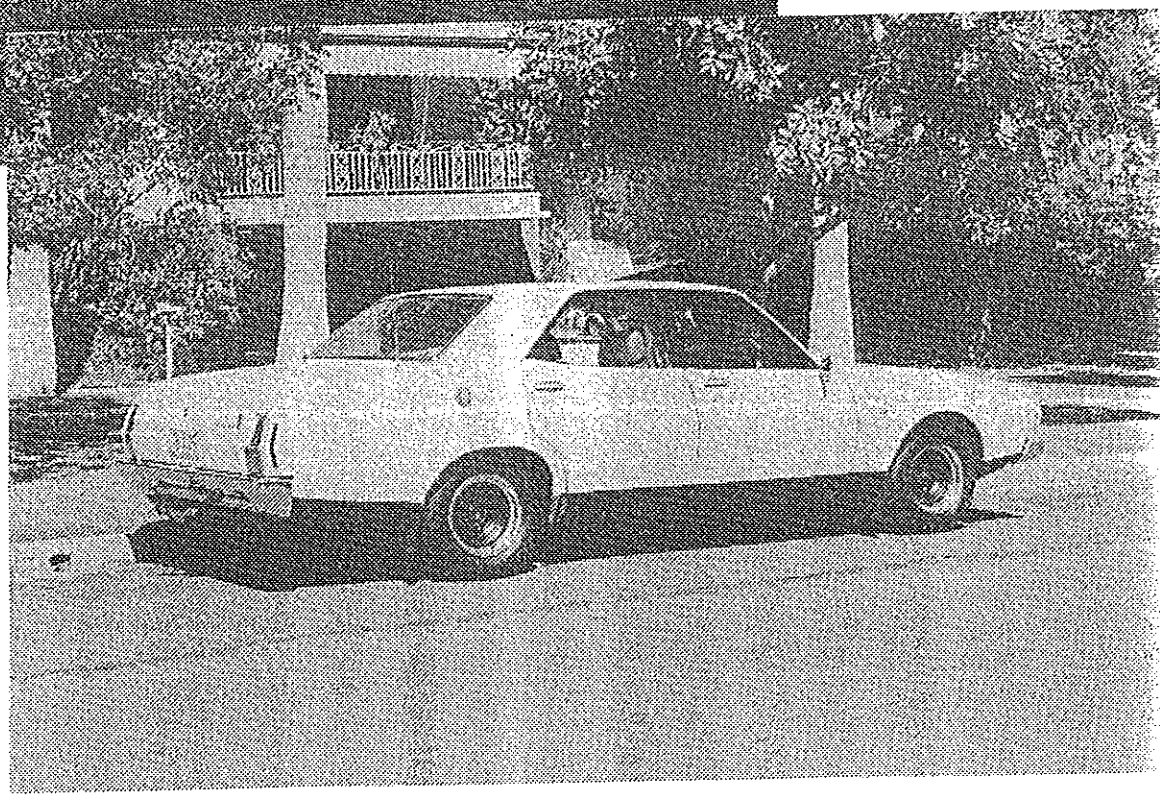
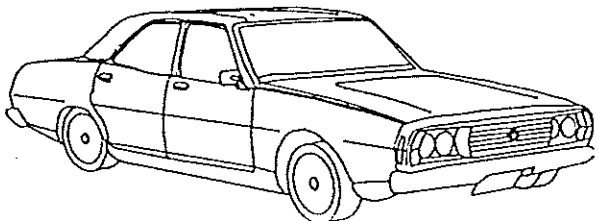
QUEENSLAND P76 OWNERS CLUB INCORPORATED



P76.Anything but average



OCTOBER 1991

CLUB INFORMATION PAGE

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This newsletter is the official publication of the Queensland P76 Owners Club Incorporated and is issued free of charge to financial members. Any opinions expressed may not necessarily be those of the Editor or the club, and any unintentional defamation or breach of copyright herein is unreservedly apologised for, and a suitable retraction will be inserted in the next edition, once the matter is drawn to our notice.

GENERAL MEETINGS

The Queensland P76 Owners Club Inc. holds its monthly meeting on the second Wednesday of of each month.

TIME 7:30 pm

VENUE
Norman Park Uniting Church hall. Corner of Bennetts Rd and McIlwraith Av.
NORMAN PARK.
(at the round-a-bout)

DATES

August	8th	'90
September	12th	'90
October	10th	'90
November	14th	'90
December	-- TBA --	
January	9th	'91
February	13th	'91
March	13th	'91
April	10th	'91
May	8th	'91
June	12th	'91

- - -

Annual General Meeting
July 10th '91

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CLUB OUTINGS

Various activities are organised by the club's members and are generally held on the fourth Sunday of the month.
The activity and venue will be advertised in the monthly newsletter.

CLUB MEMBER OF THE YEAR

Points allocation

- attend meeting	1 point
- raffle donation	1 point
- organize event	4 points
- attend event	2 points
- win event	1 point

Editorial

Hello everbody. This months thanks go to Brad Neal & Natalie Barnes for supplying me with some photos for the front cover. The car is Country Cream for those who can't tell !! Thanks Brad & Natalie.

We've got the next installment on the story about the Alloy V8 story for you this month, so I hope that keeps your appetites satisfied untill the final episode next month.

I hope to see you all at Mt. Cotton this Sunday. By the way, Try to turn up at around 9:45a.m. See you then !!

Dates For Your Diary

Sunday 27th October. Driver Training day at the Police Driver Training complex at Mt. Cotton. 10am-2pm - all come along for fun and games !!!!! Don't miss the best chance you have to have some real fun in you car. Skid pan, Brake steer exercises, cornering technique (on the circuit), High speed manouvering exercises. Get some tips from the police driver training instructor that will be supervising. Don't miss out !! $20 per driver. Meet at 9:45 at the Queensland Government Driver Training Center, Mount Cotton Road, Cornubia.

November 8,9,10th (Fri,Sat,Sunday) Eskabition, at Esk of course. Camping weekend with convoy through Esk. Contact Julie on 285-2749 or Dell on 808-9087.

Wednesday 13th November. Monthly Meeting.

Sunday 24th November. The Annual Presidents Challange. Our new club President, Mr Neil Lyons will organise his first official club event since taking office. On ya Neil !

Saturday night, 7th December. Christmas Party at Brentleys.

For Sale

Starter Motors $65 exchange - Geoff Kenward - Ph 267-6046

V8 water pumps - 2 fully recc'd - $140 each - Ron Armstrong.
Ron is also offering a reconditioning service for water pumps. The cost is $70 if the impeller is O.K. or $110 if a new impeller is needed. (Ron can get new impellers manufactured from brass (or is it bronze ?)). Note - this is NOT on an exchange basis. Ron will only repair the water pump you supply him. Ron's number is 277-2213.

4 Targa Floria Mags - excellent condition $250
Phone Gerrad Batty on 883-3651.

Brown 1974 Super V8 Auto - problem in autobox, no rego, rusty sills, doors. Paint poor, interior fair, motor good, $800 neg. Phone Roy Ashwell on 379-9685 (Oxley)

Leyland alloy V8 no-expense-spared rebuilt for a Range Rover by Ron Richards (did developmental engine work for Leyland) in Brisbane. Fully balanced & blueprinted, Full port & polish, heads flowed, lightweight S.S. valves, inlet manifold mods to

suit 500 holley, bigger head bolts, mild cam, factory hi-comp pistons (Rover?) Scorcher dissy, double-rwo timing set with extra lubrication, hi-vol oil pump. Will run at 6,000 rpm all day. 300 bhp with 500 cfm carb but will probable double stock motors output with a decent inlet setup (e.g. Harcourt 4bbl). Spent $9,000 and never been used. Make an offer to Robert Stephens on (074) 437-868 or 018-725082 (mobile) (Maroochydore).

MINUTES OF THE MEETING HELD ON OCTOBER 9, 1991

The president declared the meeting opened at 7:45p.m.

MINUTES: Minutes of the last meeting were read by the president. Moved- Ian Ward.Sec- Graham Rogerson.

NEW MEMBERS: The President Welcomed New Members Cedric Thompson and Dean Hatche.

APOLOGIES: Received from Col Murray, Julie Emmerson and Keith Nicholson.

BUSINESS ARISING FROM LAST MEETING

Mt Cotton Driver Training (27th October 1991). M. Pickering advised the meeting about insurance for public liability for the days outing at Mt Cotton driver training centre. M. Pickering put to the meeting that motion be moved to pay $50.00 for the Insurance. Sec- Ray Ward.

Assoc of Motoring Clubs. The Assoc of Motoring Clubs will be holding a rally at the Mitchelton Soccer Club on the 17th November and gates will be open at 10.00a.m. It is very important that as many people as possible turn up. See the ad in the Magazine.

4th Annual Noosa Car Classic It was discussed at the meeting that whoever was interested in going were to make their own arrangements to get there and they were to met at the grounds by 8:00a.m.

Mark Elms advised the meeting that he can get engine mounts redone in polyurethane for $35.00 on exchange basis. For more information phone Mark Elms on 2852743.

INCOMING CORRESPONDENCE: Newsletters from the Assoc of motoring clubs, S.A./N.S.W./W.A. and VIC Clubs.

TREASURERS REPORT: Balance at 16th Sept- $3005.31
Received- $568.50
Payments- 176.10
Balance for Oct- $3397.31
Moved Ian Ward. Sec Pat Rogerson.

Accounts for payment passed Graham Rogerson. Sec Mark Elms.

GENERAL BUSINESS

Mark Pickering advised the meeting to meet at the driver training centre at 9:45a.m. so everyone can go intogether.

Dean Hatche requested information on how to set up a 350 Holley.

Graham Rogerson gave his version of his heart reaching story on his day he would have rather spent at home watching Bathurst!!!!

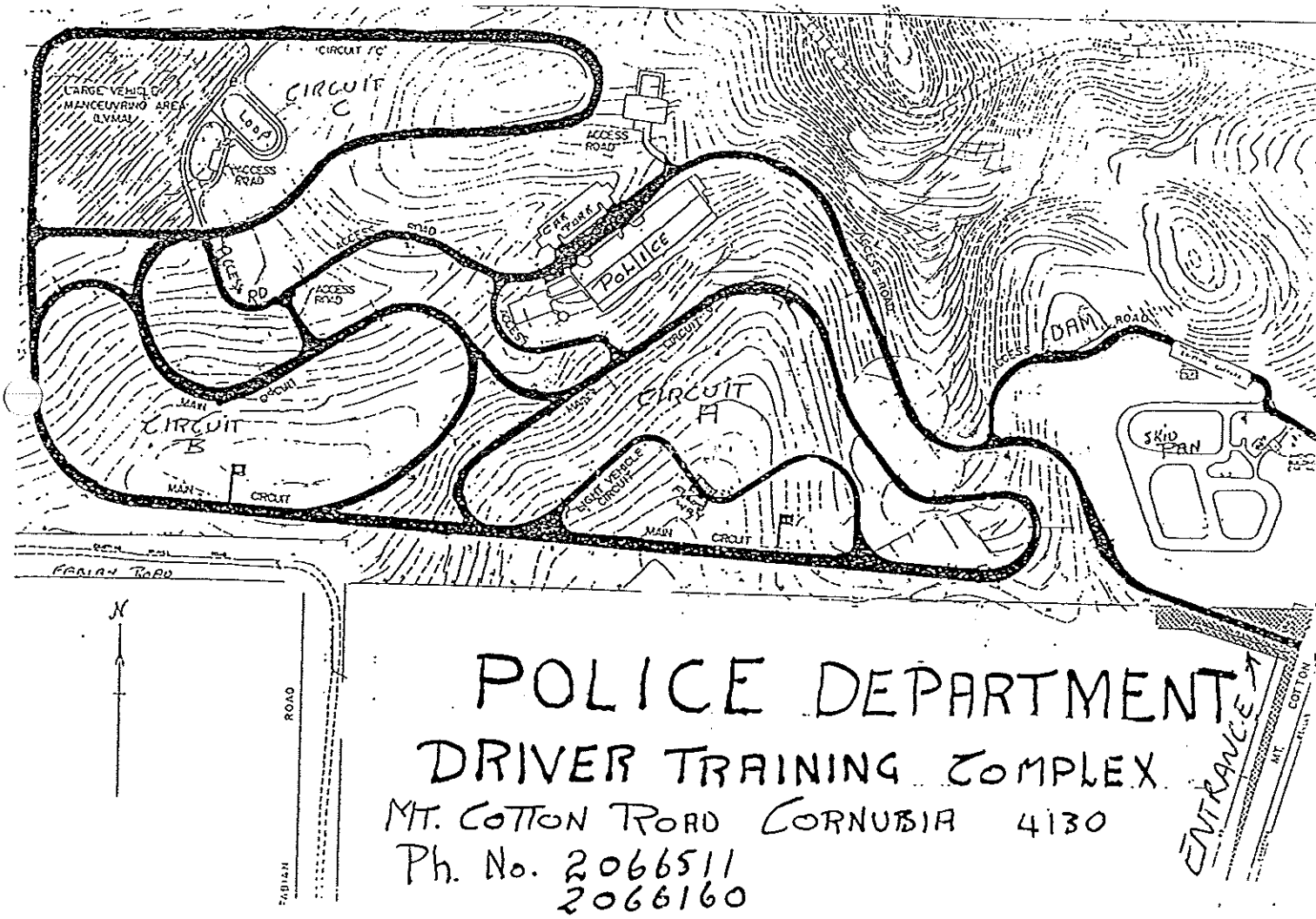
Ron Armstrong advised the meeting that he had some reconditioned waters pumps with bronze impella on exchange basis for $130.00. See ad in Magazine.

Neil lyons advised the meeting about his future experiment with his overheating problem.

Esk Eskibition- Further discussion on the Esk Eskibition was deferred to when the club meets at the driver training centre.

Annual Presidents Challenge- More information at next meeting.

As there was no further business the President closed the meeting.



DONT FORGET DAYLIGHT SAVING STARTS SUNDAY

ASSOCIATION OF MOTORING CLUBS
OF QUEENSLAND

PO BOX 1512
TOOWONG 4066
FAX No. (07) 371 7050

STAND UP, BE COUNTED

COME TO OUR

GRAND RALLY

17TH NOVEMBR 91

MITCHELTON SOCCER CLUB

Osborne Road, Mitchelton
gates open 10.am.

For more Info Ring
MILTON 351 5563

just don't drive like that." So he was seated alongside a Rover test driver who proceeded to hurtle him across country and up the M6 at over 100mph in those pre-limit days, to show him what sort of treatment the engine would have to withstand. After that experience he returned shattered and shaken, with an insight into what Rover wanted.

Turley was invaluable in interpreting the original drawings. Rover could not understand why the engines they had did not conform to the drawings. Turley was able to point out where things had been changed in production, the changes not being recorded on the original drawings. At one point he wandered into Martin-Hurst's office and said that he was unhappy; he said that he felt that he was not earning his salary. "How many people have you talked to this week?" asked the Rover managing director kindly. "About half a dozen I suppose," replied Turley. "And what were the questions?" "Oh well, they wanted to know why the crankshaft webs had a smaller radius than we showed on the drawings. I told them that after we made about 50,000 engines we started to get crankcase breakages and we discovered that by reducing the radius of the webs we got round the problem." "What do you think that sort of information is worth to Rover? You can't put a price on it," said Martin-Hurst.

Decisions were soon made about the production of the engine in England. In the first place, the gravity die casting with liners in place was carried out in America on an old automatic transmission die casting machine, a transverse machine where the block was cast on its end. Enquiries about the drawings and the methods were met with the answer that the man who set it all up had died long since.

British casters were unhappy about the technique and it was soon decided that the only feasible method of production in England was to sand-cast the block and then press-fit and shrink the liners in. There were surprisingly few problems. Birmingham Aluminium got it right almost at their first attempt and with very few changes the engine went into production. Rover altered the oil feed to the rocker shaft in an attempt to cut the rocker shaft and rocker arm wear they were experiencing with test engines. They were very worried by the problem, but Turley with his American engineering attitudes to engines was unable to see the need for concern. The problem was that the underside of the rocker arm was wearing away and at the same time cutting into the case-hardened rocker shaft until it had cut quite a groove. But Turley pointed out that the hydraulic pushrods took up the slack anyway and the engine stayed quiet, so what was all the excitement about? The engine would hold together despite the problem for well over 100,000 miles, so why worry? By that time no one would want the car.

Rover engineering was outraged by the suggestion and tried in turn anodized rockers, then tin-plated rocker bearings and eventually settled on electro-plated nickel for the surfaces. They also changed from the American "Armasteel" specification for the crankshaft to a nodular steel, a feature about which Turley was highly dubious. With Birmingham Aluminium casting the heads and blocks in sand instead of die casting, the Rover engines were at once in better tune than the original Buicks. When a head is die cast, it inevitably bows and when it is then machined flat

the combustion chambers at each end will be in smaller volumetric capacity than those in the centre. Rover did not have to contend with this problem.

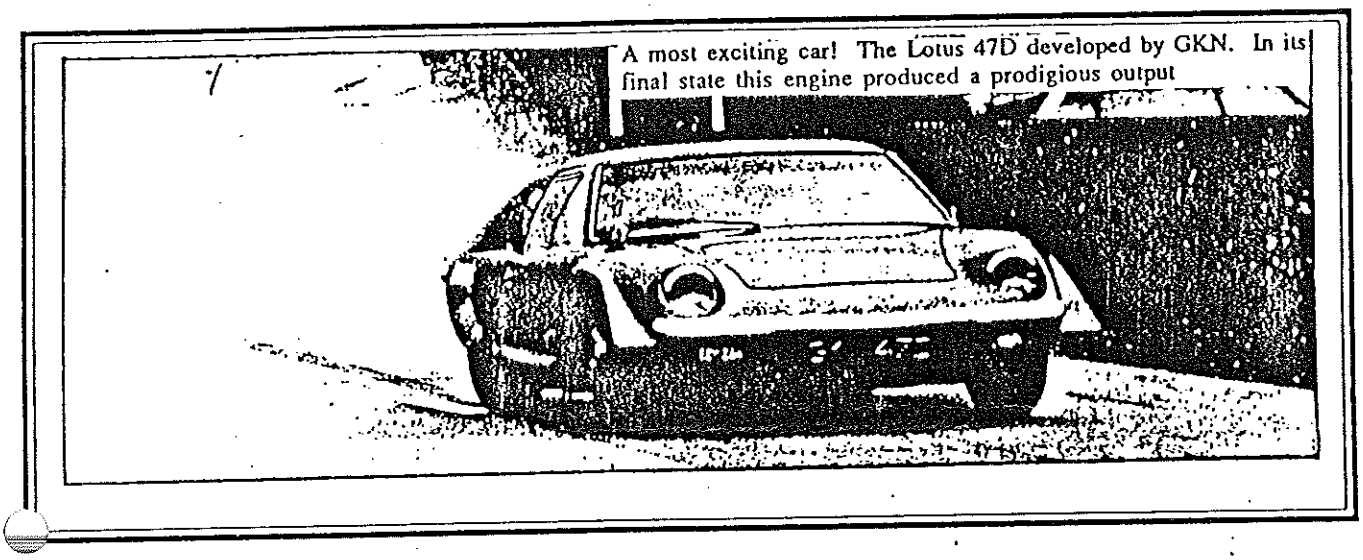
The accessories for the engine would also have to be British. Rover looked at, and tested, a compound Rochester carburettor but soon decided that with European cornering forces, it was unsuitable, as the engine tended to cut as fuel centrifuged in the float chamber. Thus the decision was taken to go to twin SUs although this would mean introducing bulges into the bonnet - something the engineers had hoped to avoid.

Lucas were also approached about the ignition side, the Buick engine being fitted with an AC-Delco single-contact breaker distributor. Lucas designed a V8 distributor - their first - and just developed it in time for final production. A feature of the distributor was the very long driveshaft, supported in the die cast timing chest on the front of the engine which also contained the water pump. The lower end of the distributor had to drive the oil pump, a Hobourn-Eaton unit. The only item of American manufacture in the entire unit remain- the hydraulic tappets, principally because the Diesel Equipment Company of Grand Rapids could churn them out a such a low price and at such good quantity that it was simply not worth going to a British supplier. The hydraulic tappets are brought across to this day.

William Martin-Hurst was convinced that the engine he had bought for the Rover was going to power many models for many years and he was already eager to see it put to more sporting use. He asked Jack Brabham, then using the Buick engine in Repco form in his Formula 1 GP cars, for a scrap engine but Brabham declined. At that time Brabham had won two World Championships with the Repco, the engine being developed in its final form to a four-camshaft unit. But the American engineering firm of Traco were more than happy to show Rover what they could do and at one stage a "full house" 350bhp Traco unit was shipped over to Rover for assessment. "I think we still have it," said Martin-Hurst. The company made a collection of all the go-faster items available for the engine from Iskenderian camshafts to Hallibrand manifolds and they assured themselves that if the need arose, they could be certain of having all the development work needed for raising the power of the engine ready at hand. Sadly that never happened "in house" at Rover and it was left to individuals to play with the Rover unit to gain the increases in power it was so obviously capable of delivering.

By far the most notable of these was Tom Walkinshaw who in later years took the all conquering Rover SDI, or Vitesse as they were known, to first place in the European Touring Car Championships and a win at Bathurst in the then Hardie 1000 with a fuel injected motor turning out in excess of 400bhp.

Also notable among the development exercises was that of GKN. They took a standard Rover V8 and installed it in the infamous GKN 47D Lotus, with a succession of modifications to manifolds, camshafts, careful attention to balancing, a longer throw crankshaft, bigger pistons and lightweight flywheel. GKN eventually had the engine delivering a remarkable 296bhp at 6,500rpm. Later on, Bill Shaw entered a full race Rover 3500 in club racing in the UK, with factory support, and all this before 1977.



A most exciting car! The Lotus 47D developed by GKN. In its final state this engine produced a prodigious output

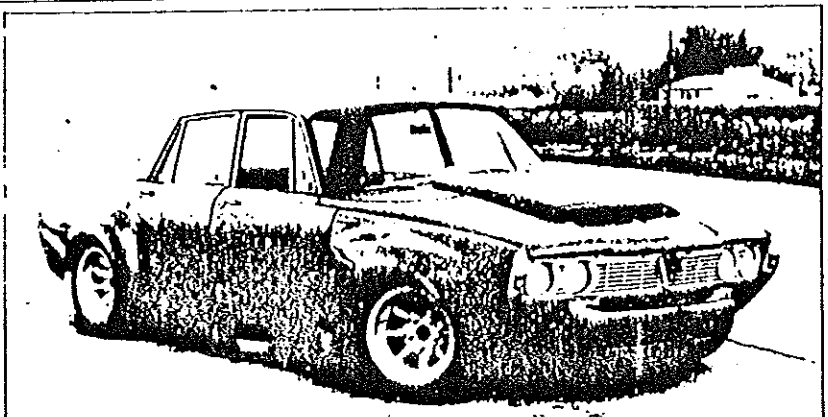
Even in those early days, there were a number of variations for the V8. It was fitted to the revolutionary P6 BS mid-engined sports car prototype, designed by Spen King and Gordon Bashford, and killed off in the Leyland merger. This was a most interesting version of the engine. It ran facing the rear of the car with the final drive cast into the sump, driven by a small prop. shaft running from the gearbox at the front of the engine. Power was transmitted to the gearbox from the end of the crankshaft by Morse chain and a modified Rover 2000 gearbox was used, lying on its side. Rover devised a new exhaust system for the car which gave equal pulses without the need for cross-over pipes. They also fitted 2" SU carburettors, with none of the usual complicated silencing air cleaner trunking. The result was a very quick car indeed, topping 140mph and accelerating from 0-60mph in 7.0 seconds. The engine was mounted on one side, resulting in extra weight on the front and rear wheels on the right hand side. However, with left hand drive and the driver only on board, the car would be perfectly balanced.

Another "one off" using the V8 was a styling exercise made by David Bache, Rover styling director, which was a two-door fastback on the 3500 with a rather Chrysler Alpine-like front grille and the nickname was Gladys. This car was to have been marketed as the Alvis GTS but was another victim of the merger.

The original V8 installation in the 3.5 saloon and coupe proved very successful. The lighter weight of the unit improved the handling of the big car enormously and in no time the 3.5s were to be seen whistling around the country at alarming rates of knots.

In 1971 the 3500S was introduced with a redesigned exhaust system and also improved SU carburettors, designated HIF 6 (Horizontal Integral Float Chamber), which were claimed to provide more stable carburetion during conditions of hard acceleration, braking and cornering.

One of the more major changes to the engine came in June 1970 when the Range Rover was announced. The Range Rover required a new timing chest (case) die, to allow for the raising of the water pump to accommodate a starting handle dog and a power take-off point. The compression ratio was reduced to 8.5 to one (the production engines varying between 0.25



Bill Shaw's fill race Rover 3500 was a familiar sight at club races in Britain.

and 0.75 anyway) from 10.5 to one in the car form. The reduction in compression allowed the car to run on what was called two star fuel (about 85 octane), fed to the engine through Zenith CD 2S carburettors on a special manifold, instead of the SUs on the car engine. The air cleaners were supposed to incorporate a one-way valve to allow any water which might find its way into the air cleaner to drain "harmlessly" away. The metal fan was changed for a moulded plastic type as Rover had experienced fatigue failures with fan blades slicing into the bonnets on the cars and the starter solenoid was moved further up the engine to reduce the possibility of damage. This engine produced 156bhp at 5,000rpm with a peak torque of 205 lb/ft at 3,000rpm.

A much later version used in the Paris-Dakar Range Rovers was the 4.2 litre 300bhp version which produced an absolutely amazing 210lb/ft of torque at only 1000rpm and nearly 300lb/ft of torque at 400rpm and propelled the Range Rover to a top speed of 145 miles per hour, with astonishing engine flexibility and reliability.

Another major production change for the unit came with the ill-fated P76 saloon, first produced in June 1973. This was a fundamentally revised engine from the 3500, featuring an enlarged block to make a "square" engine of 3.5" bore and stroke. Capacity was 4.416cc and the engine developed 190bhp with 285 lb/ft of torque at 2,500rpm. This engine became oneof the most popular replacement engines for Range Rover owners wanting more power in the middle seventies and early eighties.

One of the most altered engines from the point of view of manifolding was the MGB V8. The design and development work for the unit was done at Abingdon and the most obvious difference was the new inlet manifold moving the carburettors to the back of the unit to permit the retention of the standard bonnet. The engine used in the 'B' had more in common with the Range Rover unit than the Rover 3500. It shared the same dished pistons and an 8.5:1 compression ratio but with an AC-Delco alternator instead of the Lucas one. This engine with twin SU HIF6 carburettors produced 137bhp and 193 lb/ft of torque at 2,900rpm.

Another famous application was of course the Morgan V8. This story

DON'T FORGET:

DRIVER TRAINING DAY

THIS SUNDAY (27th Oct.)

9:45 am

MAP INSIDE

DAYLIGHT SAVINGS TIME!

You Have Been Warned

SENDER:

P.O. BOX 343
CARINA QLD 4152

Qld P76 Owners Club
(Incorporated) Newsletter