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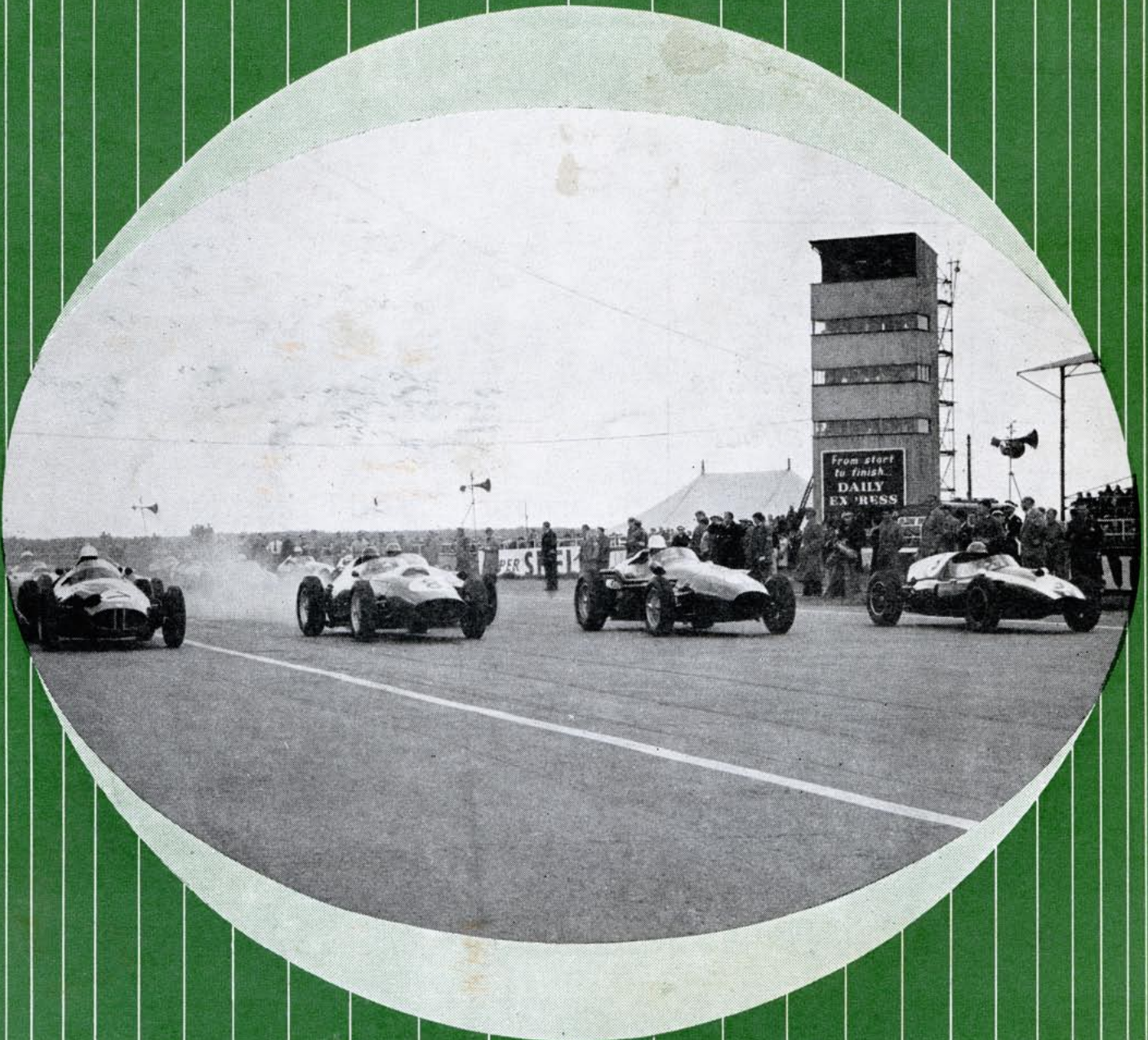
ONE SHILLING AND SIXPENCE

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# MOTOR SPORT

LARGEST CERTIFIED NET SALES

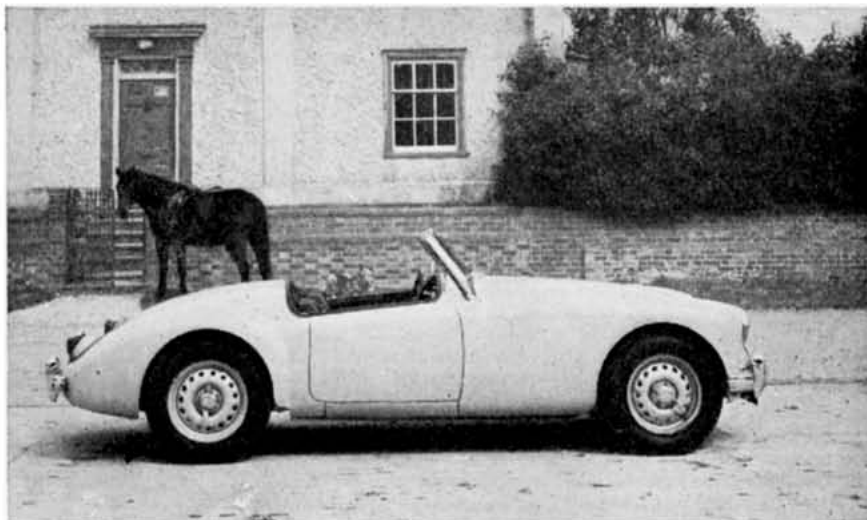
35th YEAR OF PUBLICATION



## THE TWIN-CAM M.G.

**A Very Satisfactory Small Sports Car, Offering a Maximum Speed Comfortably in Excess of 110 m.p.h., Extremely Good Acceleration, Unexpected Docility and Outstanding "Safety Fast" Characteristics, Reinforced by Dunlop Disc Brakes All Round.**

*THE TWIN-CAM M.G. in a peaceful setting. Externally it is indistinguishable from the normal M.G.-A, but wait until you drive it . . . !*



**G**OOD things are worth waiting for and this is the philosophy we adopted in respect of the Twin-Cam M.G., which finally arrived for road-test last month. The weather was ideal for open sports-car motoring and the Twin-Cam M.G. proved complimentary to it. After initial eye-brow raising at the low seating position, a centre rear-view mirror which spoils the driver's line of vision to the near-side, and a very odd seating position soon rectified by folding the hood away properly, when the driver's seat slides back (although not as far as some drivers would wish, for it is impossible to adopt a straight-arm driving position—luckily the small wheel movements required and slight oversteer characteristics make this less important than on many cars), I grew accustomed to lowering myself into this typically British sports car, and it is a sports car which really motors . . . !

When summing-up the normal push-rod M.G.-A in *MOTOR SPORT*, I wrote that "the car is a worthy descendant of the race-bred cars that preceded it, in as much as it possesses impeccable road manners and adequate performance . . ." The Twin-Cam M.G. retains in full measure the safe and pleasant handling qualities of the push-rod version but it was to convert the performance from adequate to potent that the M.G. Car Company enlarged the engine size from 1,489 to 1,588 c.c. and used a twin o.h.c. cylinder head (with suitable bottom-end mods.), developed from an experimental engine introduced for racing over five years ago. The main purpose of the Twin-Cam M.G. is competition work and it was added to the M.G. range with an eye on the dollar market. However, having used one with great enjoyment for fast pleasure motoring in England I see no reason why this particular M.G. shouldn't become very popular here as a normal sports model, particularly as the engine, if noisy, is splendidly docile and disc brakes all round look after the increase in maximum speed and the rapidity with which the scenery begins to rush by when the accelerator is depressed.

Admittedly a good deal of "teething trouble" has been experienced with this production M.G. twin o.h.c. engine but let us hope this has been overcome; certainly the car I drove for more than 470 miles never faltered and oil-pressure and water temperature remained steady throughout the test, which included taking performance figures. The engine is distinctly audible, which quite apart from the fine weather, made me reluctant to put the hood up; the coupé version must be almost unendurable! And oil consumption is, to put it mildly, excessive.

In general conception the Twin-Cam M.G. two-seater follows the specification and equipment of the well-known M.G.-A, so we need not deal with it in great detail.

The seats are separate bucket-type with folding squabs, upholstered in real soft leather. They are very good, if not ideal, seats, but set low in the car, with only the off-side front wing visible to an average-height driver. Mounting the mirror directly on the scuttle, deleting the stalk, might help visibility.

The pedals are normally placed and while it is not possible to "heel-and-toe," brake and accelerator can be operated together with the ball of the right foot. The clutch foot has to be parked under rather than beside the pedal and the foot-dipper button is rather inaccessible. Clutch and throttle action are light and well-constituted. An adjustable steering column is available; normally the wheel is closer to the fascia than tall drivers may like.

A very rigid short central gear-lever controls the usual B-series B.M.C. gearbox but what is an impeccable change on other B.M.C. small cars and earlier M.G.s is less pleasant on the modern M.G., because the lever is stiff to operate and has short lateral and transverse movements, while the synchromesh is beaten all too easily when snap gear changes are attempted. Taken calmly this is a nice gear change but in the heat of a race or when making snap selection of a lower ratio the driver suffers. The reverse gear-spring is too weak, so that this ratio can be selected inadvertently when wishing to change rapidly from third to second gear. The lever could hardly "fall to hand" better, however, its knob being extremely close to the steering wheel. It would hardly be a B.M.C. box were some difficulty not experienced in getting into bottom gear from a standstill!

The fly-off hand-brake, which is locked on by depressing the knob, has for long been an excellent M.G. feature. On the Twin-Cam it lies horizontally close against the propeller-shaft-tunnel, but it is quite convenient to use and holds the car securely.

The four spring-spokes of the steering wheel form a narrow "X," giving full visibility of speedometer and rev.-counter. These are Jaeger instruments, the speedometer incorporating total and trip-with-decimal mileometers. The needles move in the same plane and are commendably steady. The rev.-counter has a yellow segment from 6,500 to 7,000 r.p.m., a red segment from 7,000 to 7,500 r.p.m., which provides a foretaste of the performance of this Twin-Cam M.G.

The rest of the instrumentation on the leather-covered fascia is simple but effective, comprising oil-pressure gauge (reading 20 lb./sq. in. of Castrol XL at idling r.p.m., 60 lb./sq. in. at fast cruising speeds), water thermometer (steady at 70 deg. C., rising only slightly during acceleration tests), and a sensibly pessimistic petrol gauge. The ignition key is separate from the starter knob and similar (lettered) knobs look after the usual services. Warning lamps are confined to those for dynamo-charge, lamps full-beam and flashers, the last-named warning winking at the extreme right of the fascia, where steering wheel rim and driver's right fist usually obscure it, perhaps providentially. In any case, the tab switch for the indicators, conveniently placed for the right hand, returns to the vertical when the flashers have self-cancelled. The horn-button is recessed in the centre of the fascia, which is reasonably convenient. Below are the controls for heater/demister/ventilator. The map-reading lamp and switch, on the passenger's side of the fascia, is an excellent feature inherited from the M.G.-A, as are the capacious, roomy, rigid door-pockets, well-strutted windscreen mounted rather far from the occupants (it detaches for racing—gone are the days when by unscrewing a couple of wing nuts you could lower the screen flat and have fun in the fresh air, wearing helmet and goggles!), doors devoid of exterior handles and opened by "pulling a string" within the door pockets, and the rest of the body details, including a boot considerably obstructed by the spare wheel. I like the easy-to-clean ventilated steel disc wheels, of centre-lock type.

New-type rigid Perspex sidescreens, with sliding panels to enable the door-catch "pulls" to be reached with the hood up, prevent side-draughts. The hood, furled, stows completely out of sight but a tonneau cover would be a welcome addition. For night driving the Lucas headlamps are very effective.

On the road the Twin-Cam M.G. is an outstanding motor car. The engine peaks at 6,700 r.p.m. but runs readily to 7,000 r.p.m. and will go "into the red" as easily as a bank balance if the driver is casual. Using maximum or near-maximum revs. in the gears, really effective acceleration can be achieved, as the figures in the data panel confirm. This is acceleration of the kind that makes passing slow-moving vehicles a very momentary, and consequently, safe, manoeuvre. The engine is smooth, and responds effectively, right up to 7,000 r.p.m. and crankshaft speeds around 6,000 r.p.m. will be employed habitually by fast drivers. On the other hand, it is possible to use revs. more of the M.G.-A order, i.e., 4,500-5,500 r.p.m. and still get very quickly to 70 m.p.h., while top gear pick-up between 50 and 80 m.p.h. is also extremely useful.

The remarkable thing is that this inexpensive production engine is running at speeds regarded as high in the racing world not so long ago, yet it is ridiculously docile as well as potent. It will idle at 500 r.p.m. without a trace of plug-oiling or "hunting" and will open up in the 4.3 to 1 top gear from not very much higher speeds—not that anyone will often so abuse it. It is necessary to use 100-octane petrol, when no "pinkings" is experienced; running-on occurred only after some rather intense performance testing—never after normal running. There is noise from the valve gear and a faint ring from the camshafts drive but the exhaust note is not obtrusive from inside the car, although a road-side observer might recognise the Twin-Cam by its tail-pipe snarl—the only other way is by the insignia on the tail-panel.

The acceleration, to revert to this outstanding aspect of the Twin-Cam M.G. is, very roughly, twice as effective as that of a normal M.G.-A. As to speed, I believe the aim was 120 m.p.h. but normally Twin-Cam models cannot exceed 114/115 m.p.h., which is about 12 m.p.h. faster than the maximum speed of the M.G.-A coupé. Moreover, although 80 and 90 m.p.h. comes up readily enough on the road, the former speed being attainable in  $\frac{1}{4}$ -of-a-mile from a standing start, a mile or more of clear road is essential before 6,000 r.p.m. (or 103.8 m.p.h.) is obtainable in top gear. Incidentally, the test-car had a speedometer that was 4 per cent. fast at 60 m.p.h.,  $3\frac{1}{2}$  per cent. fast at 80 m.p.h.

This brings us to the question of maxima in the gears. Going up to 7,000 r.p.m. the genuine speeds are 33, 55 and 88 m.p.h.; if you ponder on this you will see how these highly creditable speeds in the indirect gears assist acceleration. It is very pleasant to be able to change down from top to third at over 80 m.p.h.!

The road-holding and roll-free cornering characteristics are fully in keeping with the performance.

The rack and pinion steering is accurate, free from lost motion, and has sensible castor-return action. There is mild kick-back of the wheel in the driver's hands, accentuated on bad by-roads, when scuttle-shake also intrudes. In spite of criticism of this form of steering for fast cars it suits the M.G. admirably and does not feel so low geared as  $2\frac{3}{4}$  turns, lock to lock suggest.

The steering, indeed, is quite exceptionally good; it is absolutely positive and the car responds immediately to any movement with a rapidity which is most unusual. A trace of stiffness is presumably due to the friction damper in the rack-and-pinion gear, but the steering remains light in all conditions, even when throwing the car fast into hairpin bends. The steering characteristic is quite neutral at normal cornering speeds, and the intended line on corners can be held with unusual precision, even on rough surfaces. Pressed beyond this, a gradual oversteer develops and the car starts to break away at the back in a very gentle and completely controllable way. Use of the throttle brings the tail round more quickly and can contribute to very rapid progress along sharply winding roads; this effect is appreciably more noticeable on right hand than on left-hand corners, probably because of weight transfer due to torque-reaction. For competition purposes, it is probable that many experienced drivers would prefer to delay the onset of oversteer to still higher cornering speeds, and the addition of a front anti-roll bar might then be indicated.

The Dunlop RS 4 tyres exhibit a considerable amount of squeal at the low pressures recommended for normal driving, and are not entirely silent even at the 22/24 lb./sq. in. recommended for fast driving. At 23 front, 26 rear, squeal was absent until the breakaway was approached, although a certain amount of harshness was then noticeable in the ride, together with occasional traces of wheelspin when accelerating hard on bumpy roads.

The combination of fairly soft front with much harder rear suspension, and heavy damping all round, gives an extremely pleasant ride, firm, almost to the point of harshness with the higher tyre pressures, but unusually flat. This lack of pitching, together with the lack of roll, produces a feeling of great stability. There is a certain amount of mild scuttle shake and some body rattles, particularly

### THE TWIN-CAM M.G. TWO-SEATER

**Engine:** Four cylinders, 75.4 by 89 mm. (1,588 c.c.). Inclined overhead valves operated by twin overhead camshafts. 9.9 to 1 compression-ratio. 108 b.h.p. (net) at 6,700 r.p.m.

**Gear ratios:** First, 15.6 to 1; second, 9.5 to 1; third, 5.9 to 1; top, 4.3 to 1.

**Tyres:** 5.90 by 15 Dunlop Road Speed RS 4 on centre-lock steel disc wheels.

**Weight:** 0 tons 19 cwt. 1 qr., ready for the road, without occupants, but with rather less than two gallons of petrol.

**Steering-ratios:**  $2\frac{3}{4}$  turns, lock-to-lock.

**Full capacity:** Ten gallons (range approximately 240 miles).

**Wheelbase:** 7 ft. 10 in.

**Track:** Front, 3 ft. 11 $\frac{1}{2}$  in.; rear, 4 ft. 0 $\frac{1}{2}$  in.

**Dimensions:** 13 ft. by 4 ft. 10 in. by 4 ft. 2 in. (high—hood up).

**Price:** £843 (£1,195 7s. 6d. inclusive of purchase tax).

**Makers:** M.G. Car Company, Ltd., Abingdon-on-Thames, Berkshire, England.

### PERFORMANCE DATA

**Speeds in gears (after speedometer correction):**

First	...	...	33 m.p.h.
Second	...	...	55 m.p.h.
Third	...	...	88 m.p.h.

**Acceleration:**

0-50 m.p.h....	...	8.5 sec. ( 8.5 sec.)
0-60 m.p.h....	...	12.4 sec. (12.4 sec.)
0-70 m.p.h....	...	16.7 sec. (17.0 sec.)
0-80 m.p.h....	...	22.3 sec. (22.8 sec.)
Standing-start $\frac{1}{4}$ mile	...	18.5 sec. (18.5 sec.)

(Figures in parentheses are mean of runs in both directions)

from the clips holding the sidescreens to the tops of the windscreen pillars.

The Dunlop 10 $\frac{3}{4}$ -in. disc brakes all round are contributory to the car's admirable safe-handling qualities. As is usual with non-servo applied disc brakes, considerable pedal pressure is required for low-speed stops but from high speeds retardation is extremely effective for light pedal pressures, it being possible to lock the wheels in an emergency. Normally the very impressive acceleration of the Twin-Cam M.G. leaves "incidents" well behind but it is comforting to know that if an approaching driver does something foolish which interferes with one's intentions these very powerful fade-free brakes are at one's disposal.

Taken all round, the Twin-Cam M.G. is a most enjoyable fast car. It costs £255 more than the M.G.-A (inclusive of p.t.) and for this the purchaser gets not only an engine giving 108 b.h.p., an increase of 36, but disc brakes, knock-off wheels and Road Speed tyres in addition.

What are the penalties? Noise, when the car is closed up against the weather. Inaccessibility of ignition distributor, which is buried under the heater piping, and of the dip-stick. The figure of 24.3 m.p.g. of petrol obtained in fast road driving, using peak revs. frequently in the indirect gears, cannot be regarded as excessive, but on rallies this would rise to some 20 m.p.g. The tank, holding ten gallons, thus gives the rather cramped range of approximately 240 miles in normal motoring and is ludicrously small for serious competition work of the long-distance variety. Excessive oil consumption is the real short-coming of this Twin-Cam M.G.—nearly half-a-gallon was consumed in 400 miles! The dip-stick is extremely difficult to replace and would seem quite impossible for making the very vital checks on sump level during club races. Presumably serious competition drivers arrange something better than Abingdon has devised for normal customers, at the same time adding a larger fuel tank.

These matters apart, the Twin-Cam M.G. is outstanding by reason of its very considerable performance and particularly in respect of its impeccable handling qualities. It is a handsome car, too. It thus very worthily maintains the reputation of this famous breed of British sports cars.—W. B.

### FLYING DISPLAY AT CARDIFF

Those who like to see at least one Air Display a year should note that the Welsh International Air Rally will be held at Rhosce Airport, Cardiff, on July 13th/14th, with an air display from 3.30 to 5.30 p.m. on the Saturday, including racing, aerobatics, parachute jumping, pleasure flying—and a display by the V.S.C.C. Details from A. Wakefield, Glamorgan Flying Club, 40, Mocken Place, Cardiff, Glamorgan.

The Bentley D.C. will rally to the Montagu Motor Museum on June 28th.