! However, once in everything was O.K.: a slight depression of the loud pedal, up went the revs. and away we went. I must admit it took me a couple of times to get used to it, but once in the groove the take-off was terrific. The needle of the tach. swung sharply up to "5,500" and I snatched second, the gear slipped in easily and I got a dig in the back. There was the needle again well on the way to 6,000 r.p.m. so I pushed it through to 3rd and this time came a real bang in the back. Because of the close-ratio and the magnificent manner in which the Borg and Beck clutch literally snatched up the drive without the slightest trace of slip, we found that in no time at all 6,000 was back on the clock and at 7,000 top was grabbed—and still there was that beautiful feeling in the back as the Midget was still accelerating. It was difficult to appreciate that a mere 17 seconds elapsed since take-off and now 90 m.p.h. was just about coming up.

Cruising at 5,500 on the open road, it

was possible to hold a conversation, admittedly not at the normal voice level, but the noise from the car was not all that high. However, what noise there was, was quite delightful; a nice busy buzz from the engine, plus another from the gearbox and to round-off, yet another, a pitch or so higher, from the rear-axle. Result: marvellous! O.K., so maybe Grandma might not approve, but not to worry. I don't suppose she'll do many miles in the Midget anyway!

In the short time I had the car, one of its most fascinating features was the top-gear performance. Cruising along the M1 at a steady 5,000 r.p.m. (72 m.p.h.) in top, to overtake another vehicle all that was necessary was to poke your foot down and in 12 seconds flat the car was doing 100 m.p.h. (7,000 r.p.m.).

In obtaining the maximum speed of the car, I let the engine rev. to 5,500 in first, 6,400 in second, and 7,100 in third. I then held it in top until within 50 revs. of my permitted maximum, which represented 111.9 m.p.h. Dick had told me not to exceed 7,800, but I felt that it would have been possible to have gone well over this. The speedometer fitted was geared to its original back-axle ratio and read in excess of 120 m.p.h.—not bad on 979 c.c.!

During my all-too-short ownership of the M.G., I covered many miles on twisty give-and-take roads and one in particular which is a good well-surfaced and, believe it or not, little-used road with plenty of fast bends in it. I really enjoyed myself; I found the handling characteristics just fine, the rack-and-pinion steering was light and very positive with only 2½ turns from lock to lock. It took me just a little time to get used to it.

Strangely enough, it was keeping the car dead straight that I found more difficult than throwing it around corners. The steering was of a neutral characteristic, road shock from the 13 ins. R.S.5 Dunlop-shod wire wheels was sufficiently slight as to say it was non-existent and if one indulged in really enterprising cornering, and hung the tail out as a result, just a flick of the steering wheel was sufficient to bring it under very firm control and make one appreciate how it was possible for Andrew Hedges and Alan Foster to put up such good lap times. Repeated use of the brakes, which, as on all Midgets, are Lockheed discs on the front and drums at the other end, failed to produce any fade, squeak, pull or what have you—and although it took quite a bit of pressure to produce the desired effect, one was never at any time worried that this would not be produced.

Taking the various standing times, it soon became obvious that, at the top end of the scale, the aerodynamic body helped considerably. 0—30 took just 2.2 seconds, 0—50 was 5.8 seconds, whilst 7.9 seconds was enough to reach 60. It was from there on, I think, that the body really started to help, as 70 m.p.h. from a standstill took a mere 10.2 seconds, and zero to 80 occupied 13.0 flat. An additional 5.3 seconds was required to reach 90 m.p.h. from standstill, and the standing ¼-mile worked out at 16.2 seconds. As a matter of interest, the car was handed over to me just as it finished in the "AUTOSPORT" three-hour race and the M.G. Car Club Sprint afterwards—so there was no question of special preparation.

Come with me now down to the Mill Garage, and find out just how Dick runs these two cars. Since the beginning of June, when they were delivered, the sumps have been removed twice for inspection and new big-end bearings were fitted as a precaution. The heads have also been removed twice



THE JACOBS TRAIN—running to schedule at Zandvoort in the World Cup race.

and on each occasion the valve springs were changed, not, you will notice, renewed, as Dick has a system to which he works; he uses three sets of valve springs for the two engines which means that there is always a set resting in the garage, as they are used in rotation. The pistons have been drawn once for inspection but replaced without any attention or replacement of rings. There it is then—nothing spectacular; in fact there isn't even a racing mechanic. The work is carried out by the normal fitters, who work the rest of the time on what the trade affectionately calls bread-and-butter



motor cars. The success formula, then is just plain straightforward routine work, done at the right time and in the proper manner—it's as simple as that!

Readers will no doubt by this time have gathered that I am more than a little enthusiastic about the Midget, and some will no doubt think: "He isn't even going to find something wrong". Well, I have no intention of criticizing just for the sake of so doing and, whilst I appreciate the old saying which tells us "nothing is perfect", I'm not worried—this car was built for a purpose—G.T. racing—and it seems to have done its job pretty well.

Performance Figures

0—30	2.2 secs.
0—50	5.8 "
0—60	7.9 "
0—70	10.2 "
0—80	13.0 "
0—90	18.3 "

Standing quarter-mile 16.2 secs.
Maximum speed 111.9 m.p.h.

