The Octagon

The Official Journal of the M.G. Car Club (Queensland Centre)

Vol. I, No. 6. **MARCH, 1959.**

THE M. G. CAR CLUB

(Queensland Centre)

Proprietors: The M.G. Car Club (Proprietary) Limited, Great Britain
Affiliated with the Confederation of Australian Motor Sport
Patron: Viscount Nuffield, G.B.E.
General Secretary: A. Russell Lowry

President: M. E. Hunter — 68 0101 (Business), 48 1627 (Private)
Vice-President: W. Makeham
Secretary: B. R. McMillan — 67 3395 (Private)
Treasurer: E. A. Hunter — 48 1627
Club Captain: S. A. Pollard — 6 2267 (Private)
Committee: W. Thomas, I. Hamilton, R. Davis, R. Lovejoy, T. Connolly

Club Rooms:
620 Wickham Street,
Fortitude Valley

Box 1847W
G.P.O.,
Brisbane

FOREWORD:

It is felt that apologies are due all round for the delay in the publication of the February issue.

As you are aware, it costs the Club nothing for the printing of the OCTAGON and as far as can be ascertained there are only two permanent advertisements, consequently the rest of the space must be sold again each issue. A difficult job for the Agency when they have staff troubles and a strong buyer resistance to their advertising space.

In this matter members are asked to assist in as far as if you see an advertisement which helps you in any way please tell the business house or garage where you found the information. This cuts both ways, it helps to sell the required space which pays for the publication and it further shows the investor that his money is being well spent.

M. E. HUNTER, President.

COMING EVENTS:

As previously announced the Sprint Meeting is now to be held on the 9th May, and copies of the Sup Regs are shortly to be made available.

As usual two sections will be run, the standing and flying. It has been decided to make the entry fee for this afternoon's sport 15/-. This naturally excludes Club Licences which are obtainable from the Secretary for 5/-. N.B. as this is a "closed to Club members" event, no C.A.M.S. licences are needed, only Club licences, so come along and have a burn with the boys.

The Race Meeting for the 12th July will receive consideration shortly and as a lot of work has to be put into it, we suggest that members keep in touch and pull their weight in the near future.

COMMITTEE NEWS:

The Committee wish to announce that a design has been selected for the Club Blazer. After much deliberation over the subject, the ideal type appears to be the "Reefer" Jacket, with polished plated buttons. The Club Badge with the added words "Queensland Centre" is to be approximately the size of the windscreen transfers and is to be embroidered on the Pocket. Any members interested in these Blazers are now invited to further their enquiries to any committee member.

Further to the programme, it has been decided to hold a series of night navigation runs this year, the first of these is to be held on 3rd April, a Friday night.

It should be noted that these runs are to be included in the points score system at a proportionate rate of score to the Main and Day runs. For further information on these runs, contact any member of the trials committee.

For the Organised Night on the 24th April, a Film night, the Secretary informs us he has secured the "Cummins Diesel" Film. Those members who had the good fortune to view this film before will remember what an excellent production it was. Disregarding any prejudice regarding the Indianapolis Races, it is a highly technical film to interest both mechanic and driver.

The programme will be supplemented by the usual short subjects.

PASSED EVENTS:

Slide Evening — 27th February

A good roll up of Regulars attended the Slide Evening at the Club Rooms on the 27th February. This was the first of the Organised Nights to be held this year.

A number of members contributed to the screening and some excellent slides were shown.

Notable among these were the G.P. series of Graham Baker, the Overseas Trip (so far) of John Muller and Royal Tour night lights by Ralph Davis and Ian Hamilton.

Due, unfortunately, to the mixed nature of the audience, the Nude photos of a certain G.B.U. member's repertoire were not shown. However, there WAS one rather incriminating slide, only flashed on momentarily, of course, but just what was Keith Turner doing?

Thanks also are due to members supplying projector for this evening and also to our old pal Brier Thomas who came to the rescue once again with a screen.

The evening was a most enjoyable one indeed and it's to be hoped more are forthcoming.

GYMKHANA 15th March by Dust. E. Throat

A very good roll up was recorded at the Gymkhana held at the Aspley grounds on Sunday, 15th March, and there followed an excellent programme of events.

Starting shortly after 1 p.m. the organisers under the direction of Nigel Stevens lined up the cars for the first event, the Forward Bending Race. The usual contenders were around plus quite a few first timers, but notable absentees were Tom Ross and Ken Ebeling, both of whom have other obligations now.

Ralph (Jim Karna) Davis drove well as usual, but was pipped to the final by Nigel Stevens in the "Y".

Next event was rather a novelty, and many a good laugh was recorded. A sledge, tied on the back of the cars (singly, of course) was towed round and the occupant had to carry a glass of water and place same on a post some 20 or 30 yards distant, then motor on and pick up a block of wood and do likewise, all against the clock. A few spills ensued but comfortable winners were Dave Stewart (simca) and Ian Hamilton (sore backside), in 23.8 secs.

Quite an interesting event followed, and it proved easy meat for Ralph Davis but was not as easy as it looked for most other competitors. This consisted of a piece of string tied to a post at one end and to the side of the car at the other, so that the car should scribe a full circle. 3/4 distant along the string was a piece of paper used as a guide, and 4 posts were placed at 90° 6 feet or so from the centre post, low enough to allow the string to pass over if kept tight. This then was the idea, to keep it tight without breaking it and the fastest time of 2 laps won the event.

The parking test was proved to be rather interesting but whether competitors were misinformed or whether their ideas went astray, is hard to imagine,

but a large percentage thought the faster the better. This, however, was quite wrong.

The cars had to be driven to the parking area (roughly the size of a meter area in town), park, and get out, place an imaginary coin in the meter and drive off to the finish.

The event was also a regularity test in that competitors had to half the time taken from the start until they were back in the car, for the remainder of the run. Therefore, the driver could have taken 10 minutes for the first part, so long as it took only 5 minutes for the second section.

Winner of this event was G. Buckley.

The Autocrosse followed and as usual the "leadfoot" types were on hand with some fine ocular demonstrations of how useless differentials can be and how not to compete in Gymkhanas with smooth tyres and too much power, Barry Weston please note.

Apart from a couple of T.C. types who "hammered" their way around, with, it seems, expensive noises in accompaniment, the prize must go to the two characters who were actually chased by a spinning T.R.2! Don was very indignant that Ian didn't get a photo of his excellent performance, truth of course that Ian was too busy getting out of the road! (phew!)

The Autocrosse was won by W. Thompson, second was P. Thew.

Peter Pollard took the Bob-a-ding and the 10/- which by the way he re-donated to the club — a very nice gesture from you, Peter, Thank You.

Summing up, the organisation was quite good, events interesting with a good variety, weather excellent, not so much dust and a good roll up. However, as a suggestion on saving time, it may pay in future Gymkhanas to run more than one "One car at a time" events, together.

This could have been done in the parking test and "Indian Rope Trick" where only a couple are needed to supervise. All in all it was a good show and credit goes to a hard working Gymkhana Sub-Committee. The gals for the timing and pencil work and Henry Richards for the drink.

FULL LIST OF RESULTS

Forward Bend:
1. N. Stevens
2. N. King
3. D. Bradfoot

Sled Race:
1. D. Stewart
2. R. Davis
3. D. Bradfoot

Rope Trick:
1. R. Davis
2. N. King
3. G. Buckley

Parking and Reg.:
1. G. Buckley
2. R. Pringle
3. K. Baker

Parking and Regularity Test:
1. G. Buckley
2. R. Pringle
3. K. Baker

Autocrosse:
1. W. Thompson
2. P. Thew
3. B. Tebble

Bob-a-ding: P. Pollard

Forward Bending Race:
1. N. Stevens
2. N. King
3. D. Broadfoot

Sled Race:
1. D. Stewart
2. Ralph Davis
3. D. Broadfoot

Indian Rope Trick:
1. Ralph Davis
2. N. King
3. G. Buckley

Autocrosse:
1. W. Thompson
2. P. Thew
3. B. Tebble

Bob-a-ding: P. Pollard

OVERSEAS MAIL BAG:

It appears that J.J.M. has procured a portable tape recorder, so DEAR knows what we will hear in the future.

The boys in general are doing O.K. and there appears to be little of London that John has not seen. He informs us, in a letter to Bruce, that they had a quick look at Brands Hatch the other day and John is still raving.

What with Cocktail parties and the like it must be very boring over there. "Spider" has written from Singapore and all is well with him. John has entered for a night rally with a bod in an A35 and for "Charlie" MacNicols infor. their No. is 127. Bring back memories, eh?

NEW MEMBERS:

Mrs. Treasurer's eyes are still lighting up with the cash register sign as the following new members are welcomed to the fold:—

D. S. Geary, V. Libenstein and Mrs. Constana Blackmore.

It is indeed a welcome sign to see a member of the fairer sex joining our Club. It is about time that the lady members joined in the competition too!

HERE'S THE ANSWER: Ray Lovejoy

Every time we hold a night navigation run, treasure hunt or some similar event, the old cry is heard "the mileage readings on the instruction sheet were incorrect." Now it appears to me that few people really know just how a speedometer works, or the factors that effect its accuracy. So think for a minute fellers, it could be your speedometer that is indicating incorrect speed and distance, say it is only 3% fast, and then you find another competitor with a speedo that reads 4% slow. Now over a distance of ten miles a difference of 7% is quite appreciable without taking into account the accuracy of the readings given in the instructions. But before we get too involved in this error business, a few words on just how a speedo works might be helpful.

Only two types of speedometer are in common use today, they are the chronometric and the magnetic types. The chronometric comprises a revolution counter, an escapement type timepiece and a device for engaging and disengaging the registering mechanism at the beginning and end of definite intervals of time. To describe the principle of operation completely would require more space than we have available here, but in brief the chronometric is the best type of speedo, combining precision and accuracy. It usually has an error of less than .3%.

The magnetic type is the most widely used today due to its cheapness and simplicity, the principle of operation is as follows. The drive shaft or cable is connected to a permanent magnet which rotates at the same speed as the cable. Between the magnet and a fixed field plate is an aluminuim disc or cup, the aluminium disc is fixed to a shaft which is supported by two bearings. The bottom bearing is of the jewel and pivot type, the pivot being part of the shaft and the jewel is in the centre of the magnet on the axis of rotation, the top bearing consists of a hole in a yoke through which the shaft passes, the diameter of the section of the shaft passing through the hole is smaller than the main body of the shaft to allow for end play adjustment by moving the yoke. The torque transmitted by friction between the rotating jewel and the stationary pivot is so small that for practical purposes it can be considered non-existent. To the end of the shaft passing through the yoke is attached a pointer, which by rotating the aluminium disc, is caused to pass over a scale marked in M.P.H.

Now as the magnet rotates, its magnetic field passing through the aluminium disc sets up current in the disc, these currents create magnetic fields of their own which of course react with the field of the rotating magnet, causing the disc to rotate. Attached to the disc shaft is a hair spring, the function of this spring is to oppose the rotation of the disc. Therefore the pointer will take up a position where the torque of the hair spring is equal to the turning force of the disc. When the vehicle stops and the magnet ceases to rotate, the spring will return the pointer to the zero position. The centre of the hair spring is fixed in a collar around the shaft and the outside convolution crosses the shaft and is anchored to the main body of the speedo by means of a tapered pin in

a hole. As the shaft rotates the hair spring winds up causing the outside convolution to press against the shaft, so effectively damping out pointer fluctuation.

The odometer or miles indicator is a separate mechanism, except that it shares with the speed indicator a common drive. The odometer drive is geared to the magnet shaft, and the gear ratio is such that one revolution of the drive of the odometer is equal to a certain fixed distance of travel. The gears of the odometer drive a series of cylinders which are numbered 1-10 at equal intervals around their circumference. When the first cylinder has completed one revolution or ten divisions it moves the cylinder on its left one division, and by this method a record of miles travelled is indicated on the dial. This apparatus is entirely mechanical, and no inaccuracies should appear except when the wrong drive gear ratios are used. This will be explained in detail later in the article.

Now you have some idea of how this infernal contraption works, we can proceed further on this error business.

First of all, the M.P.H. indicator. As it gets older several defects will start to appear. Tension of the hair spring will alter, quite possibly getting weaker causing the speedo to indicate high. The spring may become distorted due to vibration, causing the outside convolution to fail to come in contact with the shaft and due to the loss of damping there will be considerable fluctuation of the pointer. Now as the permanent magnet ages, its field strength becomes weaker, the effect of this is to cause the speedo to indicate low. Bearings wear, and the magnet shaft will develop end play, causing the distance between the magnet and the disc to vary thus affecting the calibration of the speedo. Dust and particles of metal will gradually find their way inside the speedo case, and will accumulate around the magnet assembly, if regular maintenance is not carried out this rubbish will build up, until it rubs against the aluminium disc as the magnet rotates causing violent fluctuations of the pointer. Another cause of failure of a similar nature, is caused by over enthusiastic greasing of the speedo cable. Due to the worn action of the cable, the grease is gradually pumped into the speedo itself, and the effect on the hair spring when the grease finds its way between the disc and the magnet causing them to rotate together can be well imagined. I found this out from personal experience, so now when I service the cable every 6,000 miles, I use a mixture of heavy oil and collodial graphite.

Sometimes wild periodic fluctuations of the speedo pointer are not caused by a fault in the mechanism of the speed indicator, but in the speedo cable. The cable may be kinked or a section frayed, causing the cable to give a good imitation of a spring, due to its binding momentarily and then releasing suddenly as the tension builds up. When a cable breaks, make sure that the magnet shaft rotates freely before connecting it to the new cable. Sometimes due to lack of lubrication this shaft will become stiff and occasionally seize. This is one of the major causes of breakage and should be the first thing to be checked when looking for the cause of breakage.

Now we come to the odometer, and the factors that can effect its accuracy. Due to their mechanical coupling they will also affect the speed indicator. The odometer is geared to the road wheels, the ratio is determined from the speedo gearing, the diff. ratio, and the diameter of the wheels. So that a certain number of revolutions of the road wheels will cause the odometer or distance indicator to advance by one mile. It can be easily seen that any factor that alters this overall ratio will affect the accuracy of the odometer to some degree.

First we will examine the road wheels. Now there are several ways that their original diameter can be alterd. The fitting of oversize or undersize tyres will affect the original diameter, as will tyre pressure and its associated bug, tyre expansion. For instance a typical wheel took 800 revolutions to cover a mile at 10 m.p.h.; at 80 m.p.h. it required only 780 revs. a difference of 2½%. Wheel slipping is often blamed for errors, though it is not always the bogy it appears to be, for on normal road surfaces slipping would not amount to more than one or two revolutions per mile, but of course it must be remembered that on loose gravel surfaces it is an entirely different story. Tyre wear is another cause of error, and possibly the greatest at normal road speeds. A smooth tyre has its original diameter reduced to such an extent that it can cause the speedo to read as much as 4% high.

Many manufacturers have a range of alternative differential ratios for their cars, and it must be remembered that when the diff. ratio is changed, the overall speedo drive ratio must be altered to bring it back to original. Many enthusiasts fail to do this and then wonder why their speedo is as much as 30% out. Manufacturers supply conversion gears for the speedo itself to bring the overall ratio back to somewhere near original. Usually it is difficult to obtain the original ratio as the converter gears are usually supplied in steps of about 6% between gears. So sometimes a 3% error is as close as you can get to original.

Possibly you are now wondering just how accurate your speedo is, but before you pull it apart and end up with a pile of little bits on the kitchen table, and wonder how you can put them together again. Here are a few simple methods for checking its accuracy.

The usual method of checking a speed indicator, is to check it against a tachometer of known accuracy. This is done by a machine which has a variable speed drive, and provision to mount the speedo under test with the standard tachometer so they are taken off a common drive. The revolutions per mile of the speedo are ascertained; this is usually marked on the dial, 1,600 being a common figure, so when the tach. indicates 1600 r.p.m. the speedo should indicate 60 m.p.h., and at 800 revs. 30 m.p.h., etc.

Unfortunately apparatus such as this is not readily available, so we will approach the problem from a different angle. First we must determine the accuracy of the odometer drive ratio, and this can be done in the following manner.

First disconnect the cable from the speedometer, now mark the tyre at its nearest point to the ground and mark the ground to coincide with this mark. Move the car forward six full turns of the wheel and mark the ground again. Count the number of turns the cable has made to the nearest part turn, and measure the distance the wheel has moved in inches. The formula is L $\times$ T over D, where L = 63,360 (inches per mile), T equals the number of cable turns, and D equals the distance covered by the wheel.

Example: T = 13.5 and D = 534.5

Then $\frac{63360 \times 13.5}{534.5}$ = 1,600 revs. per mile.

Now when checking the accuracy of the speed indicator by the following method it must be assumed that the correct relationship exists between the speed indicator and odometer drives. This method will be old stuff to you trials experts, but here is a brief summary for those who are not too sure of the method. Pick a flat straight stretch of road and drive along it at a constant speed; say 30 m.p.h. Now have your navigator with a stop watch note the time in seconds required to cover exactly one mile. The "tenths" indicator of the odometer is used for this purpose. The actual speed in the M.P.H. is found by dividing 3,600 by the time in seconds required to cover one mile.

Those who think this method a waste of petrol that could be put to better use in club events, can use a variation of this method if they have a lathe available. First obtain a length of old speedo cable with the square end intact. Clamp it in the jaws of the lathe so that the square end projects about 8 inches. Now remove the speedo from the dash and insert the square end of the cable into the magnet shaft. By clamping the speedo into position or holding it in the hand so that the cable runs true, time the speedo over a mile by using the method described above.

Well there it is, but before you go away with that thoughtful look on your face, remember this, those distance readings given on the instruction sheets are only a guide, and the careful navigator will make corrections to them when the speedo in his car indicates a different distance at prominent points, and there are always a few given in the instructions for this purpose.

SOCIAL NEWS

Who was the Charlie who was attempting to mix petrol with the sugar the other night. All over the Bar, mind you, was this perishing float bowl. Thank goodness it was only this and not the whole Fuel Tank that broke, Mark!

Connolly's on shift again, night variety, that is. I'll bet the Spotlight on the side of the Service Wagon gets a hiding round all the parks, etc.

Congratulations: To Ken and Claire Ebeling of Toowoomba on birth of a daughter. Also to Mr. and Mrs. Neill McNeill — a daughter. Best wishes go to Lon and Geoff Billing whose marriage took place on 7th March.

Egad! Sir Semfel we dips our lids to that Jaguar, such dignity and elegance Dave.

Mrs. Pollard tried her hand at jam making recently, the result was unexpected, twelve bottles of thin liquid. Never mind Barbara, at least you tried.

The John Finnimores parted with T.C. and now proud owners of Standard Ten, British Racing green too.

The Yummy Allans are very busy these days coping with the ready made family left in their capable hands. Understand we dare not mention school lunches to Margaret.

It was on again, Mrs. Pollard and Mrs. Pres. entertained ladies of "G" Club in honour of Lon Dillies coming marriage. Hostesses tell me husbands disappeared for "meet" — destination unknown.

Graham Perkins and "Little Jim" Davis, commiserating with one another over lights at South Side Junction — bad luck boys.

Bob Burnett has joined "Jag" owners and changed his place of toil. Good luck in your new job, Bob.

Another member is going afield to take up new occupation, all the best to you Brian Shelley.

Heard one magnette being turned out South side way. Could be owner of same is up to something for Gymkhanas?

Kay Makeham thought up a novel idea for her husband's birthday card, pasted tiny car transfers on a hunk of cardboard. Pity you left that tomato juice behind though, Kay!

At past Road Race meet lapscorers stewed in scorching sun, but Val Bowen looked coolest and most comfortable. Half your luck Val.

Members Bill Armstrong and friend Betty Millay in Treasure Hunt were good triers but Betty still recovering from bumps on the head. Swears there are more pot holes in road than she ever dreamed of. It's all in the sport of course.

Member Dave Stewart sporting new moustache of late—very pucka indeed.

Committee man recently lost lapel badge. Gent who happened to find and returned same happened to have son who happened to have T.C. who has happened to join Club. Jolly Good!

Good to see such a roll up of T.C. types at the Gymkhana. As far as our centre was concerned T.C.'s were a dying arce, but it looks like picking up again soon.

So Ian Hamilton finally occurred at a Gymkhana! Not a competitor, but did manage to borrow Ralph's T.F. for one event. Keeping his hand in on sports cars, no doubt.

PUBLISHED BY ATKINSONS ADVERTISING AGENCY
9 McLaughlan Street, Valley Brisbane
Printed by P.S.& F., Brisbane.

TRADE DIRECTORY