FORMULA ONE RACING

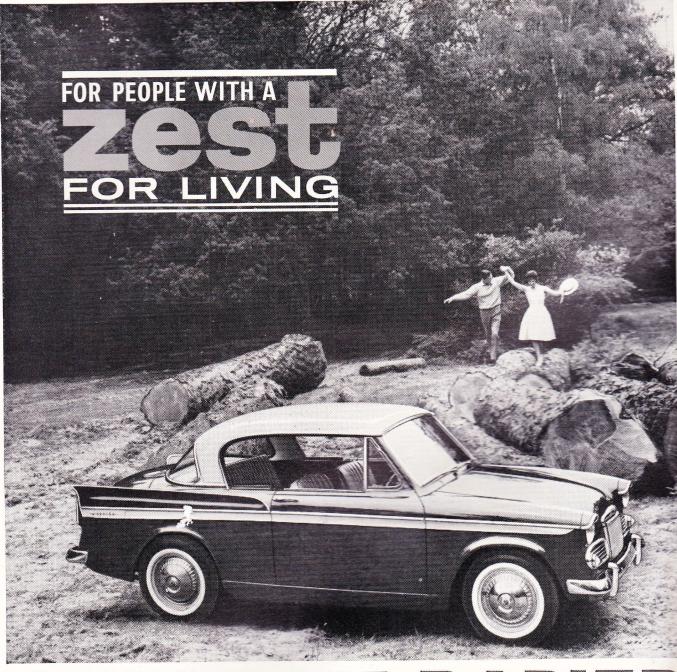
AUTOS MOTOR SPORTING WEEKLY ANUARY 11, 1963

AUTOSPORT

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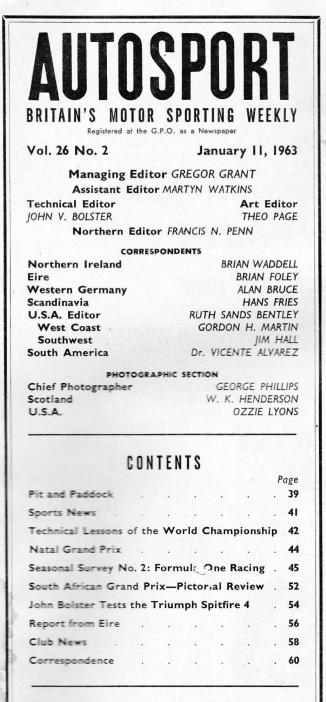


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#### EDITORIAL

#### WINTER DRIVING

THE recent spell of near-Arctic weather has emphasized the need for a more sensible approach to driving in general. Quite candidly, when snow and ice hit the roads of Great Britain chaos is the result. Local authorities are quite unprepared and woefully equipped to deal with any emergencies. Modern snow-clearing equipment is often totally lacking, with snow-ploughs attached to ordinary trucks which invariably lack the necessary traction to operate efficiently. Road-users pay quite enough in taxation to be entitled to the sort of equipment which is to be found in every Continental country, and the first duty of those responsible is to ensure that our main and communicating roads are kept clear. When it comes to driving under wintry conditions, the majority of roadusers have very little idea of how to overcome the hazards of slippery roads. All too often blockages occur through drivers being completely unable to get away again after having stopped. Throttle-blipping leads to spinning wheels, and it is pathetic to behold the efforts of some people to move away from a standstill. One feels that big instructional organizations such as the British School of Motoring could have access to certain artificial ice rinks, and lay on courses designed to assist people to understand the problems of winter driving. There is no question of teaching to rally standards, but rather attempts to apply common sense to driving methods. If people will use their vehicles in snow and ice they must be taught how best to tackle conditions which are apt to occur any time between the months of November and April. In France and other Continental countries it is rare to see drivers attempting to get away with madly spinning wheels. Familiarity with icy roads has impressed on them the need for "doucement." In Great Britain few road-users are conditioned to sudden changes in the weather, and one sees hundreds of cars, abandoned by the roadside, which could have reached their destination had their owners had any idea of maintaining traction. Obviously deep drifts and heavy surface falls will halt the majority of wheeled vehicles, but in many cases the first sideways slip on ice gives rise to near-panic and resultant traffic chaos. The blame cannot rest with the drivers themselves, for they are not educated sufficiently to appreciate the entirely different behaviour of vehicles on icy roads. The driving test makes no allowance for seasonal hazards, and the normal driver automatically applies the brakes, not quite realizing that adhesion has almost disappeared. AUTOSPORT suggests that, through the medium of television, and with the co-operation of the B.S.M. and others, valuable instructional data could be imparted, giving the basic procedures to adopt when faced with adverse weather conditions.

#### -OUR COVER PICTURE-

THIS ISSUE of AUTOSPORT contains our annual Seasonal Survey of Formula One racing, and it is noticeable that more American drivers are competing in grandes epreuves. A pair of Californians, Richie Ginther (B.R.M.) and Dan Gurney (Porsche), negotiate the Melling Crossing during last year's British Grand Prix, held on a beautiful hot July day at Aintree. Photo: Francis Penn

## Over the last 4 years more World Championship Grand Prix races have been won on ESSO EXTERA MOTOR OIL than on any other brand of oil



This is exactly the same oil that you can buy at your local garage

PAT MOSS is at present on a Monte recce with navigator Elma Lewsey who will only accompany Pat on the rally itself if they both feel confident after the recce.

THE Exeter Trial scheduled for last weekend has been postponed until mid-February, because of weather conditions. Last Saturday's Television Trophy Trial was cancelled for the same reason.

#### THREE EUROPEAN **RALLY CHAMPIONSHIPS IN 1963**

 $I^{\rm T}$  has been decided by the C.S.I. of the F.I.A. that there will be three "Rally Championships" for 1963. Whereas, in previous years, there has been only one champion (last year, Eugen Böhringer) and one champion constructor (the maker of the champion's car-Mercedes in 1962), no fewer than three manufacturers will be able to advertise a "Rally Championship victory" at the end of this year!

The three championships will be the Rally Trophy, the Rally Cup, and the F.I.A. Cup. Seven rallies will count for the first of these, and are as follows: Monte Carlo, Tulip, Sardinia, Midnight Sun, the Alpine, the German and Geneva. All these previously counted for the former Rally Championship except for the Sardinian event. Capacity classes for all rallies will be up to 700 c.c.; 701-850 c.c.; 851-1,000 c.c.; 1,001-1,300 c.c.; 1,301-1,600 c.c.; 1,601-2,000 c.c.; 2,001-3,000 c.c. and over 3,000 c.c. in the Touring category; in the G.T. section classes will be up to 1,000 c.c.; 1,001-1 300 c.c.; 1,301-1,600 c.c.; 1,601-2,500 c.c. and over 2,500 c.c. Points will be awarded on the basis of 7, 5 and 3 to the first three in the general classification of each category, and for the first three in each capacity class in which at least seven cars have started. If less than seven cars start, no class points will be scored, but if eight cars start, the fourth placed car in that class will score two points, and if ten cars start, the fifth-placed will score one.

These points will be multiplied by a coefficient which will vary according to the number of retirements in the course of the event, and which is arrived at by the follow-ing formula: 1+D-C, where D is the num-

ber of starters and C the number of finishers. The Rally Trophy will be awarded to the driver who has the greatest number of points based on his best five performances: the Rally Cup will go the next-placed driver, of the opposite category. Thus, if the Trophy is won by the driver of a Touring car, the Cup will go to the best G.T. driver. It is feasible, therefore, that two different constructors will receive awards.

Finally, there is the F.I.A. Cup, for which points are scored quite independently of the other two competitions, and which will go to the competitor who scores the highest number of points in the rallies which formerly counted for the old European Championship; that is to say, in the seven Trophy rallies, except for the Sardinian event, plus the Acropolis, the Thousand Lakes, the Polish, the R.A.C. and the Liège

This should appeal initially to competing manufacturers, who will now have three chances of scoring success in one of the competitions. But it would seem that, with no outright "rally champion", the importance of such success is considerably diminished. However, we shall see. It is significant, though, that a leading French sporting newspaper has commented darkly about "killing the goose that lays the golden egg".

#### PIT and PADI

JAGUAR CARS, LTD., has been granted the Royal Warrant of Appointment as motor car manufactures by Her Majesty Queen Elizabeth, the Queen Mother.

MARCOS CARS, LTD., are now installed in their new 10,000 sq. ft. factory at Green-land Mills, Bradford-on-Avon, Wiltshire, where the manufacture of the Marcos G.T. will be carried on.

#### AUSTRALIAN TOURIST TROPHY

THE 1962 Tourist Trophy for Sports Cars saw the first appearance of the new Australian built rear-engined Elfin Sports, which appeared in prototype form in the hands of David McKay. Based on the successful Formula Junior Elfins, this car was fitted with an 1,100 c.c. Cosworth-Ford motor. At present it has drum brakes, but discs are planned for production models.

The race, run this year at Mallala in South Australia, was won at a canter by this year's C.A.M.S. Gold Star winner, Bib Stillwell. In the absence of his main rival, Frank Matich, whose usual mount is an ex-U.D.T.-Laystall Lotus 19, Stillwell took his 2.5-litre Cooper Monaco past the flag 94 seconds ahead of David McKay in the new Elfin. Following a protest, McKay was disqualified for receiving outside assistance when he restarted after a spin. Poor McKay has little luck at Mallala, for just over a year ago he crossed the line first in the Australian Grand Prix here, only to be penalized a minute for jumping the start. This dropped him back to third.

Bob Jane, the Australian Touring Car Champion, whom British followers will remember for his spirited driving of a Jaguar saloon prior to the British Grand Prix, finished 20 seconds behind McKay in his now rather dated 300S Maserati. PETER D. BAKALOR.

Results 1, B. S. Stillwell (Cooper Monaco); 2, R. Jane (Maserati 300S); 3, J. Newmarch (Ricordian).

#### SEBRING-1963

THE International Sebring 12 Hours' Race will take place on 23rd March. Despite rumours of over 2-litres only, the event will be for G.T. prototypes, and Divisions II and III G.T. cars, i.e. over 1,000 c.c. Division I (up to 1,000 c.c.) will compete in a three hours' race on 22nd March.

On 21st March there will be a Formula Junior race, and on the morning of 22nd March, a two hours' event for improved series saloon cars.

Practice for all categories starts on Wednesday, 20th March. The F.I.A. Minimum Weight scales will apply for both three hours' and 12 hours' races. These are, of course:

f course: Class 1 (up to 400 c.c.), 594 lb. Class 2 (401-500 c.c.), 682 lb. Class 3 (501-600 c.c.), 726 lb. Classes 4, 5, 6 and 7 (601-1,150 c.c.), 836 lb. Classes 8 (1,151-1,300 c.c.), 946 lb. Classes 9 and 10 (1,301-2,000 c.c.), 1,254 lb. Classes 11 and 12 (2,001-3,000 c.c.), 1,925 lb. Classes 13 and 14 (3,001-5,000 c.c.), 1,925 lb.

#### SURTEES WINS IN NEW ZEALAND

DRIVING the four-cylinder, 2.7-litre version of the Lola-Climax, John Surtees won the New Zealand Grand Prix for Bowmaker-Lola, on the Pukekohe circuit near Auckland. His average speed for the 75 laps (165.5 miles) was 84 m.p.h. Into second and third places respectively came the New Zealand drivers, Angus Hyslop and Jim Palmer in their Cooper-Climaxes.

Apart from Surtees, it was not a good ay for the visitors. World Champion day for the visitors. Graham Hill was eliminated on the last lap, when the gearbox failed on the four-wheel-drive 2.5-litre Ferguson-Climax. Jack Brabham had a stone through the radiator of his Brabham-Climax after 32 laps, whilst Tony Maggs in the second Bowmaker-Lola survived just three laps.

Bruce McLaren (Cooper-Climax), leading John Surtees by 3.5 seconds, abandoned on the 20th lap with a split petrol tank. He set up a fastest lap at over 89 m.p.h. Of the 17 starters, only seven were still

running at the end.

This is the first overseas success for Lola since the marque entered Grand Prix racing. It was, of course, a formule libre event.

Innes Ireland will drive the Ferguson in the remaining New Zealand races, for Graham Hill is returning to U.K. for a tonsils operation this week.

#### **B.R.M. CELEBRATION**

Two bus-loads of B.R.M. technicians and mechanics, with wives and girl friends, were amongst the guests at a house-party given last Saturday by Louis and Jean Stanly. Tony Rudd brought along the enormous silver challenge trophy won at East London by Graham Hill.

#### **1963 GRADED DRIVERS**

A SURPRISINGLY small number of drivers have been listed by the F.I.A. as Graded Drivers for 1963. They are, of course, not allowed to compete in Formula Junior events or in national events except in their own country.

They are: Giancarlo Baghetti (Italy); Lorenzo Bandini (Italy); Joakim Bonnier (Sweden); Jack Brabham (Australia); Jim Clark (Britain); Olivier Gendebien (Bel-gium); Richie Ginther (U.S.A.); Carel Godin de Beaufort (Holland); Masten Gregory (U.S.A.); Dan Gurney (U.S.A.); Carber Uill (U.S.A.); Dah Hill (U.S.A.); Graham Hill (Britain); Phil Hill (U.S.A.); Bruce McLaren (New Zealand); Willy Mairesse (Belgium); Tony Maggs (South Africa); John Surtees (Britain); Trevor Taylor (Britain).

Possibly other names will be added later to prevent such people as Moss, Ireland and Salvadori from "cleaning up" in Formula Junior!

#### **ANTICIPATING FORMULA 2**

A MEETING was held last month at the R.A.C. and representatives of the B.A.R.C., the B.R.D.C. and the B.R.S.C.C. discussed with some manufacturers the likely availability of competitors in order that drafts for race meetings could be planned.

It was agreed that all three clubs would stage events for cars complying with the 1964 Formula 2 this coming season, though in the early part of the season when not enough cars would be available, they will be combined with events for Formula Junior cars. Graded drivers will not be allowed to drive a Formula 2 car unless the race is the main feature of an international meeting.

Sports car events will be run to the following classes: up to 1,150 c.c., 1,151-2,000 c.c. and over 2,000 c.c. Grand Touring cars will be divided into four categories: up to 1,150 c.c., 1,151-1,600 c.c., 1,601-2,500 c.c. and over 2,500 c.c. and Touring cars: up to 1,300 c.c., 1,301-2,000 c.c., 2,001-3,000 c.c. and over 3,000 c.c.

The R.A.C. are to appoint a special team to check the eligibility of cars competing in events run under Appendix C and Appendix J at international and national open race meetings.



## 6 cylinders for £735! And 6 more reasons for buying the Triumph Vitesse

**SIX-CYLINDER ENGINE** The Vitesse gets its steam from a 1596 cc six-cylinder motor. All other cars of its price have four-cylinder units. What's so clever about six? Smoothness, silence, iron-hand-in-velvet-glove strength. You've probably noticed these qualities in big cars. But the Vitesse weighs a mere 17 cwt! Result: light-car nippiness, limousine silkiness, gran turismo vivacity (top speed of 90 plus). Now for six more virtues.

**1 COMFORT IN THE GRAND MANNER** All the seats are deeply upholstered. The driver's is adjustable to 72 positions (one of them is yours). Thick carpeting stretches from wall to wall. The facia and door cappings are of mellow walnut. You could take an inventory of the built-in fittings (twin sun visors, heater/demister, screenwashers, etc. etc.). Visibility note: slim window pillars allow a 93% all-round view.

**2** FRONT-WHEEL DISC BRAKES A car as energetic as the Vitesse needs brakes that bring it quickly, surely, safely to heel in every weather. It's got them.

**3** FOUR-EYE NIGHT VISION A new slant on night driving. Good to look at. Wonderful to see with.

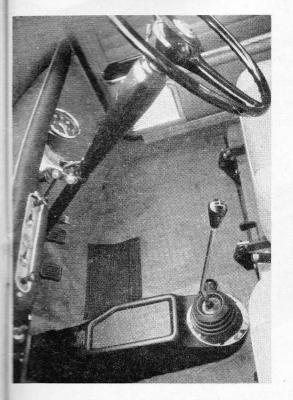
**4 ALL-ROUND INDEPENDENT SUSPENSION** Each wheel on the Vitesse is independently sprung, free to find its own level without disturbing its partners. This means that the Vitesse holds the road on corners better than most cars do on the straight. And makes even the roughest roads feel suave and civilised.

**5** 25-FT TURNING CIRCLE The Vitesse can right-about face where other cars have to do three-pointers. It can eel into parking spaces just 3 ft more than its length. No struggling with the wheel, either.

**6** ONE SERVICE IN 3,000 MILES Apart from checking oil, water, tyres and battery, you can forget about the Vitesse's internal economy for 3,000 miles. Even then, there's not much to do.

**TRY IT!** Space here doesn't permit a fullscale appreciation of the Vitesse. But a trial drive does!





#### THE S.P.Q.R. MAJOR CHANGE FOR THE MINI-MINOR

THE original S.P.Q.R. Major Change was the first remote control gear lever which was offered for the Mini-Minor. In its earliest form it was satisfactory when correctly installed, but was rather too dependent on exact adjustment.

A new and entirely redesigned Major Change is now available. This has many advantages over the earlier model, for the whole theory of its working has been changed. In brief, the main member is an aluminium housing which stands upon a pair of integral lugs. These are pivoted on the central floor tunnel, allowing the whole casting to move sideways for the "through-the-gate" movement. The gear lever itself is slotted into the rear of this housing, with freedom to move fore and aft.

A steel mainshaft is coupled to the gear lever by an actuating link. The main aluminium housing is bored to receive it, and it transmits the fore and aft movement, via the post link, to the gear stem which

#### RACING CAR SHOW

AT the Racing Car Show, which opens on 25th January, there are to be three central car displays: Historic Racing Cars, Grand Prix Contenders and Sports Car Parade. The "old timers" section com-prises a 1925 4-litre V12 Sunbeam, a 1946 4CL Maserati, a 1922 Delage (Nigel Arnold Forster's recently restored car), a Type 37 Bugatti and, it is hoped, an E.R.A. and the Thinwall Special Ferrari.

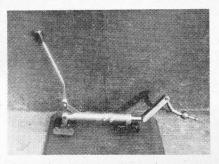
Grand Prix Contenders should live up to its title if the unconfirmed exhibits of an 8-cylinder Porsche and a V6 Ferrari appear. These would join a V8 B.R.M., a Lotus 25, a Cooper-Climax, a Brabham-Climax and a Bowmaker-Lola-Climax—in fact, all of last season's British Grand Prix contenders. Contenders of yesterday are also on show: these are a 16-cylinder B.R.M., a 1958 Vanwall and a Mercedes-Benz W196.

Sports Cars to be on show are Peter



replaces the standard lever. Thus, a change from first to second, for example, is achieved by pulling the lever back, which draws the mainshaft with it. Second to third, on the other hand, combines a forward movement of the lever and mainshaft with a lateral rocking movement of the whole assembly. It will be realized that opportunities for lost motion to develop are greatly reduced by this simplification of the mechanism.

I had an opportunity to test the Major Change on two Mini-Minors. One of these had the earlier gearbox, with weak synchromesh, and it was provided with a Major



Change that allowed a fairly long movement of the lever. The other was the latest type of Mini, for which a gear lever giving a shorter movement is found to be best. This is the standard lever for new cars.

I found that both changes worked well. I preferred the model with the shorter movement, for I dislike a very long travel on the lever. As this model will be supplied for all but the earlier cars, I am well content. Both Major Changes were entirely free from any rattle and they did not transmit the noise or vibration of the gearbox. Owners of Cooper-Minis will know what I mean!

The very many difficulties of fitting a remote control lever to the Mini-Minor seem to have been largely overcome by S.P.Q.R. Engineering. The Major Change seems to be very well made and the dis-advantages of the earlier model have been cleverly eliminated. The manufacturers can be found at Castle Road, Rowlands Castle, Hants, and the price of the complete outfit. with all instructions, drawings and templates, is  $\pounds 13$  9s.  $\pounds 16$  9s. 6d. (de Luxe). 6d. (standard) or

JOHN V. BOLSTER.

Sutcliffe's D-type Jaguar, an Aston Martin DB3S, a 4½-litre Bentley, a Ferrari Testa Rossa, the chassis of the late Mike Hawthorn's 1936 Riley 11-litre T.T. Sprite, Phil Scragg's hill-climbing Lister-Jaguar and Swiss Charles Vögele's Lotus 19. In the B.R.S.C.C. Reception Centre the

Ford Anglia which recently broke six international class G records will be on show, while examples of the V8 B.R.M. and Coventry Climax Grand Prix engines will also be on display at the Racing Car Show.

THE British International Rallies Club have arranged a special low fare flight to Monaco for the Monte Carlo Rally, or-ganized by John Webb Air Services, Ltd., on their behalf. The aircraft will leave Gatwick Airport on Sunday, 20th January, at 13.00 hours, arriving Nice Airport at 17.30 hours (local times), and the return flight leaves Nice Airport on Sunday, 27th January, at 12.00 hours and arrives Gatwick Airport at 14.30 hours (local times). The fare of £30 10s. includes coach transport to and from Nice Airport and the Metropole Hotel, Monaco.

THE annual Dinner-Dance of the Midland Centre of the British Racing Mechanics Club is to be held once more at The Hotel Leofric, Coventry, on 15th February, starting at 7.30 p.m. Members single tickets are priced £1 each, members and lady tickets  $\pounds 1$  17s. 6d. and guest tickets £1 17s. 6d. and they are obtainable from B. J. Sutton, 257 Holbrook Lane, Holbrook, Coventry.

#### MOTORISTS' FAIR

THE second Motorists' Fair will be opened I in Bingley Hall, Birmingham, on Fri-day, 18th January, by Air Vice-Marshal D. C. T. (Pathfinder) Bennett, of Fair-thorpe, Ltd.

The Exhibition will include all types of accessories and equipment. Motoring clubs are again taking an active part in the exhibition and more than 20 will have stands covering all aspects of motoring. There will be Karts, Hot Rods and other sporting and racing cars with a special exhibit organized by the Midland Centre of the Seven-Fifty Motor Club entitled "A Cavalcade of Speed"

#### THE FAST LADY

WITH the main cast comprising James Robertson Justice, Leslie Phillips, Stanley Baxter and Kathleen Harrison, one might have been excused for thinking that this film should be pretty amusing. Un-fortunately, it is not. The story is about a bumbling young Scotsman who tries to win the hand of a beautiful girl with the aid of a Vintage Bentley. After severely mis-using the car (which should bring the Rank Organisation some fan mail from the B.D.C.) the hero (?), Stanley Baxter, finally wins through.

The dialogue is trite to say the least, and the plot is as predictable as a calendar and not quite as funny. The film's one saving grace comes in the shape (and how) of a girl called Julie Christie, who is delicious. My Sprite is hardly a Bentley, but I will take Miss Christie to a race meeting (or anywhere else for that matter) with the greatest of pleasure!

#### THE ASSOCIATION OF MOTOR **RACING CIRCUIT OWNERS**

THE Association of Motor Racing Circuit Owners was formed recently and first members are Aintree, Brands Hatch, Crystal Palace, Goodwood, Mallory Park, Oulton Park, Silverstone and Snetterton.

The objects of the Association are to consider and protect the individual, collective and mutual interests of its members in connection with the promotion of motor car, motor cycle or motor and motor cycle racing; to co-operate with any other parties or organizations in the promotion of motor car, motor cycle or motor car and motor cycle race meetings; and to do all such other things as are incidental to or conducive to the attainment of the foregoing objects.

In the promotion of motor car racing and motor cycle racing, there are a number of problems common to all circuit proprietors and it is felt that the new Association will enable these matters to be dealt with more uniformly and more expedi-tiously, and at the same time leave some freedom of action to the individual proprietors. The secretary is H. J. Morgan, late of the B.A.R.C.

It is the work that goes on in the drawing office and the workshop that makes the whole dramatic spectacle possible ....

#### JOHN BOLSTER discusses

## TECHNICAL LESSONS OF THE WORLD CHAMPIONSHIP

DURING recent months most of the discussion on the World Championship has centred round personalities. This, of course, is understandable, and I would be the first to admit the importance of drivers, team managers, and the mechanics in the pits. Nevertheless, it is the work that goes on in the drawing office and the workshop that makes the whole dramatic spectacle possible, and that is the reason for this short technical appraisal.

The Championship became a duel between British drivers in British cars, and the work they have done for British prestige will be of immense benefit to our export trade and hence to our national economy. It is not too much to say that our absolute leadership in engineering has been demonstrated, but I feel that some writers have neglected to point out the very large part played by Lucas products.

Perhaps the most important feature of the B.R.M., as applied to everyday car production, is the use of an alternator. Now, it is common knowledge that the alternator, which has already replaced the d.c. generator on motor-cycles and is firmly entrenched in the commercial vehicle sphere, will shortly be fitted to most of the larger production cars. For these vehicles its high output at idling revs, allied with its capacity to withstand motorway speeds indefinitely, are its main advantages. When applied to a racing car the saving in weight is valuable as is the complete reliability at extremely high revolutions. You will soon be able to buy a new car equipped with an alternator, and it will be all the better because of experience gained in the B.R.M. application.

The Lucas transistorized ignition can already work at speeds far beyond the compass of any engine yet envisaged. It requires a very steady battery voltage to operate consistently, and so the original idea of simply charging the accumulators between races has had to be abandoned. The light, simple alternator, with revolving magnets and no commutator, is the answer to that.

Many years ago I wrote some articles on fuel injection and predicted its application to all high performance cars. After the success of the Formula 2 Connaught, which had a somewhat crude system based on an American design, it was found that the delicate control that was required for Formula I cars would need something much more sophisticated. The Vanwall had an effective form of injection of German origin, but now the Lucas system has made available completely reliable fuel injection that is 100 per cent. British. In spite of recent advances in carburation technique, the fuel injection engine must be the most powerful, and the system is immune from the effects of vibration, which carburetters are not.

It would be fair to say that the B.R.M. triumphed because of its reliability, for it

has a weight disadvantage compared with the Lotus. Much of this reliability stems from the superb work of the racing mechanics, but it is also "designed into" the car.

In this connection, it has been of great assistance that some components of the old supercharged 16-cylinder engine have been worked into the design of the V8. The timing gears and camshaft drive have been adapted from that earlier power unit, and the same connecting rods are used. The higher inertia loading of the V8, occasioned by its bigger pistons, has necessitated some re-thinking in the arrangement of the big end bolts, but the use of these rods, which had so many years of development, has saved time in getting the V8 raceworthy. Time is the commodity which is in the shortest supply, and so this saving has been of untold value.

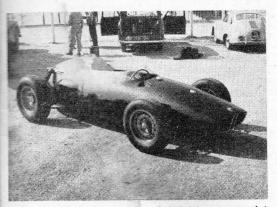
If advantage has been taken of some earlier B.R.M. developments, a completely clean sheet of paper was used when the valve gear was designed. Hairpintype springs, and fingers between the cams and the valves, have been replaced by conventional helical springs and pistontype tappets. The pistons are smaller than usual and do not extend downwards to embrace the springs, while the valves have hollow stems and carry some sodium for coaling. The light weight of the valve train contributes to the low loading and consequent high reliability. The valve gear is not stressed to its limit and could run at even higher speeds than have yet been obtained. It is of great interest that the distributor for the fuel injection is driven by an internally cogged rubber belt. This drive has proved entirely dependable and has many installation advantages, notably in the saving of weight.

From a technical viewpoint the Porsche engine has many fascinating features. The cars were not properly raced, actually missing two important events during the season, and one cannot avoid the con-clusion that a design of extreme complexity has been chosen which is proving a headache to its constructors, for their resources are limited. The Flat-8 bears no relationship to the current batch of V8s, for they have five-bearing crankshafts with side-by-side big ends sharing the journals. The Porsche has the opposing cylinders offset to the extent of half the cylinder diameter, and a straight-eight crankshaft is employed with nine main bearings. Some of the development work applied to the Porsche-designed Flat-12 Cisitalia has no doubt been useful here, and the very complicated camshaft drive owes much to the Carrera. Nevertheless, this very powerful and basically reliable engine could only be raced effectively by a large organization with considerable financial backing.

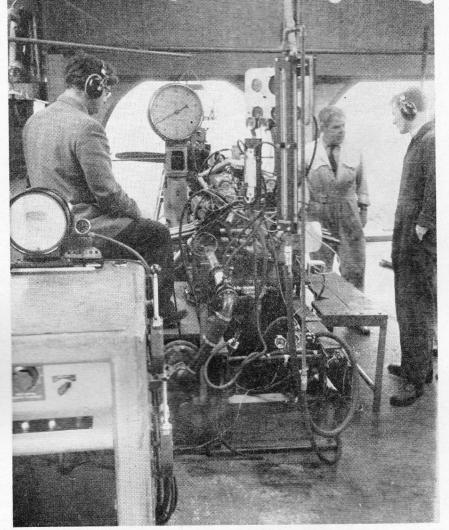
The cylinder construction of the Porsche might well be adapted to more mundane vehicles. The bores of the light-alloy blocks are given a molybdenum steel wearing surface, apparently by a spraying process. Plated cylinder bores are already used with satisfaction in some small light-alloy air-cooled engines which sell at very low prices.

In the field of chassis design the midengined all-independent layout has proved pre-eminent and is now universal. Absolute rigidity is the main requirement here, and the Lotas monococque construction has come nearest to achieving this within a reasonable weight. One predicts a general investigation among the rival competitors of forms of construction other than the multi-tubular fuselage. In this connection, may I recall a German patent of more than 25 years ago? This suggested a light alloy chassis cast integrally with the engine block and the gearbox, a method which might make sensational weight-saving possible.

Weak gearboxes have been the bugbear of 1962. It is curious that the change from four speeds to the five- or six-speed boxes of today has brought about so much mechanical grief. A gearbox failure may



FIRST rear-engined B.R.M. was raced in 1960, when the four-cylinder  $2\frac{1}{2}$ -litre engine was used.



A V8 B.R.M. engine on test at Bourne. Tony Rudd, the Chief Engineer, is seen on the left, while Willie Southcott and a mechanic stand on the right.

be dangerous at speed, and in one case a driver diagnosed an incipient gearbox seizure and retired; subsequently it was found that the trouble was a loose battery Repeated gearbox failures must lead. inevitably affect the morale of drivers and it is to be hoped that the winter will be used to eliminate this unreliability. The heavy old B.R.M. gearbox has certainly earned its keep in 1962. British disc brakes have once again emphasized their mastery in this field. Porsche alone have developed their own discs, which are driven by a spider at the external periphery, the calipers operating from the inside. This "inside-out" assembly is stated to be advantageous for cooling, which is quite feasible.

Once again it is a pleasure to praise Dunlop tyres. The "rain-tyre" can now be used on dry roads with safety, and it is only the constant research carried out by this firm that has made the lap speeds of today possible. The knowledge thus gained must assist greatly in the design of normal production tyres for fast cars, so once again British pre-eminence in racing is proving beneficial to the everyday driver.

Finally, one regrets the absence of America from Grand Prix racing in 1962, but most of all one misses the blue cars of France.



LATEST B.R.M., powered by a V8 1½-litre engine, won the Manufacturers' Championship for B.R.M. last year.

A WEEK before that World Championship decider, the South African Grand Prix, the Natal Grand Prix was held. Because of postal delays we were unable to include a full report of this event in our last week's issue.

Team Lotus once again demonstrated their supremacy to all South Africans by finishing first and second in the Natal Grand Prix. Trevor Taylor led from the start to finish. Jim Clark, after starting at the back of the grid as a result of the fact that he didn't finish in his qualifying heat, carved his way through the field in a very impressive manner to finish second, a scant six and a half seconds behind his teammate. Graham Hill's chances were spoilt by a recurrence of the ignition trouble which caused his retirement in the Rand Grand Prix, though Richie Ginther drove a faultless race and finished third, albeit 22 secs. behind the leader. The third B.R.M., in the hands of Bruce Johnstone, was retired on the 13th lap through mechanical trouble.

Jim Clark returned the fastest time of the first practice session with a lap in 1 min. 22.11 secs. This shattered Syd van der Vyver's old lap record for the 2.25 mile circuit by no less than 4.39 secs. and eventually turned out to be the fastest lap of all three practice sessions. Trevor Taylor was second fastest at 1 min. 22.79 secs., Richie Ginther third at 1 min. 24.78 secs., and Graham Hill fourth at 1 min. 25.07 secs.

Neither Clark nor Taylor were able to better their times during the second session, though Ginther improved his by .44 of a second, and Hill his by .23 of a second. Graham went much better during the third session, however, and although he was unable to improve on the times set up by the two Lotuses, came very close to them with a lap in 1 min. 22.67 secs. Richie Ginther also improved on his previous times during this session, but could do no better than 1 min. 24.06 secs. Bruce Johnstone's fastest was 1 min. 25.95 secs.

The fastest South African in a South African-entered car was Neville Lederle, who did a lap in 1 min. 26.20 secs. during the first session. This also bettered the old lap record, which, incidentally, was set up in the same car.

Gary Hocking was killed during the third session. The accident took place on a very fast uphill bend known as the Sweep. Estimates as to his speed vary, but as saloon cars reach up to 90 m.p.h. on the same stretch, his Lotus couldn't have been doing less than 110 m.p.h. when it left the road. The momentum was sufficient to carry it forward in a dead straight line for some 50 yards, all of it uphill and through fairly thick grass studded with small saplings and bushes. It then hit a donga, or ditch, somersaulted, carried on a bit farther, somersaulted again, hit a tree stump and broke in half. Gary was found lying next to the wreckage, but in spite of all that could be done for him, he died as a result of head injuries on the way to hospital. He had shown great promise and we will miss him very much.

Grid positions for the main race were not decided on the fastest practice times, but on the results of two 22-lap heats. Grid positions for the first of these were as follows:

J. Clark	R. Ginther	B. Johnstone
(Lotus 25)	(B.R.M.)	(B.R.M.)
1 m. 22.11 s.	1 m. 24.06 s.	1 m. 25.96 s.
S. van der Vyv (Lotus 24) 1 m. 26.62 s	(Co	J. Love oper-Climax) m. 27.35 s.

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Johnstone was now third and slowly dropping back.

Ginther, on the other hand, was going great guns and rapidly caught up to Clark, passing him on lap three. He stayed in front for a lap and then Jim regained the lead, only to be repassed two laps later. These two were really moving and were drawing well ahead of everyone else. Johnstone was no less than 11 secs. behind by lap seven, and van der Vyver, who then lay fourth, was a further 12 secs. in arrears.

Clark took the lead again on lap nine and managed to stay in front for a further two laps and then his engine started to misfire, and in the space of one lap he dropped 10 secs. behind. On lap 13 he took the Lotus into the pits, where it was found that the fuel was vapourizing as a result of the intense heat. By the time Clark was able to rejoin the race he had dropped a lap behind, but the leaders were going so fast that he was no lower than fourth.

The trouble had not been cured, however, and he returned to the pits on the next lap, this time for a long enough period to drop him to last place, and although he reappeared for one lap later on, he retired before the end of the heat.

Richie Ginther was so far ahead in the meantime that he had lapped everyone except Johnstone and van der Vyver and he finished the race with a 53.5 sec. lead.

Results of this heat were:

1, R. Ginther (B.R.M.); 2, B. Johnstone (B.R.M.); 3, S. van der Vyver (Lotus 24); 4, S. Tingle (L.D.S.-Alfa); 5, F. Viljoen (L.D.S.-Climax); 6, C. Trundell (Cooper-Maserati); 7, J. Love (Cooper-Climax); 8, J. Holme (Lotus 18).

THE line-up for the second heat was:

G. Hill (B.R.M.) 1 m. 22.67 s.	T. Taylor (Lotus 25) 1 m. 22.79 s.	N. Lederle (Lotus 21) 1 m. 26.20 s.
P. De Klerk (Alfa Specia 1 m. 27.92 s	D) (	2. Pieterse Lotus 21) m. 27.96 s.
B. van Niekerk (Lotus 22) 1 m. 30.35 s.	M. Harris (Cooper-Alfa) 1 m. 31.38 s.	(L.D.SAlfa)
T. Blokdyk (Cooper-Alfa 1 m. 33.80 s	a) (Sco	Henderson orpion-Alfa) m. 34.28 s.
(Cooper-Climax)	E. Hammond (L.D.SFord) 1 m. 36.61 s.	(Lotus 20)
W. Scheeper (Lotus-Alfa 1 m. 37.23 s	) (Co	R. Cresp poper-Alfa) m. 37.94 s.
A. Neave (Cooper-Alifa) 1 m. 45.82 s.		

NEVILLE LEDERLE, the bright new South African star who impressed many observers by his splendid performances against topclass opposition in the recent South African season

THE SECOND

BY TONY HULL

NATAL

**GRAND PRIX** 

L. D. Serrurier (L.D.SAlfa) 1 m. 28.89 s.	B. Podmore         S. Tingle           (Lotus 20)         (L.D.SAlfa)           1 m. 29.27 s.         1 m. 30.17 s.
F. Viljoen	C. Trundell
(L.D.SClima:	(Cooper-Maserati)
1 m. 30.22 s.	1 m. 33.54 s.
P. van Niekerk	B. Niemann V. McWilliams
(Lotus 18)	(Lotus 7) (Lotus-Borgward)
1 m. 32.59 s.	1 m. 33.65 s. 1 m. 36.44 s.
J. Holme	W. Dunlop
(Lotus 18)	(Cooper-Alfa)
1 m. 36.46 s.	1 m. 37.13 s.
E. Glasby (Cooper-Alfa) 1 m 40.30 s.	

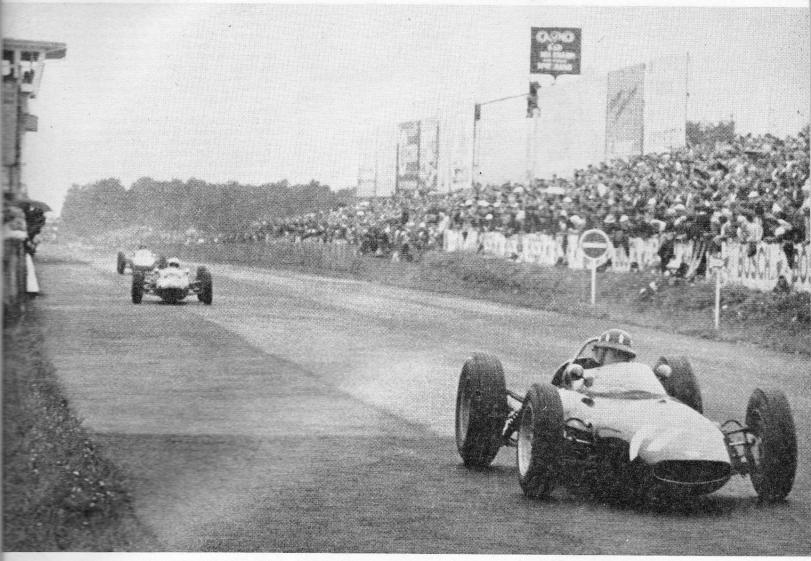
**B**<sub>RUCE</sub> JOHNSTONE jumped into the lead at the start, followed by Clark, van der Vyver and Podmore, but Clark had taken the lead by the time they reached the stretch behind the pits and he was 2.2 secs. ahead of Richie Ginther, who had moved up to second at the end of the lap. Bruce TREVOR TAYLOR shot into the lead at the start, followed by Lederle, Hill and Harris. By the end of the lap he was 3.3 secs. in the lead, but Graham, having passed Lederle, was in full cry after him, and he whittled down Trevor's slender lead until he passed him on lap four. Trevor was quick to take his opportunity and ducked into Graham's slipstream. Two laps later he regained the lead and in no time at all had increased it by two seconds, but Graham was not to be outdone, and the lead changed hands once again on lap nine.

Meanwhile Lederle, who was third, had fallen 20 secs. in arrears, and Piet De Klerk, who was fourth, was 40 secs. in arrears and in danger of being caught and passed by Ernest Pieterse.

Hill managed to retain the lead until lap sixteen, when Taylor, who was still in his slipstream, passed him down the straight and managed to get 3 secs. ahead.

(Continued on page 56)

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MOST EXCITING GRANDE EPREUVE of 1962 was the German Grand Prix, won by Graham Hill (B.R.M.) by 2.5 secs. from John Swrtees (Lola-Climax) who was, in turn, 1.9 secs. ahead of Dan Gurney (Porsche). They are seen above at the straight past the pits.

#### SEASONAL SURVEY No. 2

## FORMULA ONE RACING

- B.R.M. Reaps the Awards for Perseverance
- Graham Hill a Worthy World Champion
- So Near and Yet So Far for Team Lotus

A LTHOUGH Graham Hill and B.R.M. had to wait over two months from the previous grande epreuve (Watkins Glen), for the results of the Drivers' and Formula One Constructors' Championships, it is realized that the inclusion of the South African race has made this contest more International than in any previous years. It is, admittedly, unfortunate that the East London race has, of financial necessity, to take place during the South African holiday period, but no one can deny that the anticipated Hill-Clark duel for world honours provided the greatest tonic to motor-racing that has occurred since the pre-war appearance of Mercedes-Benz and Auto Union on the long circuit.

Naturally it was something of a strain on the rival drivers, and there are some who

#### BY GREGOR GRANT

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feel that the Championship itself could be revised, to avoid the continual uncertainty which must prevail amongst participants. Admittedly May to December is a long period during which to decide Championships, and one has also the thought that there is the distinct possibility of Australian, New Zealand and Japanese claims for inclusion which would further lengthen this already long-drawn-out period. To stimulate Grand Prix racing, these F.I.A. Championships are essential, but it is believed that the methods adopted for scoring are not as efficient as they might be. The so many best performances system has come in for plenty of criticism, particularly in relation to the Constructors' contest. One proposal, which might well be considered, is that teams of two cars are nominated at the start of the series, and that only these designated teams may score. In other words, the competition could be regarded as a sort of International League, whereby the total number of points obtained during the series would decide the destination of the Constructors' Championship.

The prevailing system concentrates scoring on one example of the marques concerned. Thus, if one particular make scores a one-two, the leader is the sole car to collect points. True, the second machine prevents others from scoring higher marks, but it is still dependent on the so many best performances out of the total number of races.

Suppose, for example, that Ferrari, Cooper-Climax, B.R.M., Lotus-Climax, Porsche and Serenissima each nominated two cars for the series, with, of course, a reserve for each team. This would auto-

thoroughly deserved to be acclaimed as Champion Formula One car. It would not have affected the struggle for the Drivers' Championship, for one feels that no matter which system is adopted, allowance must be made for illness or injury during the season, and the so many best performances is easily the most satisfactory system to retain.

During 1962, the way in which the British V8s outclassed Ferrari's V6 and, in all but the French G.P., Germany's flat-eight, was a remarkable achievement. Both B.R.M. and Coventry Climax must take great credit for the winning of eight out of nine grandes epreuves.

Whilst Jim Clark was undoubtedly the fastest driver of the year, Graham Hill's remarkable consistency and tenacity of purpose contributed to his World Championship. Of the others, John Surtees, Masten Gregory had a disappointing season with the U.D.T.-Laystall Lotus-Climax. Ferrari's exit before Watkins Glen left

Ferrari's exit before Watkins Glen left the stage to the British cars, as Porsche were not contenders for Championship honours. Bowmaker-Lola-Climax did a splendid job, and Surtees obtained two second places in the grandes epreuves. He has signed for Ferrari for 1963, and team-mate Roy Salvadori has retired from Formula One racing.

Before the Championship series began, there were several Formula One races, and results of Snetterton, Aintree, Silverstone, Goodwood and Brussels showed that the V8 cars from this country were fast enough to take on all opposition. Mairesse won at Brussels, but the B.R.M.s of Hill and Marsh were disqualified for being pushstarted, despite this being permitted in the regulations (in English) supplied to entrants.

matically ensure 12 factory entrants in each grande epreuve, with the added incentive that every car would have the opportunity to score points. The team which finishes the series with the greatest number of points is undoubtedly the most deserving entry to become Champion.

entry to become Champion. Let's consider how the 1962 factory teams would have finished the season, taking B.R.M. (Hill-Ginther), Lotus-Climax (Clark-Taylor), Cooper-Climax (McLaren-Maggs), Porsche (Gurney-Bonnier), Bowmaker-Lola-Climax (Surtees-Salvadori) and Ferrari (P. Hill-nominated driver). The Brabham-Climax is also included; even although it was a singleton entry during the later races, it must be regarded as a factory machine. Leaving the 9-6-4-3-2-1 table unchanged, but counting every race and every place, the final table would read as follows:—

B.R.M	 	62
Cooper-Climax	 	44
Lotus-Climax	 	36
Ferrari	 	26
Lola-Climax	 	19
Porsche	 	17
Brabham-Climax	 	0

Before East London, the position would have been: B.R.M., 53; Lotus-Climax, 36; Cooper-Climax, 34. Thus the Constructors' title would have been decided at Watkins Glen, which might have taken some of the interest away from East London, but would certainly have emphasized that B.R.M. had Dan Gurney and Bruce McLaren, were always possible G.P. winners. Discovery of the year was Tony Maggs, and Trevor Taylor has really arrived as a Formula One driver, although not always blessed with the best of fortune. Jack Brabham was still very much in the reckoning, and his Brabham-Climax took fourth places at Watkins Glen and East London.

Innes Ireland managed to obtain Championship points at East London, but he and



TEAM TACTICS are discussed by Jim Clark and Trevor Taylor before the South African Grand Prix.

JIM CLARK locks a wheel of his Lotus-Climax 25 under braking for the hairpin at Rouen. Helater retired with suspension failure.

It is unlikely that B.R.M. will support the 1963 race, which will be a severe blow to the organizers who would dearly love to have a World Champion appear there.

Tragedy of the year was the inexplicable accident to Stirling Moss at the Easter Monday Goodwood, which put the great driver out of motor racing. Other tragedies were the fatal crashes of Ricardo Rodriguez and Gary Hocking, in Mexico and South Africa respectively.

Africa respectively. A change of dates made Zandvoort the opening round of the Championship, instead of Monaco. This meant that the very latest Grand Prix cars would make their début on the Dutch circuit on the sand dunes, and that at least six different makes would be represented.

Most exciting car was the Lotus "25" monocoque to be driven by Jim Clark, which Colin Chapman had constructed with more than usual secrecy. Also on view were a pair of horizontally-opposed eightcylinder Porsches, for Dan Gurney and Jo Bonnier. Bruce McLaren had the new Cooper-Climax with six-speed gearbox, but team-mate Tony Maggs had the 1961 "four". Ferrari had nothing very much in the way of new machinery, Phil Hill's having modified rear suspension and slightly wider track. Ginther had the 1962 V8 engine in a '61 chassis, whilst Graham Hill remained faithful to his Silverstone-winning machine.

There were troubles a-plenty in practice. Clark's engine had to be flown to Coventry Climax, rebuilt, and returned by Saturday evening, to be installed just in time for Sunday's race. The Porsches had various bothers, both drivers complaining of dodgy brakes (Porsche's own discs) and erratic gear-changing. Bowmaker produced a V8 Lola-Climax for Salvadori, as well as Surtees's car. Brabham appeared with a bright-green Lotus-Climax.

British V8s occupied the first three rows of the starting grid, Gurney's Porsche "8", in row 3, being the sole interloper, whilst Phil Hill could only get his Ferrari on the fourth line. Best practice time was set up by John Surtees, with 1 min. 32.5 secs., just one-tenth of a second quicker than Graham Hill (B.R.M.). Jim Clark was the other occupant of row 1, with 1 min. 33.2 secs. Behind came Brabham (1 min. 33.3 secs.) and McLaren (1 min. 33.9 secs.).

Jim Clark made a superb getaway, and led on lap 1, followed by Graham Hill, Gurney, Surtees, Phil Hill and Ireland in the U.D.T.-Laystall Lotus-Climax V8. Ben Pon, in the fuel-injected Porsche "4", lasted for just that opening lap, going off in a big way at the "Scheivlak". Clark scooted round, always gaining on the B.R.M. and the Porsche, but after 10 laps the monocoque Lotus-Climax developed clutch linkage troubles, whilst Gurney had his gear lever snap off. Brabham abandoned following an incident with Rodriguez's Ferrari, and Surtees had the terrifying experience of breaking a wishbone and ploughing into the undergrowth and tearing down a barbed wire fence. John was unhurt, but later, Salvadori's car was withdrawn.

Innes Ireland hurtled off-course to the infield past the pits when the brakes locked on approaching Tarzan Corner. Nearer the end, Rodriguez pranged his Fernari, so the race was entirely in contrast to that of 1961, when all 16 starters finished, and there wasn't a single pit-stop.

When Clark and Gurney stopped, Graham Hill's B.R.M. took a lead which he never lost. McLaren made a bid for a few laps, but on his 22nd tour the quillshaft broke in the new gearbox. Phil Hill then took up the challenge, but the Ferrari was no match for the Owen machine. Ireland's third place was taken by Trevor Taylor (Lotus-Climax "24" V8), who began an assault on the Ferrari, and on the 62nd lap, the young ex-Junior driver caught and passed the reigning World Champion. Meanwhile Graham Hill circulated with a slightly altered engine note, for one of his eight vertical chimney stacks had come adrift. He finally won by 28.2 secs. from Taylor, averaging 95.44 m.p.h. for the 80 laps. Into third place came Phil Hill, then a lap behind, Baghetti (Ferrari). Fifth and sixth places were taken by the four-cylinder cars of Maggs and de Beaufort, so the last-named Porsche put a Dutchman in the World Championship table for the first time.

Porsche were extremely dissatisfied with their cars' performances at Zandvoort, and decided to send only Gurney to Monaco. Coopers were quietly confident, for before McLaren's exit he had established fastest lap with 1 min. 34.4 sees.

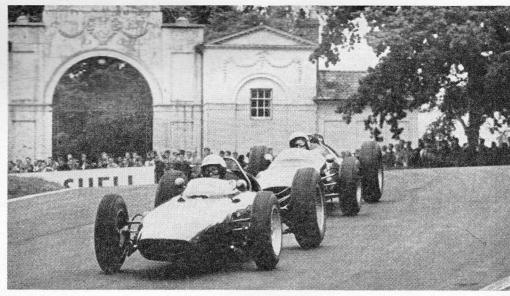
Front row of the grid was occupied by Clark (1 min. 35.4 secs.), Graham Hill (1 min. 35.8 secs.) and McLaren (1 min. 36.4 secs.), with Gurney and Mairesse behind. The start was not only spectacular, but disastrous for Porsche, B.R.M. and others. Apparently Mairesse attempted to squeeze between Clark and Graham Hill, causing the former almost to hit the wall. In the subsequent mix-up, Ginther's throttle appeared to jam open, and in a jiffy cars were all over the place. The B.R.M. went straight into the straw bales, at Gasworks hairpin, losing the offside rear wheel which was hurled over the parapet and struck an official. Unhappily, the victim succumbed later to his injuries. Trintignant's Lotus spun wildly and crashed, whilst Ireland's Lotus-Climax shot backwards into the bales, and Gurney's Porsche was hit by at least two cars, including Taylor's Lotus-Climax.

Ginther, Trintignant and Gurney, were eliminated, but Ireland and Taylor crept to their pits, the latter having a smashed nosepiece removed, but Ireland having considerably more attention, including repairs to a leaking fuel system.

The leaders managed to dodge the melee, and McLaren held off Hills G. and P., for six laps, when the B.R.M. forged in front. Jim Clark was in sixth place at the end of the first lap, but thereafter went like a scalded cat. He scuttled past Bandini, and then duelled with Brabham's Lotus-Climax. This was a tremendous dice, with Brabham giving of his best, and it wasn't till 22 laps had been covered that Jim managed to edge past. The Scot's sights were now on McLaren, and bit by bit the Lotus crept nearer to the dark-green Cooper. On the 27th lap, Clark was in second place, and next time round he equalled McLaren's race record and came within 7 secs. of the leading B.R.M.

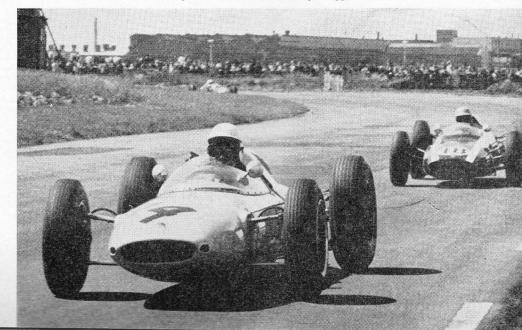
The crowd saw the Lotus closing up on the B.R.M. and with a sizzling record lap in 1 min. 36.1 secs., Clark had cut Hill's lead to 3 secs. On lap 39, Jim set a new record of 1 min. 35.8 secs., and began to push Hill for all he was worth. Graham, not to be outdone, did 1 min. 35.5 secs., but after coming up on Surtees and Bandini to double them, the Lotus-Climax "25" started to fall back with difficulties in the clutch department. After 55 laps, Jim finally gave up with engine troubles.

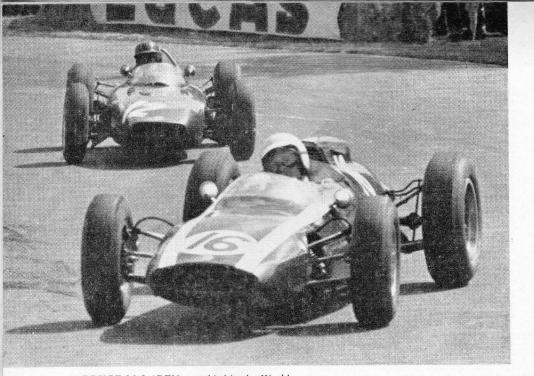
Graham Hill was left with a big lead over Bruce McLaren, and behind, Phil Hill (Ferrari) was inexorably closing up on Jack Brabham, whilst Bandini (Ferrari) was having a go at John Surtees (Lola-Climax). Hill's Ferrari lost some ground from Brabham, but the American was soon in the picture again, and eventually took the Australian, who had the bad luck to spin off at the Casino and damage his radiator.



LODGE CORNER at Oulton Park: Richie Ginther (B.R.M.) leads Bruce McLaren (Cooper-Climax), but both retired in the Gold Cup Race.

MASTEN GREGORY, like his team-mate Innes Ireland, had a disappointing season with his U.D.T.-Laystall Lotus; he leads Tony Maggs at Aintree.

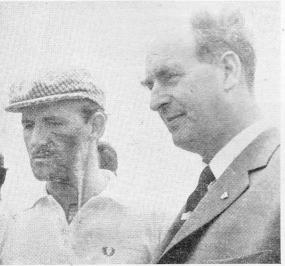




#### BRUCE McLAREN was third in the World Championship. His Cooper-Climax leads the B.R.M. of Graham Hill at Tatts in the British Grand Prix (above).

JOHN SURTEES was second in both the British and German Grands Prix in his Bowmaker-Lola. He leads Tony Maggs during the British Grand Prix (right).

With 20 of the 100 laps to go, Graham Hill led McLaren by 33.8 secs., and the New Zealander was 17 secs. in front of Phil Hill. With 10 laps left, it looked to be a B.R.M. victory, but three laps later, the B.R.M. engine spluttered ominously, and came to rest at Mirabeau with a broken engine. Into the lead swept McLaren, 17 secs, ahead of Phil Hill. The latter made a desperate effort to catch the cool young New Zealander, and with two laps to go, the Cooper's lead was down to 6 secs. One lap to go, and it was 4 secs. The crowd was spellbound; nearer and nearer came the red car, but McLaren was safely into the chicane as Hill hurtled out of the tunnel, and McLaren took the chequered flag by just 1.3 secs. Bandini took third place ahead of Surtees whose brakes had become

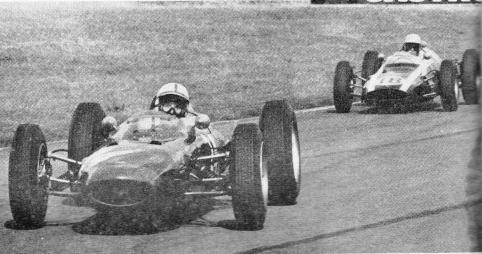


WORLD CHAMPION Graham Hill and a happy Sir Alfred Owen before the South African Grand Prix.

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the Belgian edged in front. Taylor still led at seven laps, but Jim Clark had now come up into third place, took Mairesse and was waved into the lead by Taylor. Ireland retired with a broken wishbone, and Baghetti's clutch burned out. Clark gradually got away from the others, but Taylor and Mairesse were locked in a titanic struggle. One of G. Hill's exhaust stacks had come adrift, and the engine lost its crisp, booming note. It was still quick enough to leave the Ferraris of P. Hill and Rodriguez far behind.

Clark was travelling at a tremendous pace, setting a new lap record on his 15th tour with 3 min. 55.6 secs., and leading the Taylor-Mairesse duet by 4 secs. McLaren went out with bearings trouble, and on lap 22, Maggs also vanished. Out in front went Clark, absolutely untouchable, with Mairesse trying all he knew to get past Taylor, who was driving the race of his career. Phil Hill was having rather an extraordinary duel with team-mate Rodriguez, which seemed rather pointless in every way. On the 25th lap, Taylor's Lotus went



almost non-existent. Bonnier trundled round in the veteran Porsche for fifth place, and, although Graham Hill was out of the race, the Monaco ruling gave him sixth place, owing to the number of laps completed.

This result put the two Hills as joint leaders of the Championship (10 points), with Bruce McLaren next-up (9), then Trevor Taylor (6), Bandini (4) and Surtees/ Baghetti (3). Cooper-Climax led the Con-structors' contest with 11 points, B.R.M. being second with 10.

being second with 10. The Belgian Grand Prix at Spa-Fran-corchamps had 19 starters, the front row of the grid being occupied by Graham Hill (B.R.M.), 3 min. 57 secs., Bruce McLaren (Cooper-Climax), 3 min. 58.8 secs. and Trevor Taylor (Lotus-Climax), 3 min. 59.3 secs. Behind were Phil Hill (Ferrari), 3 min. 59.6 secs. and Inpus Ireland (Lotus-3 min. 59.6 secs. and Innes Ireland (Lotus-Climax), 3 min. 59.8 secs. Jim Clark, having had engine bothers in practice, was in the fifth row.

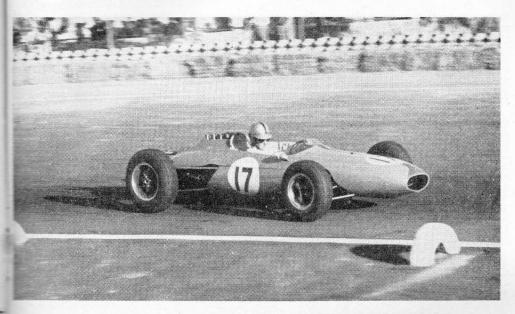
A tremendous struggle immediately developed featuring Trevor Taylor, Graham Hill and Bruce McLaren, chased by Mairesse (Ferrari), Ireland, P. Hill and Rodriguez (Ferrari). After five tearing laps, Taylor led by 0.5 sec. from Mairesse, with G. Hill, McLaren and Clark bunched close behind. The duel between Taylor and Mairesse provided great excitement, and the Ardennes echoed to the cheers when

sideways coming down towards the Source, and was struck by Mairesse's Ferrari. Both cars crashed, the latter bursting into flames. Mairesse got away with minor burns and severe bruises, whilst Taylor escaped unhurt.

This left Clark with a huge lead over second man Graham Hill, and that is how they finished, with Jim setting a new 1,500 c.c. race record, and also a new lap record. P. Hill just managed to scrape home third, despite the attentions of Rodriguez, and fifth spot went to John Surtees, followed by Jack Brabham's Lotus-Climax.

Graham Hill now led the Championship with 16 points, Phil Hill having 14, McLaren and Clark, nine each. B.R.M. shot into the lead in the Constructors' Championship with 16, then came Lotus-Climax (15), Ferrari (14) and Cooper-Climax (11).

For the French Grand Prix at Rouen-Essarts, Porsche reappeared with two flat-eights for Gurney and Bonnier, but Ferraris were non-starters owing to a metal workers' strike. Jim Clark made the runworkers' strike. Jim Clark made the run-ning in practice, with fastest lap in 2 min. 14.8 secs. Sharing the front row with him were Graham Hill (B.R.M.), 2 min. 15 secs., and Bruce McLaren (Cooper-Climax), 2 min. 15.4 secs. Second row was occupied by Brabham (Lotus-Climax), 2 min. 16.1 secs., and Surtees (Lola-Climax), 2 min. 16.3 secs. Gurney's Porsche was in



the third row along with the U.D.T.-Laystall Lotuses of Gregory and Ireland.

Right from the first lap it was a Graham Hill-John Surtees duel, with Clark in third place. Poor Ginther had gone straight into the pits with his B.R.M., losing nearly three-quarters of a lap before the engine was persuaded to fire.

At 10 laps, Hill led Surtees by 0.7 sec., with Clark 7.8 secs. behind the Lola, and Gurney in fourth spot. Ireland had gone out with a flat tyre, and now Brabham abandoned with suspension failure. McLaren had an off-course excursion following a missed gear-change and dropped to the back of the field.

Surtees stopped on lap 13 and fell to

JACK BRABHAM, towards the end of the season, went really well in his own Brabham-Climax. Here he is on his way to second place in the Mexican Grand Prix.

eighth place, leaving Hill with a 16 secs. lead over Clark, and 34 secs. over Gurney. Hill stormed round, setting a new lap record of 2 min. 19.5 secs. (168.8 k.p.h.), but Clark replied with 2 min. 18.4 secs. Surtees climbed rapidly to fourth place, but could make no impression on Gurney. Trevor Taylor limped into the pits, minus engine cover, and was there for some time. Hill went on to the grass at La Sciere, being baulked by Lewis's Cooper which had lost its brakes. Part of the B.R.M.'s exhaust system was damaged, and by the time Hill had regained the road, Clark was in the lead. Graham replied with a new lap record in 2 min. 16.9 secs., but Clark toured into his pit to abandon with suspension failure.

With 20 secs. over second man Dan Gurney, Hill seemed comfortably set for victory. Alas, he came to rest on lap 41 with a deranged throttle linkage, and into the lead went Gurney, a lap ahead of second man Surtees. The latter, however, stopped with gearbox difficulties, and then set off slowly with only one usable ratio. Maggs had shot up into second place, followed by Ginther and McLaren, who had overtaken Surtees.

The Porsche people went crazy with joy when the Californian took the chequered flag for the first-ever grande epreuve victory for the marque. Second place went to South Africa's Tony Maggs in the V8 Cooper-Climax, and Ginther thoroughly earned his third place after the initial first-lap delay.

Just as Surtees came through slowly, trying to get into the pits area, a line of gendarmes formed up elbow-to-elbow, and the unfortunate Lola driver had no place to go. Trintignant, in seventh place, swerved out into the centre of the track, just as Taylor came flat out over the finish line. Trevor could not avoid the Walker Lotus, and both cars collided. By some miracle, no one was hurt, although both machines were wrecked.

The result did not affect the placings of Graham Hill or Phil Hill in the Championship, McLaren being third with 12 points, then Gurney and Clark each with nine. de Beaufort's sixth place gave him his second Championship point.

EUROPEAN GRAND PRIX Zandvoort, 20th May 80 laps, 208 miles	1. Graham Hill (B.R.M.) 2 h. 11 m. 2.1 s. 95.44 m.p.h.	2. Trevor Taylor (Lotus-Climax) 2 h. 11 m. 29.3 s.	3. Phil Hill (Ferrari) 2 h. 12 m. 23.2 s.	4. G. Baghetti (Ferrari) 79 laps	5. Tony Maggs (Cooper-Climax) 78 laps	6. C. de Beaufort (Porsche) 76 laps	Fastest Lap Bruce McLaren (Cooper-Climax) 1 m. 34.4 s. 99.36 m.p.h.
MONACO GRAND PRIX Monte Carlo, 3rd June 100 laps, 195 miles	1. Bruce McLaren (Cooper-Climax) 2 h. 46 m. 29.7 s. 70.46 m.p.h.	2. Phil Hill (Ferrari) 2 h. 46 m. 31.0 s.	3. L. Bandini (Ferrari) 99 laps	4. John Surtees (Lola-Climax) 99 laps	5. Jo Bonnier (Porsche) 93 laps	6. Graham Hill (B.R.M.) 92 laps	Fastest Lap Jim Clark (Lotus-Climax) 1 m. 35.5 s. 73.66 m.p.h.
BELGIAN GRAND PRIX Spa, 17th June 32 laps, 281 miles	1. Jim Clark (Lotus-Climax) 2 h. 7 m. 32.3 s. 131.90 m.p.h.	2. Graham Hill (B.R.M.) 2 h. 8 m. 16.4 s.	3. Phil Hill (Ferrari) 2 h. 9 m. 38.8 s.	4. R. Rodriguez (Ferrari) 2 h, 9 m. 38.9 s.	5. John Surtees (Lola-Climax) 31 laps	6. Jack Brabham (Lotus-Climax) 30 laps	Fastest Lap Jim Clark 3 m. 55.6 s. 133.88 m.p.h.
FRENCH GRAND PRIX Rouen, 8th July 54 laps, 209 miles	1. Dan Gurney (Porsche) 2 h. 7 m. 35.5 s. 103.23 m.p.h.	2. Tony Maggs (Cooper-Climax) 53 laps	3. Richie Ginther (B.R.M.) 52 laps	4. Bruce McLaren (Cooper-Climax) 52 laps	5. John Surtees (Lola-Climax) 52 laps	6. C. de Beaufort (Porsche) 52 laps	Fastest Lap Graham Hill (B.R.M.) 2 m. 16.9 s. 106.90 m.p.h.
BRITISH GRAND PRIX Aintree, 21st July 75 laps, 225 miles	1. Jim Clark (Lotus-Climax) 2 h. 26 m. 20.8 s. 92.25 m.p.h.	2. John Surtees (Lola-Climax) 2 h. 27 m. 10.0 s.	3. Bruce McLaren (Cooper-Climax) 2 h. 28 m. 5.6 s.	4. Graham Hill (B.R.M.) 2 h. 28 m. 17.6 s.	5. Jack Brabham (Lotus-Climax) 74 laps	6. Tony Maggs (Cooper-Climax) 74 laps	Fastest Lap Jim Clark 1 m. 55.0 s. 93.91 m.p.h.
GERMAN GRAND PRIX Nürburgring, 5th August 15 laps, 213 miles	1. Graham Hill (B.R.M.) 2 h. 38 m. 45.3 s. 80.18 m.p.h.	2. John Surtees (Lola-Climax) 2 h. 38 m. 47.8 s.	3. Dań Gurney (Porsche) 2 h. 38 m. 49.7 s.	4. Jim Clark (Lotus-Climax) 2 h. 39 m. 27.4 s.	5. Bruce McLaren (Cooper-Climax) 2 h. 40 m. 4.9 s.	6. R. Rodriguez (Ferrari) 2 h. 40 m. 9.0 s.	Fastest Lap Graham Hill 10 m. 12.2 s. 83.32 m.p.h.
ITALIAN GRAND PRIX Monza, 16th September 86 laps, 307 miles	1. Graham Hill (B.R.M.) 2 h. 29 m. 8.4 s. 123.62 m.p.h.	2. Richie Ginther (B.R.M.) 2 h. 29 m. 38.2 s.	3. Bruce McLaren (Cooper-Climax) 2 h. 30 m. 6.2 s.	4. W. Mairesse (Ferrari) 2 h. 30 m. 6.6 s.	5. G. Baghetti (Ferrari) 2 h. 30 m. 39.7 s.	6. Jo Bonnier (Porsche) 85 laps	Fastest Lap Graham Hill 1 m. 42.3 s. 125.73 m.p.h.
U.S.A. GRAND PRIX Watkins Glen, 7th Oct. 100 laps, 230 miles	1. Jim Clark (Lotus-Climax) 2 h. 7 m. 13.0 s. 108.61 m.p.h.	2. Graham Hill (B.R.M.) 2 h. 7 m. 22.2 s.	3. Bruce McLaren (Cooper-Climax) 99 laps	4. Jack Brabham (Brabham-Climax) 99 laps	5. Dan Gurney (Porsche) 99 laps	6. M. Gregory (Lotus-B.R.M.) 99 laps	Fastest Lap Jim Clark 1 m. 15.0 s. 110.40 m.p.h.
SOUTH AFRICAN GRAND PRIX East London, 29th Dec. 82 laps, 200 miles	1. Graham Hill (B.R.M.) 2 h. 8 m. 3.3 s. 93.57 m.p.h.	2. Bruce McLaren (Cooper-Climax) 2 h. 8 m. 53.1 s.	3. Tony Maggs (Cooper-Climax) 2 h. 8 m. 53.6 s.	4. Jack Brabham (Brabham-Climax) 2 h. 8 m. 57.1 s.	5. Innes Ireland (Lotus-Climax) 81 laps	6. N. Lederle (Lotus-Climax) 78 laps	Fastest Lap Jim Clark (Lotus-Climax) 1 m. 31 s. 96.35 m.p.h.

#### **RESULTS OF WORLD CHAMPIONSHIP RACES**

Ferrari did come to Aintree for the British Grand Prix, with a singleton entry for Phil Hill, after a great deal of argument. Naturally Porsche, after their Rouen victory, were full of confidence, but this was shaken somewhat when the best that Gurney and Bonnier could do was in the third row of the grid. Clark had pole position with 1 min. 53.6 secs., and shared the front line with Surtees (1 min. 54.2 secs.) and Ireland (Lotus-Climax) with 1 min. 54.4 secs. Behind were Graham Hill and Bruce McLaren. There were 21 starters, and 20 left the line, the unfortunate Ireland having gear selector trouble. Jim Clark swept into the lead, followed by Surtees, Gurney and McLaren, then Brabham and Graham Hill. Phil Hill's Ferrari was disappointingly slow, and after three laps had dropped to 12th place.

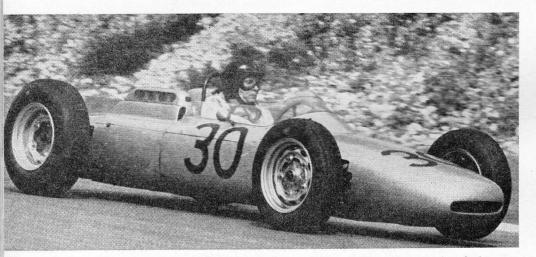
Clark, Surtees and Gurney fought it out in front, but the Porsche's clutch began to slip, and McLaren seized third place, with Brabham and Graham Hill also threatening the ailing German car. Surtees began to have gearbox difficulties and dropped behind Clark, but still pulled away from McLaren. On lap 17, G. Hill passed Gurney into fourth place.

The British Grand Prix then developed into a procession, with Jim Clark averaging the highest speeds ever obtained in a race at Aintree. Sole interest was the battle for third place, featuring G. Hill, Gurney and Brabham. Eventually Gurney's clutch started playing up again, and he was overtaken by several cars. So they finished, Clark, Surtees, McLaren, G. Hill, Brabham and Maggs. Phil Hill dropped a valve after form, and he took premier place on the grid with 8 min. 47.2 secs. Alongside him were ranged G. Hill (B.R.M.), 8 min. 50.2 secs., Jim Clark (Lotus-Climax), 8 min. 51.2 secs., and John Surtees (Lola-Climax), 8 min. 57.5 secs. Rodriguez was fastest of the Ferrari drivers with 9 min. 14.2 secs. (third row). The field of 26 cars was the largest so far in a Grand Prix of 1962.

Heavy rain delayed the start, and when the flag dropped, Clark stalled his engine and left nearly 14 secs. behind the leaders. First casualty was Trevor Taylor, whose Lotus-Climax left the road at Hohe-Acht and was out of the race. Cars slithered in all directions, and G. Hill and Gurney arrived to complete the first lap, almost wheel-to-wheel, pressed closely by P. Hill, Surtees, Bonnier, McLaren and Rodrigeuz, with Brabham in his new car in front of Clark who had picked up an amazing number of places.

Surfees took Phil Hill for third place, and Bonnier also slipped past the 1961 World Champion. Gurney, in the lead, had G. Hill's B.R.M. on the tail of the silver Porsche, and Surfees was in the spray hurled up from the wheels of his rivals. As the rain came down again, Surfees overtook Gurney for second place, and the three leaders travelled almost nose-to-tail when Hill slowed slightly to remove a loose fire extinguisher from getting in the way of the pedals.

On the eighth lap, Clark swept past McLaren for fourth place, and Tony Maggs had passed P. Hill. Hill, Surtees and Gurney continued their fierce struggle, and



DAN GURNEY won the French Grand Prix at Rouen in an eight-cylinder Porsche, but was not so successful in the other World Championship events.

46 laps, and Bonnier went out with gearbox failure.

This result still gave G. Hill the lead in the Championship with 19 points, but Jim Clark had moved up to second place with 18. Next in order were McLaren (16), P. Hill (14) and Surtees (13).

P. Hill (14) and Surtees (13). To the delight of all, Jack Brabham produced his new Brabham-Climax for the German G.P. at Nürburgring. Graham Hill had a brand-new B.R.M., but this was wrecked during practice, when a TV cinecamera dropped off the back of de Beaufort's Porsche, causing Hill to leave the road. Tony Maggs also wrote off a Cooper-Climax V8, when he skidded wildly on the oil dropped from the damaged B.R.M. Fortunately for all concerned, neither driver was hurt, but there was a great hoohah as to who would pay for the wrecked machines.

Dan Gurney (Porsche) was in splendid

Clark was an ever-present menace. On the last lap, the B.R.M. was about 50 yards ahead of the Bowmaker-Lola, and Gurney was still very much in the contest. Jim Clark had fallen back, due to temporary fuel starvation when he had difficulty in turning on the reserve tank.

It was a most thrilling finish, with Graham Hill getting the verdict by 2.5 secs. from Surtees, who held off Gurney by 1.9 secs. Clark took fourth place, followed by McLaren and Rodriguez (Ferrari).

Championship placings were: 1, G. Hill, 28 points; 2, Clark, 21; 3, Surtees, 19; 4, McLaren, 18; 5, P. Hill, 15; 6, Gurney, 13.

Victory was all the more satisfying to Graham Hill, as the car he raced was virtually a spare practice machine.

At Monza, for the Italian Grand Prix, it was a resounding triumph for B.R.M., Graham Hill and Richie Ginther finishing one-two. Jim Clark challenged for one lap, then went out with gearbox troubles, which also afflicted team-mate Trevor Taylor. Ferrari mounted a five-car offensive, with Mairesse in the experimental car driven by Bandini at Nürburgring. Porsche moved back several decades, by fitting discs to their wheels. With G. Hill getting away from the others at about 2 secs. per lap, only John Surtees was able to keep with Ginther. He was always a threat till a piston cried "enough", and thereafter the Owen cars circulated on their own. Behind, the field split up into several groups as is usual at Monza, and on lap 58, Baghetti found himself in third place. This must have proved too great a responsibility, for at the South Curve he did an almighty spin, and caused avoidances in all directions. This dropped him to eighth place, behind Tony Maggs, who had to re-fuel owing to having a small petrol tank. Gurney went into third place, but later abandoned with crunching noises from the rear-end. Up into his spot went McLaren, chased by the Ferraris of Mairesse, Hill and Bandini, and Bonnier's Porsche.

The duel between McLaren and Mairesse kept the crowd on its toes, and there was plenty of passing and re-passing all over the circuit. Graham Hill sailed home to one of his easiest victories, followed home by a jubilant Richie Ginther. Then came the Mairesse-McLaren business. It looked as though the Belgian would get the verdict, but the wily Bruce had shot ahead of Mairesse just after the start of the last lap, and held him all the way over the line.

This was Ferrari's last race of the season. The 24-valve engine had not appeared, and just before Watkins Glen, Phil Hill, Bandini, Baghetti and Ricardo Rodriguez were informed by letter that they were free to seek drives elsewhere, as racing was out until 1963.

The Championship looked pretty good for Graham Hill, and B.R.M. had also a thundering good chance of lifting the Constructors' title. The position was that Hill had collected 37 points, with 36 as best of five. McLaren had 22 from five outings, and Clark, 21 from three. Therefore if Clark could win at Watkins Glen and at East London, he could amass 39, which was the same as Hill would obtain even with a couple of second places. By virtue of more outright wins, Clark would become Champion. McLaren, even with two more wins, could not amass more than 35 points from his best five performances, so if Clark could win in the American race, the title was still very much open. The same applied to the Constructors' Championship, for a double Lotus-Climax victory would pip B.R.M.

As is now a matter of history, Jim Clark pulled off the Watkins Glen race. He led for the first dozen laps, and was then taken by Hill who kept in front for seven more laps. Jim whipped the monocoque Lotus-Climax into the lead again, a lead which he never lost. Behind, a furious battle developed for third place, featuring Ginther, McLaren, Gurney and Brabham. Ginther blew up his engine, and McLaren gradually made third place his very own. Dan and Jack battled it out, and the latter took the flag 0.9 secs. ahead of the Porsche. Brabham was the first man ever to obtain Championship points in a car of his own construction.

Clark's meteoric progress was achieved without a clutch for about half of the 100laps distance. His record race average was 108.61 m.p.h., and in fact the first seven finishers were all faster than Ireland's 1961 average. Jim also set a new Watkins Glen record with 1 min. 15 secs. (110.40 m.p.h.). Porsche gave Fast London a miss so

Porsche gave East London a miss, so Gurney and Bonnier were without drives. Ferrari, of course, were also non-starters, and with the exception of de Beaufort's old Porsche, and a couple of South African hybrids, the entry was an all-British one.

Jim Clark's tremendous effort to secure victory for Team Lotus is too recent to require re-telling. It is sufficient to relate that, in the third lap, he set up the lap record with nearly 24 gallons of petrol aboard, and with over 30 sees. lead, 23 tours from the finish, it looked as though B.R.M. would lose both titles. However, it was not to be. On the 59th lap, a small bolt in the distributor housing came loose, and Clark lost all his oil. As it is forbidden to add oil during a Grand Prix, the Lotus-Climax was out of the race, and victory went to that model of consistency, Graham Hill, who had plugged on determinedly, never putting a wheel wrong. Team Lotus also lost their chance of the Constructors' title, when Trevor Taylor abandoned with gearbox trouble, and Innes Ireland just did not have the speed or handling necessary to overcome Hill, McLaren, Maggs and Brabham. The Cooper-Climaxes were most impressive, and the pair duelled for the largest part of the race, after Surtees went out with piston failure, aggravated by gearbox difficulties. Brabham once again

#### BRUSSELS GRAND PRIX

- BROSSELS GRAND PRIX Heysel--Ist April (3 Heats--185 miles) 1. Willy Mairesse (Ferrari), 5 pts., 66 laps. 2. Jo Bonnier (Porsche), 10 pts., 66 laps. 3. Innes Ireland (Lotus-Climax), 13 pts., 66 laps. 4. Keith Greene (Gilby-Climax), 19 pts., 65 laps. 5. John Campbell-Jones (Emeryson-Climax), 22 pts., 55 laps. 6. Joseph Siffert (Lotus-Ford), 26 pts., 62 laps. Fastest lap: Stirling Moss (Lotus-Climax), 2m. 00.0 s., 84.87 m.p.h.

#### LOMBANK TROPHY

- LOWBAINK TROPHY
  Snetterton—14th April (136 miles)
  1. Jim Clark (Lotus-Climax), 50 laps in 1 h. 20 m.
  25.6 s., 101.09 m.p.h.
  2. Graham Hill (B.R.M.), 1 m. 21 m. 13.6 s.
  3. Jo Bonnier (Porsche), 49 laps.
  4. Keith Greene (Gilby-Climax), 49 laps.
  5. Tony Shelly (Lotus-Climax), 48 laps.
  6. Wolfgang Seidel (Porsche), 47 laps.
  Fastest lap: Moss, 1 m. 33.6 s., 104.23 m.p.h.

#### PAU GRAND PRIX

- PAU GRAND PRIX Pau-23rd April (172 miles) 1. Maurice Trintignant (Lotus-Climax), 100 laps in 2 h. 39 m. 35.5 s., 64.48 m.p.h. 2. Ricardo Rodriguez (Ferrari), 2 h. 40 m. 09.1 s. 3. Jack Lewis (B.R.M.), 2 h. 40 m. 10.1 s. 4. Tony Marsh (B.R.M.), 99 laps. 5. Lorenzo Bandini (Ferrari), 99 laps. 6. Nino Vaccarella (Lotus-Climax), 98 laps. Fastest lap: Jim Clark (Lotus-Climax), 1 m. 33.4 s., 66.09 m.p.h. 66.09 m.p.h.

- GOODWOOD "100" Goodwood—23rd April (101 miles) 1. Graham Hill (B.R.M.), 42 laps in 58 m. 55.2 s., 102.65 m.p.h. 2. Bruce McLaren (Cooper-Climax), 59 m. 38.6s.

- J. Innes Ireland (Lotus-Climax), 41 laps.
   Roy Salvadori (Lola-Climax), 41 laps.
   Masten Gregory (Lotus-Climax), 41 laps.
   Tony Shelly (Lotus-Climax), 40 laps.
   Fastest lap: John Surtees (Lola-Climax) and Stirling Moss (Lotus-Climax), 1 m. 22.0 s., 105.37 m.p.h.

#### AINTREE "200"

- Antree-28th April (150 miles) 1. Jim Clark (Lotus-Climax), 50 laps in 1 h. 37 m. 08.2 s., 92.65 m.p.h. 2. Bruce McLaren (Cooper-Climax), 1 h. 38 m. 38.4 s.
- Bruce McLaten (Cooper China),
   Bril Hill (Ferrari), 1 h. 38 m. 42.4 s.
   Giancarlo Baghetti (Ferrari), 1 h. 38 m. 43.2 s.
   Trevor Taylor (Lotus-Climax), 49 laps.
   John Campbell-Jones (Emeryson-Climax), 48

- laps. Fastest lap: Clark, 1 m. 54.0 s., 94.74 m.p.h.

#### B.R.D.C. TROPHY RACE

- B.R.D.C. IROPHY RACE Silverstone–12th May (152 miles) 1. Graham Hill (B.R.M.), 52 laps in 1 h. 31 m. 34.2 s., 99.73 m.p.h. 2. Jim Clark (Lotus-Climax), 1 h. 31 m. 34.2 s. 3. John Surtees (Lola-Climax), 1 h. 33 m. 30.6 s. 4. Innes Ireland (Ferrari), 51 laps. 5. Brtuce McLaren (Cooper-Climax), 51 laps. 6. Jack Brabham (Lotus-Climax), 51 laps. Fastest lap: Clark, 1 m. 36.4 s., 109.31 m.p.h.



GRAHAM HILL stands beside his B.R.M. thinking about what it is like to be World Champion.

Results

of the

#### Non-Championship

Races . . .

#### NAPLES GRAND PRIX

- NAPLES GRAND PRIX Posillipo-20th May (93 miles) 1. Willy Mairesse (Ferrari), 60 laps in 1 h. 19 m. 36.1 s., 70.31 m.p.h. 2. Lorenzo Bandini (Ferrari), 1 h. 19 m. 39.4 s. 3. Keith Greene (Gilby-Climax), 59 laps. 4. Carlo Abate (Porsche), 59 laps. 5. Ian Burgess (Cooper-Climax), 58 laps. 6. Tony Shelly (Lotus-Climax), 58 laps. Fastest lap: Bandini and Mairesse, 1 m. 18.1 s., 71.76 m.p.h.

- 71.76 m.p.h.

2,000 GUINEAS RACE

- 2,000 GUINEAS RACE Mallory Park—11th June (101 miles) 1. John Surtees (Lola-Climax), 75 laps in 1 h. 05 m. 2. Jack Brabham (Lotus-Climax), 1 h. 05 m. 21.8 s.
- 21.8 s.
  3. Graham Hill (Lotus-Climax), 1 h. o. 31.8 s.
  4. Mike Parkes (Cooper-Climax), 74 laps.
  5. Masten Gregory (Lotus-Climax), 73 laps.
  6. Jo Bonnier (Porsche), 73 laps.
  Fastest lap: Surtees, 50.8 s., 95.67 m.p.h. Graham Hill (Lotus-Climax), 1 h. 05 m.

#### CRYSTAL PALACE TROPHY

- CRYSIAL PALACE IROPHY
  Crystal Palace—11th June (50 miles)
  I. Innes Ireland (Lotus-B.R.M.), 36 laps in 34 m.
  46.4 s., 86.34 m.p.h.
  Roy Salvadori (Lola-Climax), 35 m. 06.6 s.
  Bruce McLaren (Cooper-Climax), 35 m. 09.0 s.
  4. Tony Settember (Emeryson-Climax), 35 laps.
  5. Brian Hart (Lotus-Ford), 35 laps.
  6. David Piper (Lotus-Climax), 34 laps.
  Fastest lap: Ireland, 57.2 s., 87.46 m.p.h.

#### **RHEIMS GRAND PRIX**

- Rheims—Ist July (260 miles) 1. Bruce McLaren (Cooper-Climax), 50 laps in 2 h. 02 m. 30.2 s., 126.33 m.p.h. 2. Graham Hill (B.R.M.), 2 h. 02 m. 38.2 s. 3. Innes Ireland (Lotus-Climax), 2 h. 04 m. 06.5 s. 4. Jack Brabham (Lotus-Climax), 2 h. 04 m. 33.8 s. 5. Maurice Trinignant (Lotus-Climax), 49 laps. 6. Roy Salvadori (Lola-Climax), 49 laps. Fastest lap: Hill, 2 m. 24.0 s., 128.97 m.p.h.

brought his own car into fourth place, not far behind McLaren and Maggs, who crossed

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the line a few yards apart, in that order. Graham Hill's effort was a lone one, for Ginther had plug trouble and was unable to give his team-mate proper support. The third B.R.M., driven by Bruce Johnstone, was a training car, made raceworthy at the last moment, but well down in power. Thus to B.R.M. went the 1962 honours,

the first-ever Championship victory by a British driver in an all-British car. It was a near thing, and Jim Clark's tremendous driving will not be forgotten by the 90,000 spectators who were present. History was also made, for McLaren's Cooper-Climax was the first car to be fitted with a fuel-injected (Lucas) Coventry Climax engine to take part in a grande epreuve, whilst Neville Lederle's sixth place with his 1961 Lotus-Climax, gave two South African drivers Championship points in one race.

The Dunlop concern can take great credit for the 1962 Championship series. Every single car in every race was fitted with their tyres, and, in addition, B.R.M. used their wheels and disc brakes. The Championship marque also used Ferodo brake linings, Lucas fuelinjection and transistor equipment, Shell oil and petrol.

#### SOLITUDE GRAND PRIX

- Solitude—15th July (177 miles) 1. Dan Gurney (Porsche), 25 laps in 1 h. 45 m. 37.2 s., 100.72 m.p.h. 2. Jo Bonnier (Porsche), 1 h. 47 m. 24.3 s. 3. Trevor Taylor (Lotus-Climax), 1 h. 49 m.
- 32.3 s.
- Ian Burgess (Cooper-Climax), 24 laps.
   Carel Godin de Beaufort (Porsche), 23 laps.
   Gerhard Mitter (Lotus-Climax), 23 laps.
   Fastest lap: Gurney, 3 m. 55.6 s., 108.37 m.p.h. CANON RACE

CANON RACE Karlskoga—12th August (56 miles) 1. Masten Gregory (Lotus-B.R.M.), 30 laps in 42 m. 51.3 s. 2. Roy Saivadori (Lola-Climax), 42 m. 58.6 s. 3. Jo Bonnier (Porsche), 42 m. 58.8 s. 4. Innes Ireland (Lotus-Climax), 43 m. 28.0 s. 5. Ian Burgess (Cooper-Climax), 29 laps. 6. Carel Godin de Beaufort (Porsche), 29 laps. Fastest lap: Ireland, 1 m. 24.1 s.

MEDITERRANEAN GRAND PRIX

MEDITERRANEAN GRAND PRIX Pergusa—19th August (150 miles) 1. Lorenzo Bandini (Ferrari), 50 laps in 1 h. 09 m. 25.8 s., 129.06 m.p.h. 2. Giancarlo Baghetti (Ferrari), 1 h. 09 m. 58.3 s. 3. Carlo Abate (Porsche), 49 laps. 4. Joseph Siffert (Lotus-Climax), 48 laps. 5. Bernard Collomb (Cooper-Climax), 45 laps. 6. Roberto Lippi (De Tomaso-Osca), 44 laps. Fastest lap: Baghetti and Bandini, 1 m. 20.9 s., 132.92 m.p.h.

COPENHAGEN GRAND PRIX Roskilde Ring—25th-26th August (3 Heats—70 miles) 1. Jack Brabham (Lotus-Climax), 80 laps in 59m, 14.1 s.

4.1 s. 2. Masten Gregory (Lotus-B.R.M.), 59 m. 34.9 s. 3. Innes Ireland (Lotus-Climax), 59 m. 47.3 s. 4. Gary Hocking (Lotus-Climax), 1 h. 01 m.

GOLD CUP

GOLD COP Oulton Park—1st September (201 miles) 1. Jim Clark (Lotus-Climax), 73 laps in 2 h. 03 m. 46.6 s., 97.70 m.p.h. 2. Graham Hill (B.R.M.), 2 h. 05 m. 04.2 s. 3. Jack Brabham (Brabham-Climax), 70 laps. 4. Bruce Johnstone (B.R.M.), 70 laps. 5. Tony Shelly (Lotus-Climax), 69 laps. 6. Masten Gregory (Lotus-B.R.M.), 69 laps. Fastest lap: Clark, 1 m. 40.0 s., 99.40 m.p.h.

MEXICAN GRAND PRIX

Mexico City-4th November (186 miles) 1. Trevor Taylor/Jim Clark (Lotus-Climax), 60 laps in 2. h. 03 m. 50.9 s., 90.31 m.p.h. 2. Jack Brabham (Brabham-Climax), 2 h. 04 m.

Jack Brabham (Brabham-Chinas), 2
 Janes Ireland (Lotus-Climax), 59 laps.
 Jim Hall (Lotus-Climax), 59 laps.
 Masten Gregory (Lotus-B.R.M.), 59 laps.
 Bob Schroeder (Lotus-Climax), 57 laps.
 Fastest lap: Clark, 1 m. 59.7 s., 93. 44 m.p.h.

Fastest lap: Brabham, 42.7 s.

132.92 m.p.h.

AUTOSPORT, JANUARY 11, 1963

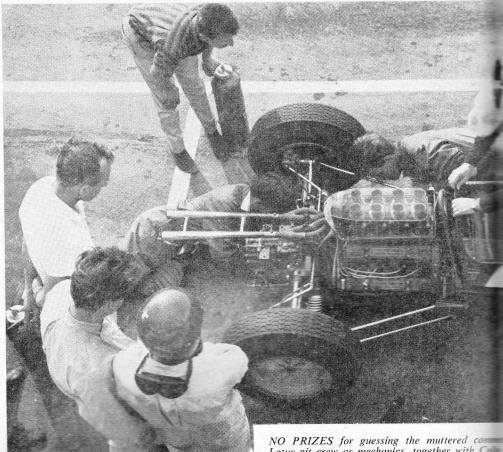


THE FIRST THING TO DO is to have this lot out. Jack Brabham seems to be preparing to change his power unit (above). Perhaps he was going to lend this one to Jim Clark? BELOW: A pensive Richie Ginther sits huddled in the cockpit of his B.R.M. before the race. Misfiring delayed him during the Grand Prix, and he finished in seventh place.

# EAST LONDON

## A Pictorial Flashback to South

PHOTOGRAPHY BY



NO PRIZES for guessing the muttered comp Lotus pit crew as mechanics, together with Comp look for the oil leak, while Jim Clark (foregrad (above). BELOW: There it is ! Chapman put the leak which might have cost the Champion of certainly put Clark out of the race.



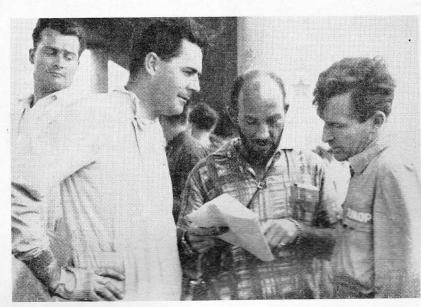


AUTOSPORT, JANUARY 11, 1963



## Africa's Championship Decider





NOW, ACCORDING TO THIS . . . Jack Brabham looks on and listens as a bearded Stirling Moss (so that's where his hair went to) discusses the written word (above). LEFT: John Surtees, unlucky in South Africa, but victorious in New Zealand.

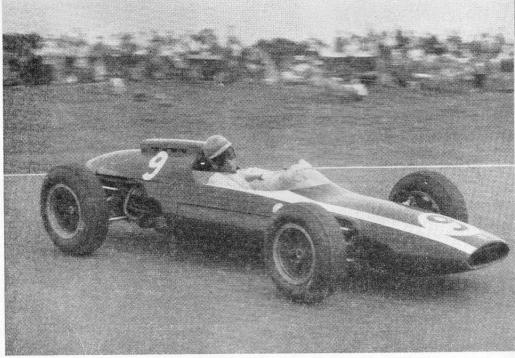


CONSIDERING that it is full of leaves from that perishing laurel wreath they stuck round my neck, this doesn't taste so bad. Wonder if I can drink the lot?









THIRD PLACE went to Tony Maggs (above) in a close finish with his Cooper team-mate, Bruce McLaren.

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## the TRIUMPH SPITFIRE

#### JOHN BOLSTER TESTS

The Triumph Spitfire 4 is a most exciting new, small sports car. Capable of a timed-both-ways maximum speed of 90 m.p.h. and of covering the standing quarter-mile in 19.4 seconds, it can also average a full 30 m.p.g. under give-and-take conditions. It therefore has all the performance characteristics that the average sports car driver wants.

Yet, the Spitfire is not only a sports car. With its winding windows raised and hood up, it becomes a luxurious coupé. The hood fabric never flaps, the heater is efficient, and the sound level is quite low. Above all, it has a turning circle of only 24 ft., which renders it an ideal town and shopping car. With its extremely attractive appearance and superior finish, this Triumph must be a good buy at a basic price of £530 (P.T. extra).

The foundation of the car is a narrow, backbone-type box-section frame, similar to that of the Triumph Herald but shorter. There is independent front suspension by wishbones and helical springs, with rack and pinion steering and an anti-roll bar. Behind, the independent suspension is by swing axles with a transverse laminated spring, and a hypoid final drive unit is mounted on the chassis.

The four-cylinder engine has a capacity of 1,147 c.c. and a compression ratio of 9 to 1. It has push-rod-operated overhead valves and twin carburetters, developing a useful 63 b.h.p. at 5,750 r.p.m. With a weight of only 14 cwt. this is sufficient to guarantee a lively performance. The gearbox has synchromesh on the upper three ratios and the open propeller shaft is contained in a central tunnel.

The disc front brakes are included in the price, whereas they are optional extras on the Herald. The car is well equipped, a rev. counter being fitted as standard, but an oil pressure gauge would be appreciated by enthusiastic drivers. There is quite a useful luggage boot and some space behind the seats, while the whole front end opens up to reveal the engine and suspension, conferring

a degree of accessibility that is rare indeed, the power unit being unusually far forward. Even with the hood up, the Spitfire is

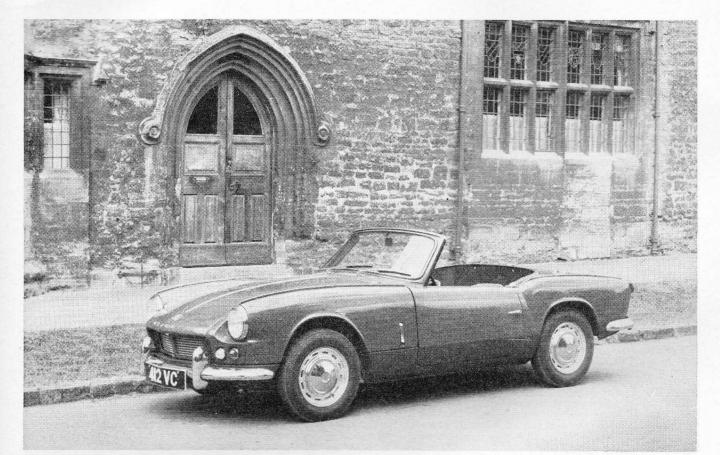
Even with the hood up, the Spitfire is quite easy to enter through its large doors. The fly-off hand brake is an appreciated feature and the gear lever is well placed for easy operation. The steering column is arranged to telescope in the event of a crash, and there are many other safety features.

The clutch grips well and the getaway is rapid without any pattering of the rear wheels, but wheelspin is experienced in snow due to the weight distribution. The engine is very flexible indeed, permitting much of the work to be done on top gear, but third gives a full 70 m.p.h., encouraging very rapid ascents of the steeper hills. The gear change is easy, the synchromesh being adequate for all but the most clumsy drivers. The gears are just audible, but the final drive is completely silent, a considerable engineering achievement. The engine is a very willing little unit, permitting 80 m.p.h. cruising with a considerable reserve of power beneath the right foot. Exactly 90 m.p.h. was achieved in both directions on the timed stretch, the car being closed at the time. The exhaust is quiet, but the engine, while revving smoothly, has just that suspicion of "hardness" that one expects of sporting machinery.

As this is strictly a two-seater, the suspension does not have to be proportioned to carry rear passengers. In consequence, a more advantageous angle has been chosen for the rear swing axles than in the case of the Herald, which is of great benefit to the cornering power. The Spitfire does not oversteer until it is really forced into a corner, when the sliding of the rear end is fully controllable. The ride is distinctly firm, but more comfort is given over bad road surfaces than would be expected. The insulation of road noise from the body is very good indeed.

The steering is quite light and unusually "quick", which is exactly as it should be in a sports car. The machine feels very controllable, is steady at speed, and has





powerful brakes which do not fade. There is leg room for the tallest driver.

From these remarks, it will be realized that the Spitfire is a very attractive little car. It is therefore with great regret that I have to make a criticism, which concerns the shoulder and elbow room of the driver. Now, I am perhaps rather broad across the back and I also have a right shoulder which is tender from an old injury. For me, the Spitfire is too constricted on the right side,

ENGINE INSTALLATION is extremely neat yet there remains perfect access for inspection and maintenance. In common with other Triumphs, the bonnet hinges right forward.



and a long journey eventually results in my arm feeling stiff and uncomfortable. Men and women with narrower shoulders would not notice the lack of space, but I felt that a slight modification of the right door would be a good idea, and it might even be possible to move the seat fractionally towards the centre of the car. Until this is done, I cannot become a Spitfire owner, which is a pity.

I have only one other minor criticism. The very attractive barrel-shape of the bottom of the body does result in some dirt being flung from the front wheels. A very simple form of flap could probably be

#### SPECIFICATION AND PERFORMANCE DATA

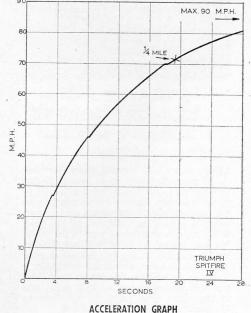
- Car Tested: Triumph Spitfire 4 sports two-seater, price £640 19s. 7d. including P.T. Extra: Heater £13 5s. 10d. including P.T.
- 113 5s. 10d. including P.T. Engine: Four-cylinders 69.3 mm. × 76 mm. (1,147 cc.). Push-rod-operated overhead valves. Compression ratio 9 to 1. 63 b.h.p. at 5,750 r.p.m. Twin SU carburetters. Lucas coil and distributor. Transmission: Single dry plate clutch. Four-speed gearbox with synchromesh on upper three gears and central gear lever, ratios 4.11, 5.73, 8.87, and 15.40 to 1. Open propeller shaft. Chassis-mounted hypoid final drive. Chassis: Bayssection backbong frame with start b.d.
- Chassis: Box-section backbone frame with steel body on outriggers. Independent front suspension by wishbones, helical springs, and anti-roll bar. Rack and pinion steering. Independent rear suspension by swing axles with radius arms and transverse spring. Telescopic hydraulic dampers all round. Disc brakes in front, drums behind, with hydraulic actuation. Bolt-on disc wheels fitted 5.20—13 ins. tyres. tyres.
- Equipment: 12-volt lighting and starting. Speedo-meter. Rev. counter. Fuel and temperature gauges. Flashing direction indicators. Windscreen wipers and washers. Extra: heating and demisting.
- Dimensions: Wheelbase 6 ft. 11 ins. Track (front) 4 ft. 1 in.; (rear) 4 ft. Overall length 12 ft. 1 in. Width 4 ft. 9 ins. Turning circle 24 ft. Weight 14 cwt.
- Performance: Maximum speed 90 m.p.h. Speeds in gears: 3rd, 70 m.p.h., 2nd, 46 m.p.h., 1st, 27 m.p.h. Standing quarter-mile 19.4 s Acceleration: 0-30 m.p.h., 4s.; 0-50 m.p.h., 9.2 s.; 0-60 m.p.h., 13.2 s.; 0-70 m.p.h., 17.9 s.; 0-80 m.p.h., 26.5 s.

Fuel Consumption: 30 m.p.g.

devised, and this would keep the body, screen, and windows clean.

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It is quite remarkable what a sense of luxury this convertible body gives, and it is in no way inferior to a conventional saloon in this respect. These creature comforts do not make the little machine any less sporting, and with the hood down the appearance is as dashing as the most avid enthusiast could wish. This is a fast sports car that has perfect town manners and an appearance that will break down the sales resistance of many prospective owners. At its low price, it is bound to increase the popularity of Triumph cars.



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#### BRIAN FOLEY'S

## **Report From**

## Eire

THE following committee was elected at the Annual General Meeting of the Irish Motor Racing Club, held in the Royal Irish Automobile Club's premises in Dawson Street, Dublin on Monday, 10th December: Sir Basil Goulding, President; Joe O'Neill, Hon. Secretary; Dickie Lovell-Butt, Joe Flynn, Nick Flynn, Jack Fildes, Billy Kilroy, Arthur Knowles, Barney Manley, Vincent O'Reilly, and Alex Wood. Alex Wood, Barney Manley, and Billy Kilroy make up a special three-man race committee to deal exclusively with the Phoenix Park Race meeting scheduled for 27th July. Hon. Secretary of the race com-mittee is Mrs. Hope Kilroy. Regulations for the Phoenix Park meeting

will be available as early as mid-January, when it is hoped to have a world-famous Grand Prix driver in Dublin for the I.M.R.C's popular Midnight Matinee of maine films. Execution states and the Porther will racing films. Feature event in the Park will be a Formula Junior race, and if Formula Two becomes popular by next July, an F2 section may be incorporated. In a letter just received, Hope Kilroy gives the following interesting information on the Club's Night and Day Rally in January. This event starts in Dundalk on Saturday, 12th January, at 9 p.m., and the first car is expected back at the finish in Dundalk at approximately 3.30 p.m. on Sunday, 13th January. Saturday night and early Sunday morning will be devoted to the serious navigation, with possibly two driving tests as well. After the breakfast stop in Athlone, the rally will return to finish at Dundalk, via Mullingar, Oldcastle, Navan, and Drogheda. Driving tests will be held in most of these towns, and navigation will not be of a serious nature. A number of driving tests will be held at the finish in Dundalk. Due to the very generous help from the sponsors of the rally (not named as yet), I.M.R.C. have a good selection of awards, including three navigator awards. Breakfast will be free for each driver and navigator. The Night and Day Rally is a Hewison qualifying event. It is strongly rumoured that an R.A.C. Rally-type forestry timed-section will be included, although I have no official confirmation regarding same.

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NORTH of Ireland speed events for 1963 are as follows:

30th March: Kirkistown Race meeting. 27th April: Cairncastle Hill Climb.

18th May: Spelga Hill Climb. 25th May: Kirkistown Race meeting.

8th June: Syonfin Hill Climb.

22nd June: Bishopscourt Race meeting.
6th July: Kirkistown Race meeting.
17th August: Craigantlet Hill Climb. (British Hill Climb Championship event.)

24th August or 31st August: Kirkistown

Race meeting. 21st September: Bishopscourt Race meet-

ing. 28th September: Kirkistown Race meeting. 5th October: Knockagh Hill Climb. 10th October: Kirkistown Sprint.

It is a pity that the people concerned with allocating dates for Northern and Southern speed events could not get together and thus avoid clashes, such as Spelga Hill Climb and the Rathdrum Road races on the same day (18th May) and a Kirkistown meeting and Calary Hill Climb also on the same day (25th May). An unspecified speed event to be run by the Tipperary Club is down for 17th August, the same day as Craigantlet Hill Climb. On 27th April, Carincastle Hill Climb is due to be held in Co. Antrim, and almost 300 miles away, Dungarvan Hill Climb will be held on 28th April. The same applies to a Bishopscourt meeting on 22nd June and Corkscrew Hill Climb on 23rd June, and a Kirkistown meeting on 6th July, and the Galway Hill Climb on 7th July. Drivers wishing to compete in both Saturday and Sunday events will have a lot of gear ratio swopping to do, and considerable mileage to be covered between the events.

#### NATAL GRAND PRIX—continued . . .

By dint of some pretty forceful motoring Trevor was able to stay in front, and he won by 2.3 secs.

Results of the second heat were:

1, T. Taylor (Lotus 25); 2, G. Hill (B.R.M.); 3, N. Lederle (Lotus 21); 4, P. De Klerk (Alfa Special); 5, E. Pieterse (Lotus 21); 6, B. van Niekerk (Lotus 22); 7, E. Bosman (L.D.S.-Alfa); 8, R. Cresp (Cooper-Alfa).

BASED on the results of these two heats, the grid positions for the main race were:

R. Ginther (B.R.M.)	T. Taylor (Lotus 25)	G. Hill (B.R.M.)
B. Johnstone (B.R.M.)		an der Vyver Lotus 24)
N. Lederle (Lotus 21)	P. De Klerk (Alfa Special)	E. Pieterse (Lotus 21)
S. Tingle (L.D.SAlfa		F. Viljoen D.SClimax)
C. Trundell Cooper-Maserati)	B. van Niekerk (Lotus 22)	J. Love (Cooper-Climax)
E. Bosman (L.D.S. Alfa	) (	R. Cresp Cooper-Alfa)
		D. Serrurier (L.D.SAlfa)
D. Riley (Cooper-Climater)		Г. Blokdyk ooper-Alfa)
W. Dunlop (Cooper-Alfa)	J. Clark (Lotus 25)	

WITH Jim Clark starting from the back of the grid, it was up to Trevor Taylor to keep the Lotus flag flying, and he did so in no uncertain manner by screaming into the lead and rapidly increasing the distance between himself and the rest of the field. Bruce Johnstone followed him off the mark, but was passed by both Hill and Ginther before the end of the lap, by which time Trevor had a 3 secs. advantage over them.

Trevor set up a new record on his second lap with a tour in 1 min. 24.20 secs., and at the same time increased his lead to  $7\frac{1}{2}$  secs.

Behind them all Jim Clark was catching up at a fantastic rate. After moving up from last to seventh on the first lap he passed De Klerk and Lederle, and on lap four he passed Bruce Johnstone as well and set off in pursuit of Ginther and Hill. Johnstone's car was smoking badly and throwing oil on the corners, and it didn't look as though he would finish. Ginther was slowly falling behind his flying team-mate, but even Hill didn't seem capable of catching Taylor, who was now 14 secs. ahead of him.

Clark was still catching up at a tremendous pace, and on lap nine he passed Three laps later he caught and Ginther. passed Graham and had increased the distance between them to  $2\frac{1}{2}$  secs. by lap 13, on which lap Johnstone retired with engine failure. The position at this stage was: Taylor, Clark, Hill, Ginther, Lederle, De Klerk, Pieterse, Love.

Lederle was going incredibly well, and although a long way behind Ginther, was an equally long way ahead of De Klerk. The latter was going well, but Ernest Pieterse was gradually catching up to him. Syd van der Vyver, the only South African in a V8, apart from Bruce Johnstone, had crashed on lap five, and although severely damaging his car, emerged unscathed himself.

On lap 16 Graham Hill's engine sud-denly went dead on him. Fortunately, this happened while he was in a position to coast into the pits, but although his pit crew worked as fast as they possibly could, it wasn't until Taylor had completed his 26th lap that Graham was able to rejoin the race, and by that time he was 10 laps in arrears.

The only B.R.M. now left was Ginther's,

but he was 37 secs. behind Jim Clark, who in turn was 13 secs. behind his team-mate. Taylor had lapped everyone except Lederle, Ginther and Clark by lap 20 and showed no sign of easing up even though he appeared to be in an unassailable position. The distance between him and Ginther had increased to 43 secs. five laps later, and on lap 26 he lapped Neville Lederle, whose car, incidentally, was the one which Taylor drove in the same race last year. Hill had now rejoined the race, but his

engine was misfiring, and to all intents and purposes his race was run.

Trevor eased off a bit as the race entered its last few laps, probably with the intention of letting Clark draw alongside so that they would finish in the same way as they did at Kyalami, but Jim's engine developed a misfire at the same time, and so Trevor was still  $6\frac{1}{2}$  secs. ahead when he finally crossed the finish line.

Richie Ginther brought the B.R.M. home in third place 19 secs. behind, and Lederle finished fourth a further 2.7 secs. behind.

Colin Chapman was clearly overjoyed with the success of his cars, and in addition to clapping his own drivers on the back, endeared himself to all South Africans by showing his appreciation for Lederle's fine performance.

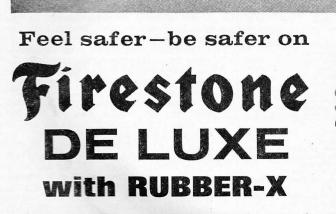
#### RESULTS

RESULTS 1. T. Taylor (Lotus-Climax 25), 48 m. 08.67 s. 2. J. Clark (Lotus-Climax 25), 48 m. 14.83 s. 3. R. Ginther (B.R.M.), 48 m. 28.01 s. 4. N. Lederle (Lotus-Climax 21), 48 m. 30.78 s. 5. E. Pieterse (Lotus-Climax), 19, 48 m. 30.78 s. 6. J. Love (Cooper-Climax), 48 m. 49.14 s. 7. P. De Klerk (Alfa Special), 48 m. 5219 s. 8. S. Tingle (L.D.S.-Alfa), 48 m. 5221 s. 9. E. Bosman (L.D.S.-Alfa), 10, D. Serrurier (L.D.S.-Alfa); 11, B. van Niekerk (Lotus 22); 12, F. Viljoen (L.D.S.-Climax); 13, C. Trundell (Cooper-Maserati); 14, J. Holme (Lotus 18); 15, G. Hill (B.R.M.); 16, R. Cresp (Cooper-Alfa). Fastest Ian and naw Ian control Taylor

Fastest lap and new lap record: Trevor Taylor, 1 m. 24.20 s., 96.79 m.p.h.

## Our car's Firestone safe

"What we like about this sort of car is the better handling and road holding. Tell you one thing though—tyres are important. We fit Firestone De Luxe, with Rubber-X<sup>\*</sup>. They're first class — make driving a pleasure."



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## **Club News**

By MICHAEL DURNIN

#### A HOUSE DIVIDED . . .

Last week this column carried a report of a meeting of the Association of Independent Motor Clubs in which the association's rather ambitious plans were enumerated. It appears that the association aim at creating a sort of poor man's R.A.C. Competition Department. R.A.C. recognized clubs enjoy all sorts of

R.A.C.-recognized clubs enjoy all sorts of advantages in that they have an extremely ex-perienced central body to which they can turn for advice, arbitration if necessary, guidance on all matters concerning the sport and which in addition, provides an excellent liaison be-tween member clubs. Furthermore, com-peting members of "pirate" clubs cannot hold a British competition licence as the R.A.C. are the only body authorized by the F.I.A. (which the only body authorized by the F.I.A. (which controls the sport on an international level) to issue such licences. This means that " pirates " are unable to take part in National or Inter-national rallies and are effectively banned from all racing.

What can a pirate club offer that makes it unique? What advantages can members enjoy that would be denied them within the ranks of the affiliated clubs? What makes the pirate association's members believe that they can do a better job than their opposite numbers in affiliated clubs? affiliated clubs?

I am a rally enthusiast and I should hate to



see the sport killed off. A body is to be estab-lished by law which will decide what course the sport will take in the future. I believe that this body should be set up and supervised by the R.A.C. as the only organization competent to perform such a task. The Association of Independent Motor Clubs' first item of policy is that: "The Association will apply for repre-sentation on any advisory or controlling body set up by the Ministry of Transport in con-nection with the control of rallies, etc." For an organization which is in its infancy and has a total lack of the experience necessary for such an undertaking, this seems to be some-thing of an impertinence. If motoring sport on the public roads is to

thing of an impertinence. If motoring sport on the public roads is to flourish it must and will be brought under con-trol and the wisest decision which any Govern-ment sponsored committee could take would be to vest power in the R.A.C. to control ab-solutely all competitive motoring on the roads.



MARGARET POLLARD, wife of former R.A.C. Trials Champion, Charles Pollard, having a go with her daughter acting as "bouncer". MRS.

#### RALLY OF THE YEAR

RALLY OF THE YEAR RALLY drivers and navigators of the Ecurie Cod Fillet have voted the 1962 Express and system ational rally the Rally of the Year. The system is organized by the Wolverhampton and south Staffordshire C.C. Last year's winner was Pat Moss and her navigator David Stone in a Saab. They were the only crew from a record entry of 180 to finish the tough 200 miles all night rally unpenalized for lateness at any of the 52 manned time controls. Why makes the Express and Star so popular with competitors? Basically it is competitors. It is as straightforward and un-complicated as it possibly can be. Great care is taken to make the route difficult while used bye-roads and tracks make the going hards while strict time controls ensure penaltic uses for the slightest delay. Mot many changes have made for the total controls.

#### **Coming Attractions**

- Coming Attractions
  12th January. Vic Hudson Memorial Trophy Race, Levin, New Zealand (F.L.).
  Scottish Sporting C.C. Starlight Rally. Starts Anderson's Garage, Newton Mearns (M.R. 60:536556), at 2 p.m.
  12th-13th January. Cavendish C.C. Fiona Ellison Trophy Rally.
  13th January. Maidstone and Mid-Kent M.C. Brian Lewis Torophy Trial. Starts Mote Cricket Pavilion, Mote Park, Maidstone, at 10.30 a.m.

- Cricket Pavilion, Mote Park, Maidstone, at 10.30 a.m. 19th January. Lady Wigram Trophy Race, Christchurch, New Zealand (F.L.). 19th-20th January. Ashford Kent M.C. Jones Rally. Starts The Swan Hotel, Charing, Kent (M.R. 184/949498), at 7.30 p.m. Harrow C.C. Moss Trophy Rally. Starts Rowstock Corner Garage, Harwell (M.R. 158/479892), at 9.30 p.m. Romjord E.C.C. Clockwatchers' Rally. Starts Stansted Airfield, Essex (M.R. 161/528228<sup>1</sup>/<sub>2</sub>), at 10 p.m.
- 110 n.m.
- at 10 p.m. 19th-26th January. Monte Carlo Rally. Starts Athens (Greece), Frankfurt (Germany), Glasgow (U.K.), Lisbon (Portugal), Monte Carlo (Monaco), Paris (France), Stockholm (Sweden) and Warsaw (Poland). 20th January. Riverside, U.S.A. (T.) 25th January-2nd February. Racing Car Show, Olympia.
- Olympia. 26th January. Teretonga International Trophy, Invercargill, New Zealand (F.L.).

## WARCO CUP SPORTING TRIAL

#### Surprise Win by Newcomer

BY PAUL WATSON

PHOTOGRAPHY BY TONY JOHNSON

WHILE most people stayed at home by a W warm fire and the "tele", 38 brave com-petitors took part in the Peterborough Motor Club's annual Warco Cup Sporting Trial, held for the third year running at Great Weldon on the A43 eight miles north of Kettering. Charles Pollard who usually competes with a Cannon made a splendid job of the organization under far from ideal conditions. Thirty-two hills were attempted, 16 in the morning and the same 16 slightly

altered in the afternoon. Don Rawlings put in a terrific perform-ance to win his first championship trial by the narrowest margin from Billy Warr. This was a most satisfying result, first because Rawlings is a local man and member of the organizing club, and secondly because he is still a comparative newcomer to this branch of motor sport, having only one season's experience behind him.

Thick snow topped by a crisp icy surface made the going very tough, especially for the earlier runners, who were from the beginning quite obviously at a distinct disadvantage. Hill 1 started with a righthand bend containing a vicious hump that sent the cars leaping into the air, full throttle was then needed to take the cars up between gorse bushes to the summit. To make a good run it was necessary to go wide make a good run it was necessary to go wide into the bend which sent several competitors sliding into the bushes. The top was never actually reached, Don Rawlings (Cannon), Peter Highwood (Canhi), David Render (Canhon) and Rex Chappell (Cannon) reached 4 in the morning, and Tony Harrison

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HELPED out of difficulties is BEING Mrs. Pollard's Cannon.

(Wets I) and M. Annett (Cannon) reaching 8 and 7 respectively in the afternoon. The second hill was one of several starting at the bottom of a "bowl" and climbing very steeply out; marker number 6 was the best all day, Ivor Portlock (Cannon) and Billy Warr (Warr IV) getting that far in the morning and nine competitors doing likewise after lunch. Hill 3 was one of the day's more interesting hills. It consisted of three adjacent hummocks joined by steep dips and formed a most spectacular switchback. The surface was soon cleared of loose snow and turned to polished ice under continual tyre-wear; although 18 drivers cleared it in the afternoon, only Billy Warr, Stan Jenkins (Stansford), Frank Wall (Cannon) and Peter Highwood got completely clear at the beginning of the day.

Quite the most scruffy car present was Ken Lees' battered old Wolseley Special; hardly a Wolseley any more, it is fitted with a sturdy VW engine mated to a Hillman gearbox and an Austin Eight back axle. If not exactly a pretty car it does show some individual thinking, and in these days of Ford domination it is nice to see someone prepared to break away from the

trend and think for himself. Another "bowl" or pocket in the ground was in use for Hill 4. There was however a sharp left-hander at the bottom just where the power was needed for the assault. Just for a change it was the after lunch session that ran into trouble here, Bernard Dees (Cannon), Colin Taylor (Cannonball) and Don Rawlings being the only ones clear. Hill 5 was the last of the first section and climbed fairly steeply up to a right-hander, the hard-going then started as the camber changed half way round. Don Rawlings and D. Allen (Cannon) got to marker 4 in the morning, while D. A. Friend (Midnight

Sole London MG Distributors

Special) and John Wilshaw were the only clear runs later on.

Hill 5 completed, the cars then moved across the A43 to a second section of hills. Hills 6, 7 and 8 were all on the side of a hill facing a wood and were rather similar, only differing by the number of ridges to be found. Six saw only Alan Bush (Ford Special) and Mrs. Margaret Pollard (Cannon) up as far as eight, while Billy Warr, Rex Chappell, Dennis Hobson (Cannon), Mrs. Pollard, Alan Bush, Gordon Holdrup (Cannon), Don Rawlings and Tony Harri-son were all clear on 7. Eight saw Billy Warr and Dennis Hobson up as far as marker 7 in the morning and Edward Harrison (Cannon) the sole clear run in the afternoon. D. Allen was now having some trouble with his carburetters and several cars were boiling merrily.

Hills 9, 10 and 11 were of a very similar Interview of the previous three. Hill 9 saw Ivor Portlock, Warr, Rawlings and Hobson get as far as 5 in the morning while Mrs. Pollard and Tony Harrison improved to 6 in the afternoon. Hill 10 saw Hobson, who was excelling on this particular section, as far as 8 and Annett as far as 7, but later nobody could get farther than 6. The eleventh hill was the last in a series of six hills in the open and on the side of a valley. Bertie Sayers with his beautifully turned out Alberties reached as far as 8 in the afternoon and was soon joined by Edward Harrison and John Wilshaw (Cannon).

The remaining five hills were in the woods and offered the drivers a rather more interesting section. Hill 12 saw only expert Rex Chappell up as far as 6 in the morning, but Mrs. Pollard, Edward Harrison and Alan Bush all got as far as 7 after the lunch break

An 8 in the afternoon was the best effort of the day on number 13, Mrs. Pollard taking that honour although competing in her first ever trial. She had obviously learnt a lot from watching her husband Charles Pollard, an ex-Champion of some standing. Mrs. Pollard was accompanied by her elder daughter, and it is believed that this is the first time an all female crew has taken part in a championship event.

Hill 14 started on a narrow ridge, there followed a sharp left turn with an ugly branch poking out to give your head a bang if you took the corner too wide, then a plunge down into a small valley before climbing out the other side. Billy Warr, Rex Chappell, and Dennis Hobson were all clear in the morning, while eight others joined them later on. The penultimate hill should have been just an ordinary climb out of a valley, but a stout tree in the middle of the proceedings made it somewhat more difficult. Geoff Lindsay found this out to his loss, so hard did he hit it that the car

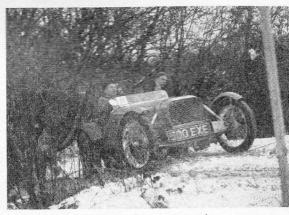
Stratton House, 80 Piccadilly, W.1.

had to be retired with a damaged front axle, Ivor Portlock also hit it pretty hard but was able to continue. However Warr, Holdrup, Rawlings, Ken Lindsay (Cannon), Highwood, Render, John McLaughlin (Ford Special), Rex Chappell, Hobson, and Ernie Chandler (Chandler) all got up. The final hill allowed Warr, Highwood, McLaughlin and Rex Chappell as far as 8 in the morning, and in the afternoon saw six drivers clear.

To make the competition more fair the organizers had a fresh draw for starting positions in the afternoon; had they not done this there would certainly have been none of the morning's early numbers in the top dozen.

Regrettably non-starters included Ron Kemp, Frank Lewis, John Harrison, Ralph Needham, Tony Marshall, Geoff Langdon and others. Geoff Newman made a and others. welcome re-appearance after a trip to New Zealand, while Percy Barden, who is rumoured to have retired, was missed. Retirements were heavy and included Geoff Lindsay, Bernard Dees (back-axle), Edward Harrison and Tony Harrison. Colin Taylor had trouble with his prop-shaft, it kept dropping off; undaunted he pressed on to finish. This was, of course, the first round in the 1963 R.A.C. Trials Vintners Park will be in Championship. use again next Sunday for the Brian Lewis Trophy Trial, a non-championship event, with most of the leading names entered.

Results 1, (Warco Cup), D. J. Rawlings (Cannon), 222; 2, W.G. Warr (Warr IV), 220; 3, I. Portlock (Cannon), 216; 4, R. Chappell (Cannon), 211; 5, G. D. Hobson (Cannon), 209; 6, D. D. Render (Cannon), 196; 7, M. Annett (Cannon), 194; 8, K. B. Lindsay (Cannon), 178; 9, P. F. Highwood (Canhi), 177; 10, G. L. Holdrup (Cannon) and J. M. McLaughlin (Ford Special), 172; 12, L. Chappell (Cannon), 170.



LEE CHAPPELL, son of current Trials Champion Rex Chappell, finished twelfth in his Cannon.

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#### ORRESPONDEN

#### **Independent Motor Clubs**

K NOWING AUTOSPORT's habit of including light-hearted, not to say comic, relief in its pages at the festive season, my first impression, upon reading your item in Club News concerning the proposed Association of Independent Motor Clubs, was that the leg-pulling had been delayed a week in publication. Subsequent realization that the report was intended seriously has dismayed and horrified me.

Like thousands of other enthusiasts, I enjoy my rallying and because I compete regularly, and organize occasionally, I feel that my views on the subject might be of value. I submit them in the sure knowledge that they are shared by many colleagues and rivals, all of whom are members of established, experienced and responsible clubs. Some measure of control over and above that already exercised by

Some measure of control over and above that already exercised by the R.A.C. is obviously imminent. That it is necessary is regrettable, but because it is necessary, it will be accepted, if not welcomed, by every public-spirited rally crew and rally organizer. In whom is this control to be vested? The R.A.C. is the obvious and only choice. It is fashionable to criticize the R.A.C. and certainly that august body has erred from time to time, and will do so again. But, and this is the crux of the matter, the Competitions Department has had a wealth of practical experience in all the problems which at present afflict the sport. They have gained this experience the hard way, often by personal participation, and they know what they are talking about. Their attitude to their members is not that of an autocratic dictator, but of an advisory body endeavouring to give a service to its customers. When it assumes the impending additional control it will be necessary for the R.A.C. to increase its staff considerably. It is only a staff-shortage which is causing the present occasional failure to implement fully the excellent and thorough precautions laid down for the protection of competitor and public alike.

fully the excellent and thorough precautions laid down for the protection of competitor and public alike. In all these circumstances, there is no possible justification for the complication of an alternative, additional, or "splinter" governing organization. An organization which would have to start learning for itself from scratch all the hazards of rally administration and public relations. An organization which would not enjoy the support of any of the established, recognized clubs. An organization whose activities would inevitably clash with those of the governing body, however well-intentioned those activities were.

would inevitably clash with those of the governing body, however well-intentioned those activities were. The present methods of resolving clashes of territory and dates, to mention only two causes of anti-rally feelings, may not be perfect, and may not always be implemented as thoroughly as they should be, but can anybody think of anything better? And can you imagine the confusion, chaos and public inconvenience if two bodies involve them-selves in these important and delicate matters simultaneously? The situation would become ridiculously impossible. No, sir, the survival of rallying as we know it at the moment lies in a reduction in our activities, not in an increase in the governing bodies.

a reduction in our activities, not in an increase in the governing bodies. It lies in the intelligent delegation of the R.A.C.'s authority to the various regional associations. These associations, composed of experienced member clubs, meet regularly and are currently engaged in finding ways and means of keeping the sport going and of reducing public wrath. They will never entirely eliminate anti-rally feelings—nobody will—but already their efforts are showing results—on the lines of reducing numbers, combining organizing on a co-promotion basis and generally ensuring that their members are made aware of the dangers and difficulties of bad organization.

I see in the proposed activities of the projected Association of Independent Motor Clubs nothing more than a short-cut to increased public inconvenience and to the premature abolition (somehow or other,

for don't let us fool ourselves, it could be done, if necessary by "insur-ance" means) of our sport. Am I taking the matter altogether too seriously? Perhaps I was wrong and you really did intend the item as a leg-pull. I hope so. BROMLEY, KENT. RON AMBRIOSE.

 $M_{\rm of}^{\rm y}$  attention has been drawn to the statement from the Association of Independent Motor Clubs which you published in your last week's edition

In view of the objectives announced in this statement it seems a little ironical that it should have taken the shadow of government action to persuade those concerned to adopt the idea of responsible overall organization of motor sport—an idea which has been not only preached but voluntarily practised by the R.A.C. and its associated clubs for

some 65 years. The attitude of the R.A.C. towards this new association must be somewhat influenced by the above. As an aside it is also noted that though substantial claims are made these are not supported by any specific figures.

The individual non-recognized club is a different matter. It should already be well known that the R.A.C. has no particular antipathy towards such clubs so long as they do not seek to make use of the R.A.C. organization of the sport without at the same time accepting the responsibilities attached thereto.

Indeed if you refer to the November issue of the R.A.C. Motor Sport Bulletin you will find a statement to the effect that in any opportunity which the R.A.C. has to influence any regulations concerning rallies to be made by the Ministry of Transport it would be the desire of the R.A.C. to ensure that reasonable provision is made for the motor sporting activities of non-recognized clubs on an individual basis. LONDON, S.W.1. D. H. DELAMONT

Manager, Competitions Department, R.A.C.

AUTOSPORT, JANUARY 11, 1963

#### **Congratulations to Carson**

MAY I congratulate both "Carson" and yourselves, "Carson" for his really excellent cartoons, both topical and penetratingly humorous, and obviously dedicated to the racing and rallying fraternity, and yourselves for giving him the opportunity to display his talent. Another Brockey in the making? Bro-k---k in the making? London, N.W.8.

D. P. MERFIELD.

JOHN MEW.

#### A Letter from Father Christmas

THE present road conditions are not without compensation. Faced with a tricky bit of manoeuvring, I have twice in the past week ex-ceeded my wheel adhesion; however, instead of an expensive "crunch" there has been a very cheap "spludge" as I have run into piled up snow. I can think of no more suitable material to employ in this manner

around our race circuits, safe even for capsizes, and also cooling for those hot-headed Formula Junior drivers!

I think we should press for its adoption, as possibly the greatest advance in safety on the race track. To the parsimonious, who are always ready to retard real progress, this will show just how cheaply it could be arranged. As everyone knows there is "snow" produced as waste around all ice boxes, and on my calculations  $264\frac{1}{2}$  tons are produced each day in home and commercial refrigerators. mercial refrigerators.

It would be, of course, a simple matter to arrange for the collection of this waste at a nominal cost, and its distribution around the margins of the track.

TUNBRIDGE WELLS, KENT.

#### In Defence of Karting

In Defence of Karting I FEEL I must rush to support Mr. Douglas Hughes in his defence of the karting boys. There are still a number of people who regard karting with a certain amount of derision, maintaining that it can hardly be called motor sport. Anyone who has watched a karting event, be it club or international, will appreciate, I am sure, the skill of the drivers and the ability of the technicians. For a lot of people it is the only form of racing they can afford, and the close and fast racing they produce is a tribute to their skill and the delight of the spectators.

the delight of the spectators.

The crowds that attend our local Exeter Club meetings surely testify to the popularity of the sport.

To sum up, we have a sport that is fast (over 60 m.p.h. in Class IV), provides a spectacle and is enjoyed by thousands. So, please give the karting boy a chance to increase his audience and let the public enjoy our sport!

Thanking you for an excellent magazine and for letting me have my 'groan' BARNSTAPLE, DEVON.

BARRIE J. BALDELLI.

#### **Alvis History**

May I draw your attention to a number of inaccuracies in your very interesting article on Alvis in your issue of 28th December? G. P. H. de Freville, although generally credited with having a hand in the derivation of the name Alvis, was not, in fact, a founder of the company

The first overhead valve Alvis was the 12/50, the previous cars being

I he first overhead valve Alvis was the 12/50, the previous cars being all side valve, and in fact the maximum speed achieved by Alvis in 1921 was 82 m.p.h. rather than the 93 m.p.h. claimed. Perhaps personal feelings prompt me to complain about the state-ment that the 12/50 won the J.C.C. 200-mile race by default. My father, Mr. W. M. Dunn, was the designer of this car, and as a result of this success the company presented him with his own new 12/50, his first new car. Victory, quite rightly, goes to the car that crosses the firstshing line first, regardless of whether initially some other vehicle reverses to be faster.

The Abuse of the faster. The 12 k0 from wheel drive did not use a Cozette supercharger, as the Abus engineers did not care for this type which, due to high friction loadings, suffered numerous failures, and they designed their own Roots blower. The 12 80 in fact produced about 80 b.h.p. and the power countrul of 125 b.h.p. referred to by Mr. Pritchard was produced by the 1,500 c.c. Straight Eight, in which the Roots blower was producing a boost of 23 p.s.i.

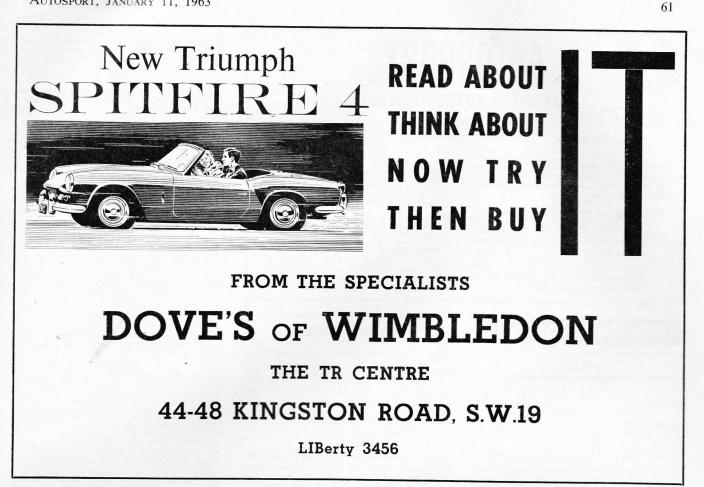
boost of 23 p.s.i. The present series of 3-litre cars, starting with the TA21 in 1950, reflect the sound management policy of offering a very smooth and refined car with adequate performance. The TC21-100 (104 b.h.p. at 4,000 r.p.m.) was not evolved by Mr. Issigonis. Perhaps this misconception arose from a photograph of him standing in front of a coachbuilder's drawing of the Grey Lady, which was published in a number of magazines. Mr. Issigonis joined Alvis to develop a completely new car and did not work on existing models. Alvis have never put any of his designs into production. Technically interesting though they were, it would have required further considerable expenditure to put them into production. into production.

The 3-litre TC108G, with body by Graber, stands out in my mind as an outstanding car with superlative coachwork. Its apparently effortiess long stride made fast journeys a matter of course rather than a feat of concentration, as with some contemporaries. The first photograph in the article is of the TD21 series I, which has been superseded for 1963 by the series II, recognizable externally by spotlamps set into the front air intakes and revised rear number plate design. Mechanical changes consist of Dunlop disc brakes on all four wheels and an optional fivespeed all-synchromesh gearbox.

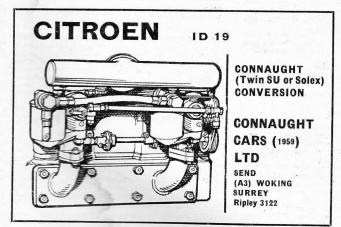
COVENTRY.

MICHAEL DUNN, M.ENG. Chief Engineer, Vehicle Division, Alvis, Ltd.

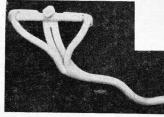
The Editor is not bound to be in agreement with opinions expressed by readers.







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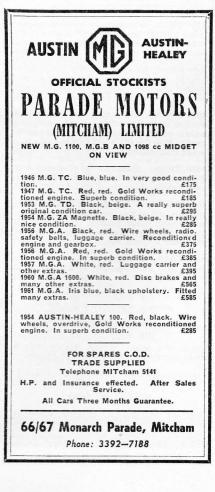
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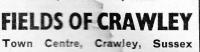
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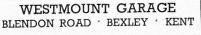
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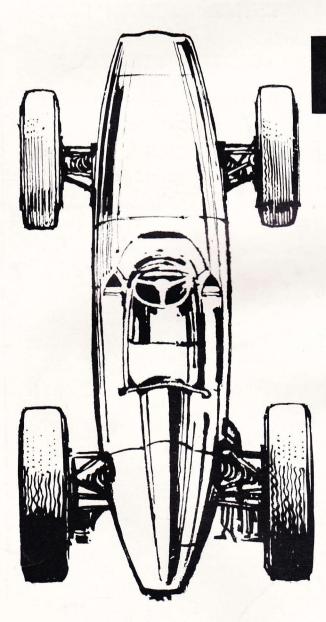
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