



CHACA

Journal

The official magazine of the
Classic & Historic Automobile Club of Australia

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Eddie's Dodge

To bring together persons with a common interest, to encourage the use, maintenance and preservation of automobiles built from the 1st January, 1931 up to 25 years old, without prejudice to make, model, method of manufacture or country of origin.

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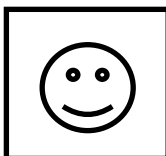
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CHACA is affiliated with the Association of Motor-ing Clubs (AOMC) and the Federation of Veteran Vintage and Classic Vehicle Clubs.

Meetings

4th. Thursday of the month at 8pm (except December) at CHACA Clubrooms, Unit 8, 41 Norcal Road, Nunawading Tea, coffee and snacks are served at the conclusion of each meeting. Visitors and prospective new Members are wel-come.

CHACA is a Disabled Friendly Club with fully paved park-ing facilities, level access throughout, disability toilets, PA system with Tele-Loop compatibility for hearing impaired and wheelchair lift to the upstairs library. The Club is equipped with a portable defibrillator for medical emergen-cies at all meetings and events.

Club Newsletter

The Journal is published monthly. Items for inclusion in the Journal must be mailed, emailed or passed on to the Editor at Club Meetings. The Committee reserves the right to edit or decline any article deemed unsuitable. Photographs sub-mitted for possible publication should preferably be glossy 5"x 7" or 6" x 4" prints or high resolution jpg/bmp images to ensure best reproduction in the Journal. Opinions ex-pressed in this publication are not necessarily those of the Club.

Journal Closing Dates

Nominally 2nd. Thursday each month.

Journal Nights

Normally 3rd. Thursday every month.

Website

The Club's website www.chaca.com.au is updated regular-ly and features Club History, Club Promotions, an Events Calendar, a full Journal for downloading and many photographs of Club Events.

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Ray Griffin, Margaret Griffin, Barry Smith, Jim Kerr, Dale Allen, Eddie Reynolds, Bob Mantle, Patricia Wightman, Peter Galley, John Schuurman, Kevin Churchill, John Chris-tie, Ray Nichol

In Memoriam : Fred McGeary, Norm Watt, Don Main, Ian Davey, Tom Lambert, Eddy Dobbs Snr, Col Patience, Gor-don Wightman, John Hunt, Henry Alger, Bill Kerr, Max Austin, Roy Pepprell.

Notice To All Reciprocating Clubs

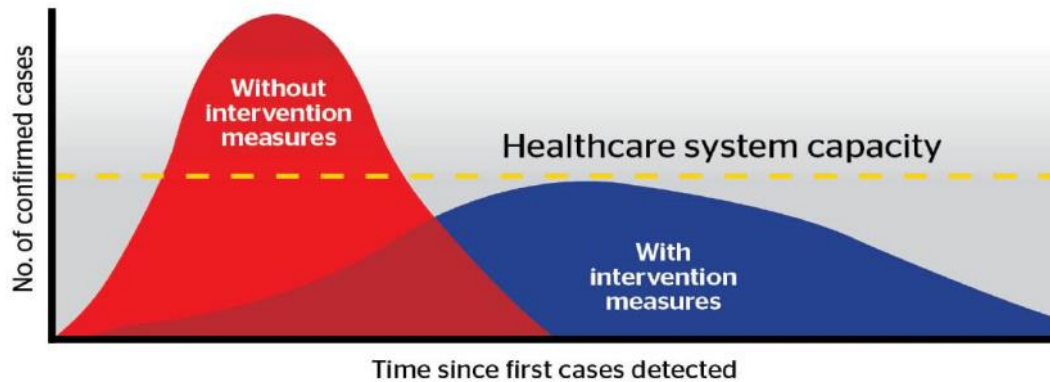
Please address your magazines to
The Secretary
LPO Box 72, Bittern Vic 3918



CHACA CPS Eligibility Criteria

Committee has looked at the draft guidelines and the Sub-Committee has now produced the new guidelines.

See Page 18.



“Fuel up, we shall be back on street sooner or sooner.”

Tony Tang

PRESIDENT’S REPORT

As I write this report the first stage of relaxing the covid restrictions are being implemented. Great news for us classic car owners as finally we will be able to get out and give our cars a good run. We all know the consequences of a vehicle sitting idle for a long period of time and it “ain’t pretty”. What is more you can only do so much maintenance and fiddling before you have withdrawal symptoms and start inventing devious ways around the law just so you can go for a blast in your pride and joy. Well now we can legally. Sure cafes and pubs are still not open but visiting friends and rel’s is ok, or better still pack a picnic lunch and head off to a park, beach etc and enjoy getting out again. Just remember the separation criteria.

There have been many educational sessions on the television about what you should do to protect yourself from picking up the virus but I am yet to see the one I give the most importance to. That is those filthy petrol pump fuel nozzles. Imagine how many people handle those nozzles over a day and you can see the risk to you. I noted some people use a glove and others rely on using the hand sanitizer after use. Either way you do need to take some protection as the virus will stay active for up to three days on plastic and stainless steel. Yep, the nozzles use those materials.

As far as I can determine Motor Classica is off this year regardless of the regulations at the time. Pity as it was always good way to view the very best classic vehicles in Australia all at the one place at the same time making it a smorgasbord of eye candy. A bit pricy to get in but what the heck! Heard nothing from the Bay to Birdwood, and as I have entered this year with the 130 Fiat I do hope it goes ahead, health permitting of course. Not too far to drive and a lovely state to visit. A return trip via Victor Harbor and the Coorong is well worth the effort.

At this stage CHACA cannot make any firm plans as to club activities for the remainder of 2020. Our AGM was scheduled for the October meeting but again we do not know if it will be safe or legal to gather in large numbers by then. We do have to have an AGM under the company regulations but we are able to defer the AGM, so this may happen. We will keep you informed by Journal, email and web page what is going on and the plans for the remainder of the year when we are able to firm something up. Look at the benefits you are getting; at least six months of peace from listing to my prattle at the General Meeting. That alone is worth the inconvenience.

Stay Safe & Well
Brian Garrett

A SOMEWHAT EVENTFUL TRIP

An extract from mum's diary covering a rushed trip from Georgetown near the Gulf of Carpentaria back to Maryborough (Queensland.) Dad's father was seriously ill in hospital and wasn't expected to recover.

We were living in Gilbert River at the time as part of our "round Australia trip". Dad was working as a mechanic at a "Main Roads Camp" on the Gilbert River while they built a bridge over the river. This trip took nearly 2 years to complete: wherever Dad could get work we stopped till we decided to move on again. Mum wrote an excellent diary of the trip.

Our party consisted of Mum, Dad, my brother Allan, and myself, plus a cat and a dog. We stayed in Gilbert River for 10 months and Allan and I went to school there.

Friday 16th December 1955.

Last minute details attended to, a hurried lunch, the car (1929 Marquette) packed,



we left the main roads camp at 1.45 p.m., too late then to get to Georgetown before the bank closed, but hopeful he would stay open later that particular day. Heat was terrific and getting worse. A few miles out and the radiator boiled. Frank (dad) had to stop to attend to it, and then stop a little further on because there was water in the petrol. At Prestwood, Crooked Creek was running, first time we ever saw water on the Georgetown road. Almost half way to town the fabric type universal joint broke with a fearsome clatter. Long delay while we fixed that. Spot (dog) and Blackie (cat) panted in the heat. A piece of tyre cut and punched to fit. Georgetown. 5 pm. Called in to Shire Office and Main Roads Office. Bank at 6 pm. It was closed, but he gave us a credit note for the Maryborough Bank. Cashed Shire cheque.

Half way to Forsayth universal broke

again and water had to be cleaned out of the carburetor again. Put in universal bought in Georgetown. Vivid flashes of lightning lit the sky and the distant ranges stood out in stark relief. Start off again, through Forsayth, and onto the New Range Road. Numerous creek crossings giving a switchback effect, the road greasy. A hurried meal prepared by torchlight, rain beginning to fall, the storm came closer. Then to the top of the range, a fairly steep grade. Then the 20 mile run to the main part of the range, storms, thunder and lightning close about us all the time. We raced a big storm to the range, getting over the worst uphill grades before the red soil became really slippery. In places the motor would sing, the wheels spinning madly. The rain poured down, blotting out vision and the lightning flashes were blinding.

Just over the crest, and ascending a slight rise, the universal broke again. It was 11.30 pm and raining hard, so we decided to stay there till morning. We could see the play of lightning over distant ranges, in colours of red, green and blue, and once, a completely blinding, brilliant flash, almost lavender. Blackie went out through the window, Spot stayed warm and dry. Sitting as comfortably as possible in the circumstances, we slept for a few hours. Blackie came back later and walked over us to get to the back seat.

Saturday

The morning was chilly. Trees stood out dark and still against the dawn. Gradually the gloom lightened and we could see the green tree covered slopes all around and the blue hills in the distance. Green grass and trees against red soil. A colourful combination. The universal was replaced and we moved off over a somewhat greasy road; places where heavy rains had gouged out deep holes on the edge of the road.

We had experimented with a single thickness of fabric on the universal, but it only went for a mile then broke. Had breakfast. Cut spare tyre to make a new universal. A few miles further on A stop to change tyres. A good tyre to the back, one starting to blister on the back. Cat and dog feeling the heat. So were we.

A SOMEWHAT EVENTFUL TRIP

Einasleigh ... where we got petrol from Ray's Store and met people who had come up from Hughenden the day before. Said the road was alright. Crossed the nearly dry Copperfield,



filled the water bag. Then a bad road, low, wet, and slippery with big holes full of water to the Einasleigh, which was not running. After Carpentaria Downs, a fairly good road, past the wartime airstrips. The turnoff to "The Lynd" station, and a winding bush road. Just past the Lynd station, stopped for dinner.

At Lyndhurst station we came to a wide beautiful river, clear cool water running over the causeway. Cool shady trees. The Einasleigh River again! Here we had a wash and filled the water bags and the radiator. Then we were driving through beautiful heavily forested country. The long green grass in luxuriant growth, the green leafy trees, so dense, that the sun only shone through in isolated patches, made an unforgettable picture. The road was quite good, then the country became hilly, with deep creek crossings. An area of large ant-hills. Late afternoon, and a storm approaching. Constant thunder and lightning that seemed to split the sky. The trees wildly tossing against a swiftly darkening sky. A few minutes later we stop and hastily adjust the luggage and then we drove on into the storm. Rain poured down and water ran inches deep on the road. We drove on slowly, approaching creeks with caution.

When the rain became too thick to see, we stopped for a while. Seen in the brilliant lightning flashes it was a desolate area, very low and flat, almost devoid of trees. The rain eased and we drove on slowly, until, some miles further

on, we got stuck in a boggy patch. We spent the night there.

Sunday

Awakened at daylight, 5.30 am, and found bog was dry enough to just drive out of it. Road greasy and branch strewn. Had breakfast some miles on in a rock strewn district. Later encountered a sudden and abrupt steep slope called the "Jump-Up" Then an intense gash called the Dutton? River. Flat country all around and we dropped down to a tremendous depth to cross the nearly dry river. The banks were white cliffs carved out by wind and weather.

Approaching Hughenden we passed a bird sanctuary surrounded by barbed wire. Flat topped ranges in the distance. Crossed the dry, wide, sandy, Flinders River at Hughenden. Bought bread, etc, petrol and a new tyre.

Continued East towards Charters Towers. Black soil and greasy road. We pushed the car out of one hole. The road soon improved in that respect, but there were bad corrugations. Bare open country, weathered rocks, ranges unlike any we had ever seen before. Something that looks like brick walls built along the tops of the ranges. A still, unearthly silence everywhere. It has been said that the country around Hughenden is very ancient.

We had dinner (*lunch*) beside the road near a dry creek. Spot chased some sheep. The road would be a nightmare in wet weather. Further on, where trees grew thickly, there were signs of a wind storm. Broken branches littered the ground. We had been told of the wind storm which had nearly wrecked Muttaborra the previous night.

We passed through the township of Prairie, and then Torrens Creek, and then the creek itself, dry, wide, sandy, steep banks followed by a long straight road, tree lined. Then through a section where the silver wattles grew profusely and crowded thickly along the edges of the road. We crossed many wide creeks, all dry and very sandy, and saw numbers of emus.

A SOMEWHAT EVENTFUL TRIP

A badly corrugated stretch caused the radiator to leak and our supply of water was very low. Heat intense. Then the exhaust blew out and the motor became very noisy. The tailpiece had to be removed because it was badly battered when the universal joint broke.

Soon after that we stopped to change a tyre and found all the bolts sheared in one rear wheel.

That was a lengthy stop and a big job. Both front wheels had to be removed to get a couple of bolts from each. We had supper there, dry, because there was not enough water to make tea. There was a railway line on one side and a creek a few yards away, quite dry. As it grew dark we hunted everywhere for Blackie, and at last, unsuccessful, we found him sound asleep in the car. It was dark when we moved on again, but found it necessary to stop again after a few miles because the brake drum on one front wheel was heating. We went on slowly and within a few minutes were in "Homestead". It was nearly midnight, but one house showed a light and a man directed us to a water tap nearby. Filled both water bags. Travelled on about 100 yards and the front wheel developed a definite thump. The bearings were the trouble. Frank sorted them out and we went on again. A few miles further on and the thump started again. Decided to stop for the night. Cat and dog out. Curled up for the night at 10 to 2.

Monday

Up at daylight, fix wheel and make early start. Blackie had a lizard for breakfast. A few miles outside Charters Towers we stopped to have breakfast, a wash, and to change into clean clothes. A tiny deserted house on one side, where we could get water. Saw a mob of goats and numerous cats that seemed to live there.

In Charters Towers we went to a garage and Frank worked on the car, welding rims etc. Bought new ball and race for front wheel. Repairs to exhaust etc. Walked down the street to do some shopping. Talked to one man who told me Charters Towers was undermined by gold mines, from the early days, 2000 feet deep. Sent telegram to say where we were.

We were ready to leave when a storm broke over the town. Rain came down in torrents. Presently it eased and we left for Clermont. Several miles of bitumen, then a corrugated road, really bad in places. Numerous grids. Late dinner. Frank adjusted brakes. Discovered four bolts sheared off in rear wheel. A few miles further on, found universal almost broken through, and stopped to replace it. A small grass fire smouldering in the distance on one side of the road. As it was growing late, we decided to have tea there, so lit fire to boil billy. Then suddenly, when the universal was off and the whole thing was in pieces, a storm came up, the wind changed, and in a flash our position became dangerous. The smouldering grass fire burst into roaring life and came racing towards us, raging through dead dry grass over four feet tall, showers of sparks raced along the road and under the car, which we managed to push back to a place where the grass was not so tall and thick. We could only mount guard and hope for the best. The ancient tarpaulin on top of the luggage flapped madly and tore. Apart from a full tank of petrol, we carried three 4 gallon drums full of petrol. The cat and dog were frightened and could not stand against the wind.

Frank burned a hasty fire break in the densest grass and rubbish patches. Sand and small stones whipped up by the wind stung our faces. Tense minutes as the fire roared to the edge of the road and the hot breath of fire scorched us, then suddenly the wind dropped, and a few drops of rain fell. The danger was over, we were covered in dirt, the tools half buried. Our tea billy was covered in dust, leaves, twigs, and the fire was out.

A SOMEWHAT EVENTFUL TRIP

The universal fixed, we went on, the road wet, in places greasy, and always corrugated. 9 pm We were travelling at a good speed, when the steering rod parted, the car skidded and turned, and ran into a bank at the side of the road, and stopped. We got the car back onto the road and spent the night there, sleeping in the car.

Tuesday

Early start. Had breakfast at Cape River. A pretty place and a good picnic spot. Plenty of water. Frank soldered the radiator pipe on the car. After that a long straight road, grids, ranges in the near distance, not very high, sparsely timbered, and consisting largely of shelved, weathered rock. Areas of brigalow.

Belyando ... consisting mainly of a couple of muddy water holes, crossed by two rattling wooden bridges, Then a road strewn with branches and limbs torn from trees, past a heavily laden truck, with driver and two rear wheels missing. Later, the steering rod slipped out again. A long straight desolate stretch of country where the sides of the road were cleared and burned back to a distance of about 20 yards. The sun blazed down, and no breath of air stirred. On the edge of the low scrubby trees were patches of shade, and an occasional breeze moved across the scorched countryside. Grace Bros. furniture van stopped and offered assistance. Gave us a handful of nails. Had dinner (*lunch*) there and went on again.

Some miles further on, the steering rod came out again, and while seeing to that, Frank found the valve stem of the tube in the front tyre had broken off. Changed tyre, while the sun streamed down mercilessly. Shade trees were conspicuous by their absence, not a leaf stirred and the sun was a furnace sending out rays of blistering, burning heat. Towards evening we saw a huge goanna. A good 6 feet in length. Later, we saw another one nearly as long. Road badly corrugated. About 50 miles from Clermont was evidence of a severe wind storm. Trees had been stripped and branches were strewn everywhere. Several miles from Clermont

we struck bitumen and put on speed. Then the back tyre blew out. The rim was split. Changed tyres and replaced bolts that had sheared off. Cut sandwiches. We arrived in Clermont at dusk and found a garage open. Had rim welded. Bought two new tubes. Filled water bags. Filled up with petrol,.

Had a hasty supper (*dinner*) some miles outside Clermont, and then went on to Capella, with its new modern hotel, then on through Emerald, which seemed to be quite a large town. A few miles outside Emerald we stopped for the night. It was fine, so we stretched out on the tent fly under the stars. Eddie and Allen stretched out on the seats. It was the first night out of the car since we started. Long before dawn we were frozen, so sorted ourselves out, rounded up the cat and dog and started driving.

A few miles on and the steering broke. Frank fixed it, and in a short distance, it went again. Had breakfast and then spent some hours working on the rod so it would not so easily part company again. (*I remember Dad shaped a penny into a cup shape to replace the worn out cup in the track rod*) At last we were ready to move on again. It had become frightfully hot, the sun blazing down.

The railway line runs beside the road, and the railway bridges are noticeable because of their height and elaborate structure. The road bridges are equally noteworthy. All are old, timbered, and how they rattle! Road is corrugated badly. The tiny township of Comet left behind, we headed for Blackwater. Here, there is a garage, and Frank borrowed tools and fixed the steering rod more securely. Drank a couple of bottles of soft drink in an effort, not entirely successful, to quench our thirsts.

A SOMEWHAT EVENTFUL TRIP

Just outside Blackwater we discovered a bulging tyre, so stopped under the one shady tree on the roadside to change the tyre and have dinner (*lunch*). Next town, Bluff, we bought bread. A large well stocked store in such a tiny place. Picked up a young lad who asked for a lift to a railway siding some miles out.

Wonderful bitumen road, winding over hills and through deep valleys. Met up with a party in new Ford Mainline utility owned by K.K.Hall, from a Station somewhere out from Emerald, or was it Clermont? Burnt out clutch was their problem. A storm, with severe lightning and thunder, passed over while we were there on the ridge. Eventually Frank got him started and he raced off at a terrific speed, leaving three of his party with us. We had no alternative but to take them along, one in the back seat and two on the front mudguards. The Marquette raced along, seeming imbued with a spirit of wild exhilaration in the chase after the other car. The trees around us were tossing in the cool gusty wind that was the aftermath of the storm.

We went for miles without sighting the Ford. From the crests of the hills, seeing nothing but the empty tree lined road ahead, then swooping way down into the valleys, and then climbing effortlessly up the next long hill. This was the place, where, during the war, the convoy of trucks of which George (*Uncle George*) was a member, became hopelessly bogged and finally had to drive along the railway line.

We left one of our passengers at his destination and finally came up to the Ford. It would not go at all then, so we took Mr. Hall as passenger and left the other two and the lad, and went into Dingo. Mr. Hall made arrangements about his car and we got petrol and tried unsuccessfully to get the rim welded so we went on to Duaringo. At the garage there, it was just on closing time, but we got petrol, and Frank welded the rim himself, because the garage man would not touch it, said it was too thin.

After leaving Duaringo, the road was fairly

good and after about 12 miles, during which we crossed the Dawson River, we began the climb of the Gogango Range. It was dusk and the range had some very steep grades. Prickly pear grows there, as trees, up to 40 feet high. A steep winding road, the curves very sharp; we were glad we got over it in daylight, but only just.

A short time later it was dark. In places, the road was very bad, but at last we came out onto bitumen. Then, mile after endless mile, until, at last, we were in Rockhampton. Located a snack bar and purchased hamburgers and lemonade. Then we could not find our way out of the place. Someone directed us and soon we were travelling along beside the huge lagoon which had caught our notice when we first saw Rockhampton. We stopped for a while to have our supper of hamburgers and lemonade then went on again. But not for very many miles. Frank was very tired and we curled up on our seats for a few hours sleep.

Thursday

Awoke to a frightful clatter and clanging such as only a diesel train can make in the still dark hours. Soon after that there was a puffing and clanking and clattering of a steam train, and we decided it was time to move on to a quieter place. Road in fair condition with a lot of bitumen. Passed through Mount Larcom long before shops opened. Stopped for breakfast soon after that.

We were making good time and shortly after we left our breakfast spot we crossed the Calliope River, a lovely stream of clear running water. Just as we reached the top of the bank the wheels wobbled badly and the one front wheel skidded sideways as the steering rod fell off. The other end this time. So we had to stop to fix it. Eventually we reached Gladstone and found a service station.

A SOMEWHAT EVENTFUL TRIP

There met a mechanic who told us there had been a police call for a Marquette car. Saw Gladstone police and had to ring Rockhampton.

After that we left Gladstone and headed for Maryborough, determined to get there that same night. Good bitumen road to some miles the other side of Miriam Vale, then rough right into Gin Gin. Took a shortcut here to go through Wallaville and Booyal into Childers, completely cutting out Bundaberg. Steering rod broke again at late afternoon. Then we stopped for petrol and minor repairs at Childers. Changed a tyre. Managed to buy sandwiches for our supper. Left Childers and headed for Maryborough. There were storms around Howard and we hit an invert full of water at speed. Arrived at Maryborough at 9.30 pm.

Friday

Business and shopping then leave for Kilkivan. No time to spare. Bauple in half hour. Miva and its bad corrugations, a blow out in the front tyre, a rocking car, that came close to rolling with its heavy rooftop load. Kilkivan at last!

Footnote

We traded the Marquette in on a 1939 Chev. for the return trip to our caravan at Gilbert River (near Georgetown) and the remainder of our around Australia trip.

Eddie Reynolds

What is a Classic vehicle? or how long is a piece of string?

Both of these questions could be classified as hypothetical. There is no easy answer to the Classic vehicle question. In Australia, every State and Territory has a permit system for their “old” vehicles. Mostly, this covers vehicles more than 30 years old except in Victoria where it is 25 years old. This is a “rolling” date so that it advances year by year. So this includes vehicles from Veteran – beginning to end 1917; Vintage – 1918 to end 1930; vehicles from 1931 to 1989 (in Victoria). The whole group is classified as “Historic” or “Heritage” vehicles but generally referred to as “old vehicles.”

When the Classic & Historic Automobile Club of Australia was formed in 1966, our charter covered vehicles built from start 1931 to end 1942, hence the “Classic” part of the name. As time went on, this changed to accept other interesting vehicles built after 1942 and ultimately we accepted the rolling 25 year cut off. The 25 year rolling cut off allows all sorts of vehicles to be brought into the fold and in some people’s view some of these vehicles should not be included in the mix. Clubs are, of course, free to determine their own cut off date.

Whilst we can define Veteran and Vintage vehicles in Australia, with some clarity and in the past could define a “Classic” that is not so easy these days. What constitutes a “Classic” vehicle is really in the eye of the beholder or owner of a particular vehicle. Is a vehicle which came off the assembly line in the thousands a Classic – maybe? I am not aware of an Australian definition of a Classic vehicle and if you asked 10 enthusiasts you would probably get 10 different answers. It is an argument that will continue for ever!

Kevin Churchill

HISTORY OF LEAD IN PETROL AND DELCO'S INVOLVEMENT

The lacing of petrol with tetraethyl lead has been a topic of controversy the world over because of the additive's toxic qualities.

How and why the stuff got into fuel in the first place is an interesting story.

It starts in America in 1876 with the birth of Charles Franklin Kettering, who apart from initiating the research that led to the introduction of lead in petrol, was also responsible for two major refinements in the motor car's evolution: coil ignition and electrical starting. He was the son of an Ohio farmer and on entering college gave up his Classical studies to become an electrical engineer. Although his formative years were plagued by poor eyesight, in 1904 he obtained a mechanical engineering degree in electrical engineering from Ohio State University.

The following year he got a job with National Cash Register in Dayton, Ohio and made an immeasurable contribution to that company by converting the hitherto manually operated registers to electrical power. The principles he adopted were re-activated when he came to develop, in 1911, an electrical starting system for cars.

But this is to anticipate our story. In 1909, Charles bade farewell to cash registers and established his own research and development firm which he called the Dayton Engineering Laboratories Company, which became better known by its Delco acronym. At this time car electrical equipment was of varied quality and specification and Kettering's company was soon involved in improving and refining components.

Another string to Delco's bow was the development of an efficient house lighting set. These units, driven by a small petrol engine, were ideally suited to both the modest ranch and lavish country house, which were often hundreds of miles from the nearest power station. In the first instance these engines were fitted with magneto ignition but this was superseded by a cheaper and simpler Delco battery and coil set which later found its way on to car engines.

The coming of the First World War saw the introduction of a petrol tax so Kettering set about converting his lighting set to run on paraffin in a move that also pleased insurance companies who preferred the fuel's less flammable qualities. Unfortunately the use of paraffin brought its own set of problems because customers soon complained of overheating and, above all, engine knock, or detonation. In really bad instances holes were burnt in piston crowns. Not surprisingly, the coil ignition came in for its fair share of blame for at the time it was assumed that the phenomenon of engine knock was largely caused by pre-ignition and was also known as 'ignition chatter'. However, in Britain H. R. Ricardo (later Sir Harry), who had worked under Professor Bertram Hopkinson at Cambridge, had proved that knock was a fuel rather than an ignition phenomenon.

The problem of knock was again highlighted in 1917 when Kettering was working for General Motors (the Corporation having taken over Delco in 1916) and was much involved in the development of the Liberty aero engine, conceived after America's entry into the First World War. While the engine was on test, Kettering noticed the same noises he had witnessed on his paraffin fuelled lighting sets and he called the condition fuel knock.

After the war, Kettering seconded two of his associates, Thomas Midgley Jr and T. A. (Tab) Boyd and gave them the formidable brief of curing the problem of knock. He bluntly told them: "Find the cause; cure it!". Midgley soon came up with proof that knocking and pre-ignition were separate phenomena and

that the former condition was caused by the chemistry of the petrol then available.

Midgley proceeded to experiment with many anti-knock agents, including iodine, but all had to be abandoned for one technical reason or another. A real breakthrough came when Dr Charles Wilson, chairman of Standard Oil, suggested to Midgley that a study of the atomic numbers or weight of elements might repay investigation. Even though Midgley was a mechanical engineer he responded to Wilson's suggestion and found that those elements with higher atomic numbers had a greater degree of anti-knock effectiveness. This line of investigation inevitably led to metallic lead but the difficulty lay in having to convert it to a form that could be used in petrol.

The difficulty was overcome by the creation of tetraethyl lead (TEL). At the time tetraethyl was little more than a chemical curiosity but the resultant organo-metallic compound was an oily, colourless liquid, which could easily be mixed with petrol. But it was a toxic, dangerous material. However, Midgley pressed ahead and produced TEL in laboratory quantities and demonstrably proved its anti-knock qualities. On December 9, 1921 he reported his findings to Charles Kettering who later spoke of the event as the most significant of his career.

Amazingly, only minute quantities of TEL, less than two parts in 4000, were necessary to give fuel anti-knock qualities but effectiveness was decreased if the concentration was increased. Later, in January 1922, Midgley met Charles Wilson, who had made such a crucial contribution to the breakthrough. The occasion was a meeting of the American Society of Automotive Engineers and Midgley showed him a small test tube containing TEL, which he claimed, was the answer to the anti-knock problem. There was one more hurdle to clear because Midgley soon found that TEL formed lead oxide deposits on sparking plugs, combustion chambers and exhaust valves. So he applied himself to this new shortcoming and added ethylene dibromide to the TEL before it was blended with the fuel. This was later used in aviation spirit while petrol engines used the cheaper ethylene dichloride. They had the effect of forming lead bromide, which could then be exhausted from the engine.

With this final obstacle overcome, the next stage was to produce TEL in commercial quantities and this was undertaken by du Pont, a major General Motors shareholder. Marketing was the responsibility of the Ethyl Gasoline Corporation, formed in August 1924: a fifty-fifty partnership between GM and Standard Oil.

With the problem of anti-knock overcome, improvements in engine efficiency followed as compression ratios could be progressively increased without the constant danger of piston failure. But on sidevalve engines it was not possible successfully to increase compression ratios to above about 5.5:1 before breathing was limited and turbulence increased to an unacceptable level. Far higher compression ratios were possible with overhead valve engines and efficiency was greatly improved. From thereon the sidevalver was destined to a slow decline.

Today, the use of petrol containing TEL is virtually banned on the most stringent health grounds.

It is possible that when Thomas M Midgley solved one problem he created another.

Chris Lowth

Sources: *Thoroughbred & Classic Cars* July 1982, Various Websites

Restoration Stage 1 for Fairlady Z

Ok, despite that work is still busy and doing a lot of overtimes at the moment, I have completed the stage 1 restoration for my 1990 300ZX.

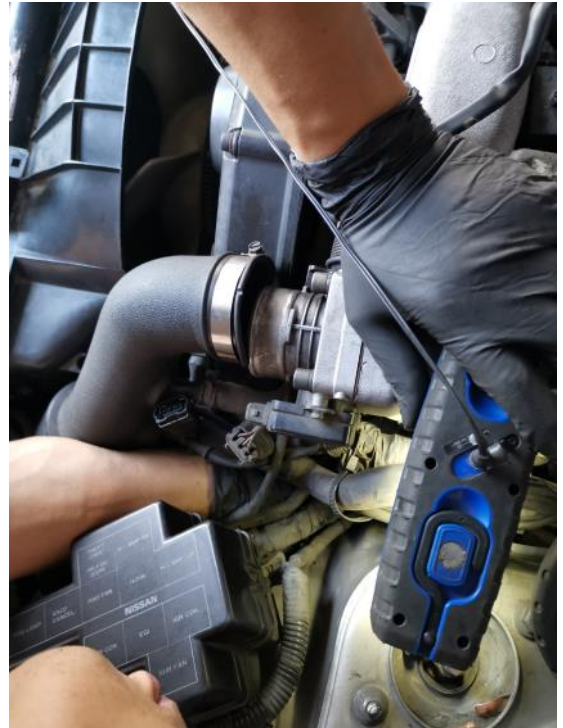
The issue was, oil leaked from the head gasket. Called my friend Park to come over and had an inspection, pretty much confirmed that it's time to replace the head gasket. As a good friend of mine, Park had seriously warned me that, the "Lady" is not very friendly to deal with. At that time, I had my ego played out and went ahead with the project.

The idea was really simple, take out the manifold, take out the rocker cover, replace the gasket, put the cover back, put the manifold back, back on road in no time. Park did not say anything and smiled at me. (I reconstructed the story, he said stop day dreaming at that time...)

So, step one, take out the manifold, this took us 3 weeks. 2 hours after the initial disconnect of the fuel lines, I was already swearing in Japanese. The reason being, you know there is a hose or a bolt in that corner, but you can neither see, nor touch it. I mean, unless you don't mind to get yourself really dirty and try to reach them on a very specific angle risking destroy your wrist.

Once the manifold was out of the way, I thought it would then be much easier for the rest of the tasks. Again, I was just being naïve. The next challenge is to get rid of the gasket residuals as they are glued. Taking out these 30-year-old rubber/silicon was no kidding. Thanks to the very low profile design of the Lady Z, I spent a full week bending over with my razers. Literally cannot feel my lower back after this.

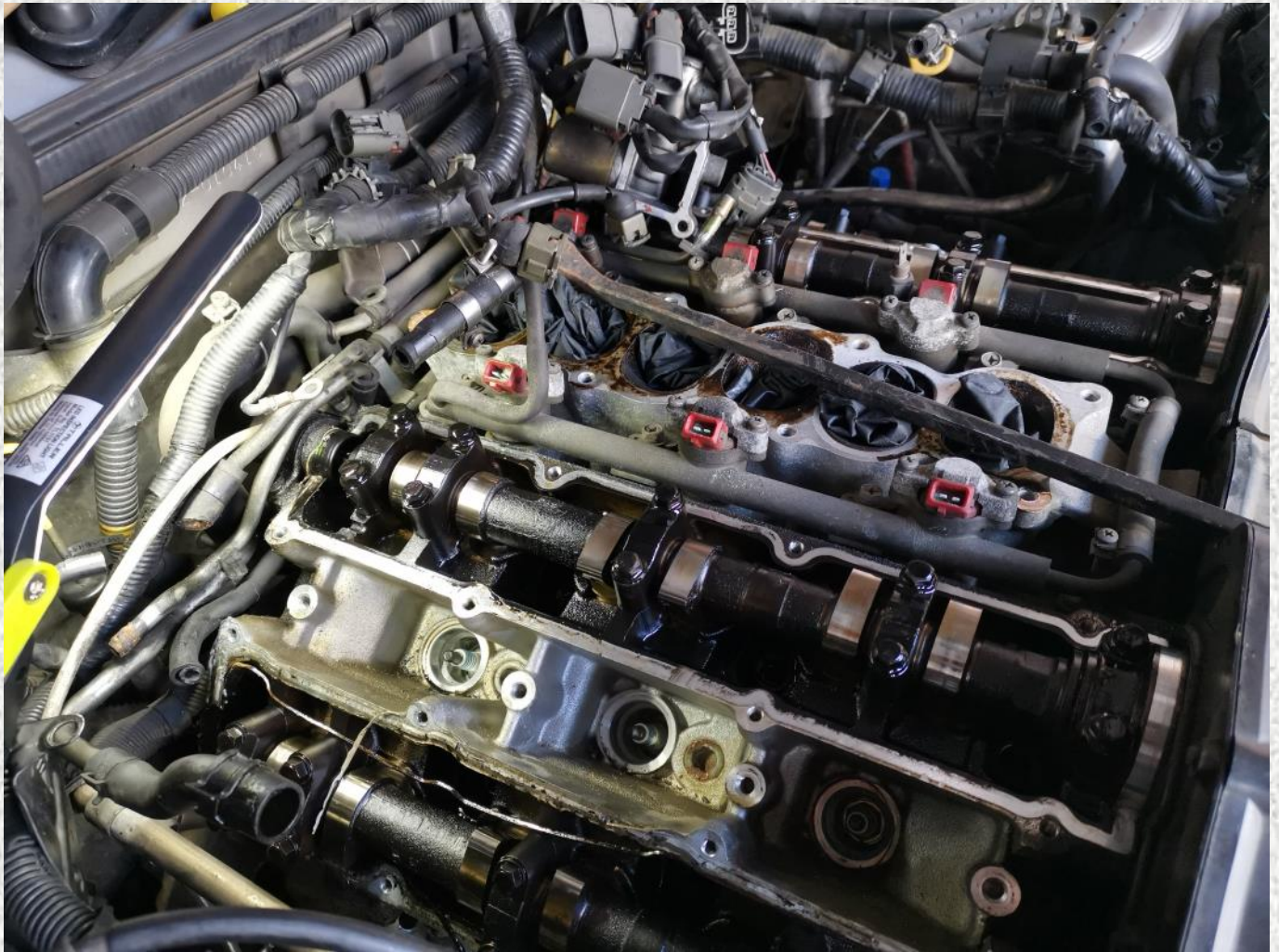
From there, it did get a bit easier, we replaced the gasket, put the cover back, and waited for a week to dry. With the help of newly purchased soft hoses and heat gun, reconnect them back to the manifold was rather unchallenging.



Lady Z is now back on road and took it out for a drive last Saturday (to a supermarket, which is essential shopping. However, let's just say it's not the Safeway around the corner where we normally get our groceries from.)

So this is the stage 1 restoration for the 300ZX, no leaks so far. All credits to my friend Park, could not have done it without him. I'm now looking forward to replace more parts and slowly bring it up to a more presentable condition.

DETAILS FOR THE 300ZX GASKET REPLACEMENT



EDDIE'S 1936 DODGE



Restoration of Leyland P76

1973 Executive

Editor: "This is an article published by the Canberra Antique & Classic Motor Club (CACMA), CHACA member Brian Crocker has send me this article with the permission of CACMA. Which he found it to be a great story and include lots of useful tips."

Leyland Australia produced the P76 at their Zetland plant in Sydney in 1973 & 1974.

My parents purchased this car from Arthur Pulfer of Pulfer Motors in Bendigo. Dad had previously purchased a Morris Minor 1000 four door, a 1960 Morris Oxford series V and a 1964 Wolseley 24/80 Mk 2 from Arthur. Pulfer Motors had been in Bendigo for decades as a Morris Dealer then BMC, BLMC, Leyland Australia and after the demise of Leyland became Bendigo's Mazda dealership. The 1973 Leyland P76 Executive was Chrystal White in colour with a Casino Blue interior. The Executive came standard with power steering and automatic. The only option available was air conditioning. Rubber floor mats and carpet floor mats were also purchased as genuine accessories. The car was much loved and proved a competent family car including the ability to tow caravans, boats and trailers.

Below is the breakdown of the total numbers built for all 13 P76 sedans.

- Deluxe Column Manual 6 (2N26) - 2342
 - Deluxe 4 Speed Manual 6 (2M26) - 516
 - Deluxe Column Auto V8 (2C44) - 1532
 - Deluxe Column Manual V8 (2N44) - 1281
 - Deluxe 4 Speed Manual V8 (2M44) - 380
 - Deluxe Total - 8169
 - Super Column Auto 6 (3C26) - 1132
 - Super T-Bar Auto 6 (3A26) - 380
 - Super 4 Speed Manual 6 (3M26) - 719
 - Super Column Auto 6 (3C44) - 1928
 - Super T-Bar Auto V8 (3A44) - 2256 (including Targa's)
 - Super 4 Speed Manual V8 (3M44) - 1047
 - Super Total - 7462
 - Executive - 2376
- Total 4 door sedan P76 Production – 18007
Plus 650 were made in NZ from parts shipped from Australia.

In addition there were:

- 52 X 2 door Force 7 Coupes
- 3 X Station Wagons

As can be seen in this photo (without compliance plate), the compliance number is P76 076 B4S4 A44 1252 with a build date of 7/73. The engine number is 4404/1259 and as you can determine came without air conditioning.



All major components are still as they emerged from the factory i.e. Engine, gearbox, rear axle, power steering and seats; although they have all been reconditioned.

I owned the car from the early 1980's and drove it daily for years as a family car in conjunction with a Bold As Brass Super V8 4 speed manual I also purchased from Pulfer Motors. Both cars ended up languishing in my garage as a succession of newer cars took their place. In 2007 I decided that my dream of fully restoring one of my Leyland's should be turned into reality and finally set about dismantling the Executive. The dream has been interrupted by the stark reality of family life and was completed in 2018.

My Executive was built in July 1973 and was one of 126 Execs built that month. There was a total of 1483 P76's built that month and assuming 5 day weeks probably came down the production line on or about the 25th July 1973. Enough trivia now back to the story!

Stripping the car was easy with just the usual difficulties associated with working in a home garage without a car hoist. I had decided to undertake a complete restoration so every part was removed from the body. I made a wooden frame with trolley wheels to support the body and also have the ability to move it about the workshop and transport to panel beater etc.

In order to keep originality I carefully removed the original firewall insulation and the insulation under the parcel shelf. This was a fortuitous decision as I haven't seen anything resembling the original material. I would recommend using a large paint scraper and some patience and you will be able to keep the original material. At the same time I made a decision which I now regret; removing the Executive only engine bay sound deadening. My decision to remove the sound deadener was based on Leyland's decision to glue the material to the inner wings and then paint the body. My reasoning was to ensure that there was no rust under the material on the primer only steel. As it transpired the steel in the engine bay was perfect except for some damage under the battery tray.



Original positioning of sound deadener under the window wipers. Firewall showing haphazard placement of yellow glue and luckily no signs of rust.



The brown in these photos is glue not rust. The glue held the sound deadener in place.



Front of car shows surface rust in panel under bumper bar and evidence of work carried out by dealer to get front indicator lights and associated panels to fit properly.

As discussed previously I had decided to undertake a complete restoration and hence having the body blasted seemed the natural extension of that decision. I also decided to media blast the floor pan to ensure the sound deadening material did not hide any rust. As can be seen from the photographs there was minimal rust in the body shell.



Some surface rust in the stone tray

The only rust in the engine bay was under the battery tray.

The front and rear guards were mostly free of rust except for some in the front and rear wheel arches.



The floorpan and roof and boot area were free of any rust.



All rust was removed and new steel welded into place. The body was sanded and cleaned and then given a protective coat of etch primer. There are reasons both for and against media blasting. You need to choose an operator who is experienced as an inexperienced blaster can warp panels or even worse destroy panels.

The person who blasted my car was very experienced and caused no damage to the body shell. I also had all suspension components, cross members etc. blasted to remove mostly oil grease and dirt. When restoring the alloy wheels I used Soda Blasting as this can be gentle on components. We made sure that the wheels were carefully washed before painting and polishing as the wheel restorer explained that any residue would destroy the painted finish.

CHACA CALENDAR FOR 2020

NOTICE: ALL EVENTS ARE CANCELLED UNTIL FURTHER NOTICE

Note: **CR** indicates sanctioned CHACA Club Run
Check Journal or web site for details of events listed

Covid-19 restriction & Use of CPS permitted vehicles

From President:

A CHACA Member has sent the following information for club members to consider. His point is valid.

It is important for all persons considering the use of CPS permitted vehicles to be cognizant of the implications of the civil law - as well as the criminal law.

During the covid-19 restrictions police will be intercepting CPS users to determine the legality of that usage. Part of that interception will be an investigation of log book entries!

In addition to that, when any accident / theft / fire et al or like event occurs all insurance claims would be the subject of intense insurance company scrutiny.

Most CPS users depend on insurance in case of accident / theft / fire et al.

Unless the insured is able to prove that the vehicle was at all times being used - in compliance with the law - the insurance company is unlikely to accept the claim.

In this context it is important to be aware that the main petitioners of matters before the High Court of Australia, apart from Federal, State & Territory Governments & their Department, are insurance companies & banks.

Insurance companies frequently initiate matters regarding accident / theft / fire et al. issues before the High Court of Australia in order to create precedents for future claims.

We can expect insurance companies to behave in a similar manner about the covid-19 issue.

Accordingly it is extremely unwise for any CPS permit vehicle to be used during the restricted covid-19 periods.

Our members should be aware that the criminal penalties are only part of the adverse outcomes of using CPS permitted vehicles at this time!

Criminal law requires proof beyond reasonable doubt while civil law is based on the balance of probabilities!

Regards

CHACA CLUB PERMIT SCHEME ELIGIBILITY GUIDELINES

CHACA is a VicRoads authorised Club to participate in the VicRoads Club Permit Scheme (CPS).

VicRoads has set rules to determine the eligibility of vehicles for the Club Permit Scheme. These may be viewed in the CPS handbook or on the VicRoads website. CHACA has set its own additional requirements for vehicles to be submitted for the CPS using CHACA's authorisation. The additional requirements are in line with the original CHACA charter of vehicle originality and preservation.

The following are CHACA's requirements for Members submitting vehicles for CPS assessment.

1. The vehicle must have been manufactured prior to 1st December 1992.
2. The member submitting the application must have been a CHACA member for at least 3 months.
3. Vehicles submitted for CPS application must be as the manufacturer originally designed and built. Some modifications are permitted in line with the original manufacture option list, are period correct, or are based on safety issues, but in all cases must not detract from originality. Replicas derived from a lower model are acceptable as long as the appearance is as original as possible to the intended vehicle model (e.g. GT Falcon from a base Falcon).
4. Applicants for the CPS will certify that the vehicle submitted will remain roadworthy during the permit period and unmodified from what was originally submitted.
5. Once a vehicle has been accepted by CHACA for CPS it will be the members' responsibility to maintain the vehicle as originally presented, with no further modifications and in a roadworthy condition for all permit renewal applications.
6. Determination of the eligibility for any vehicle submitted to CHACA for CPS will be at the discretion of the Committee. Vehicle CPS application must be submitted to the Technical Officer in writing.

For further questions, please contact the committee.

www.chaca.com.au

Associated Clubs:

Independent Clubs Associated with the **Classic & Historic Automobile Club of Australia**

Classic & Historic Automobile Club of Australia Wagga Wagga Region Inc.

Secretary: Jenny Myers,
Mobile 0403 678246
PO Box 749, Wagga Wagga, NSW 2650
Meetings: *First Monday of the Month,
at Astor Motel, corner Baylis and Edward St
Wagga Wagga 7.30pm.*
Guests and visitors are welcome.

Morgan Country Car Club

Secretary: Tony Nelson, Phone: 0403 152 474
PO Box 428, Albury, NSW 2640
Meetings: *At Clubrooms on Jindera Sports
Grounds, First Tuesday of every month 7.30pm.*

Classic & Historic Automobile Club of Australia Sydney Inc.

Secretaries: Anne Campbell, 0414 521 521
38 Wattle Crescent, Glossodia NSW 2756 .
Phone 02 45765872

Email: annecampbell3@bigpond.com
Meetings: *All Sunday meetings start at 2pm.
Members may arrive from two hours prior to
meeting times to have meal and chat.*

Classic & Historic Automobile Club of Caboolture Inc.

Secretary: Peter Rohan PO Box 514 Caboolture,
Qld.4510. Phone (07) 32041371, mob
0407752632 email: secretary@chacc.com
Meetings: *2nd Sunday of the Month. Meeting at
the Sundowner Hotel car park, Caboolture at
8.30am*

EVENTS & SWAP MEETS OF INTEREST TO CLUB MEMBERS

ALL SUSPENDED AT THE MOMENT



editor@chaca.com.au

TONY TANG

CLASSIC & HISTORIC AUTOMOBILE CLUB
OF AUSTRALIA

To minimise contact by staff and public

Vic Roads Service Centres will no longer accept Club Permit

Scheme payments

Until further notice, club permit renewals can only be accepted by
post to:

VicRoads

GPO Box 1644

MELBOURNE VIC 3001

Please advise your club members of this change to service.

Iain Ross

President

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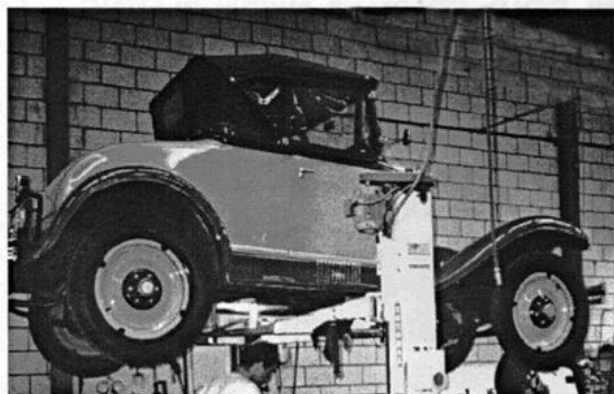
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BUY, SWAP AND SELL

Advertisements in this column will appear for three consecutive months unless instructions to the contrary are received by the Editor. Victorian State laws require all advertisements for registered vehicles to display a Price and Registration Number, and for unregistered vehicles, the sale price together with the engine or VIN/Chassis number.

Advertisements that do not comply with the above will not be listed, nor will it be the Editor's responsibility to seek such information.

SELL: Variety of Tail Shafts for 1936 Dodge, Holden and misc. others. Some are Ball and Trunion type. Nothing over \$10.00. 1/2 a dozen "boat anchors" (Dodge Motors) 3 1/4 and 3 1/8 bores. Also very cheap.
Eddie Reynolds. 0429 142 460 or (03) 9770 1231. (0219)

SELL: Orig. early-Holden wheel brace with rubber tip & 6V coil with GMH pressed into the casing. 5-ton truck bottle jack.
Rolls of black industrial-type rubber, 4- feet wide x 1/4- inch thick. New.
Rubber mats, 21 inches x 14 inches. New.
Tension wrench with metric & imperial gauges.
New. Domestic-type 18-inch, 3-speed, heavy-duty electric fan. New.
One pair of Delco wheel cylinders, 1 3/8-inch diameter, No. 5450072. New.
Large assortment of items for 1948 Chev. car.
Bridgestone tyre, size 245/70 R16, 111S.
\$100. New. Reasonable offers accepted.
Call Ed 9544 4147 Oakleigh (0419)

SELL: I have two, a left and right side front quarter glass windows, with the small thumb lock with a small spring loaded push in lock button, I'm not sure if they are for an early model, single spinner, Ford Customline, about years 53-56, or may be early model Holden model FC.
Attached above is a couple of photo's.

If anyone is interested or knows somebody that is interested please give me a call on my mobile, number 0409525587 Barry Schultz (1019)



SELL: Peugeot Engine Cylinder Sleeves. 80mm. Bore. Qty. 4. New, made in France and still in box.
Asking \$150.00 John: 0413 314 196.
(11/19)

WANTED: Old Glass and Ceramic wares, Bottles, Vessels, Containers, Jars, etc.
Pay tens, hundreds, even thousands for the right item. Marble Bottles, Ginger Beers, Demi-johns, Soda siphons, Spirits, Beers, Ceramic label Milk and Lemonade bottles, Chemist pot lids, Jars, early Australian pottery, Signs, Tins, etc.
Phone John on 0413 314 196. (1119)



SELL:
1949 RARE Mercury Convertible Coupe in standard form.
A restoration has been performed & runs well.
255 Cu" flat head engine & 3 speed gearbox with coupled electric overdrive.
A total strip of all interior renewed to authentic factory style & colours.
Some quality spare parts are available for purchase with the sale.
The mercury can be viewed at Vermont South, Victoria.
Current club registration is not transferable.
Asking price can be discussed at the viewing.
Peter Hibbert. 0419 800 122.
peter_hibbert@bigpond.com (0220)

Wanted: Front Stabiliser Bar for 1938 Desoto, also windscreen Wiper Mount.

Andrew Jones.....0427 245 644. (0520)

KEN'S JOKE OF THE MONTH.

A woman goes to her doctor who verifies that she is pregnant.

This is her first pregnancy. The doctor asks her if she has any questions.

She replies, "Well, I'm a little worried about the pain. How much will childbirth hurt?"

The doctor answered, "Well, that varies from woman to woman and pregnancy to pregnancy and besides, it's difficult to describe pain."

"I know, but can't you give me some idea?"

"Grab your upper lip and pull it out a little".

"Like this?"

"A little more".

"Like this?"

"No, a little more".

"Like this?"

"Yes. Does that hurt?"

"A little bit".

"Now stretch it over your head!"



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CHACA Membership Details.

Category	Joining Fee	Annual Subscription	Total
Single Member - Printed Journal	\$30.00	\$60.00	\$90.00
Single Member - Electronic Journal	\$30.00	\$50.00	\$80.00
Joint Member - Printed Journal	\$30.00	\$70.00	\$100.00
Joint Member - Electronic Journal (Husband/Wife/Partner)	\$30.00	\$60.00	\$90.00

Contact: Kevin Churchill, Ph. 0412 802 177
LPO Box 72, Bittern Vic 3918

Joint Membership – Husband/Wife, partner etc..

Renewals – If joined Nov-June, must renew when due on November 1st. If joined July-Oct. Membership will carry through to renewal date in following year.

Club Permit Scheme Renewal of Permit.

Send to Barry Smith the Permit together with a copy of your current Membership Card and a stamped self-addressed envelope. Barry will return it to you for you to pay at your nearest Vic Roads Office.

You can also see Barry at meetings, **please bring along a copy of the Permit for Club records, also the 7 photos of your Club Permit vehicle/s if Barry doesn't already have them.**

FOR New Applications/renewals: Contact Barry Smith,

14 Jacqlyn Avenue, Rye Victoria, 3941

Email: rozbar@bigpond.com

PHONE: 5985 9220, MOB: 0408 440 240

To all Permit Plate Holders

Due to VicRoads tightening their control on all Clubs involved with the Club Permit Scheme (CPS) we now request that all members issued with a Permit through CHACA under the new Log Book scheme attend at least one Club Run or Meeting every 6 months **with the Car**. This will assist the Club in ensuring your vehicle continues to meet with all the guidelines and conditions of use as set out by VicRoads and CHACA.

Members are also reminded that the Club is bound by the new rules of this scheme to advise VicRoads of any Permit Holder who is no longer a financial member of the Club. Any queries please contact.

Barry Smith on **Ph: 5985 9220, Mob: 0408 440 240**

Photos for Club Records

The photos that are required when applying for Club Permit are as follows.

Size of photos 6x4 inches or 15x10 cm please get them printed at Harvey Norman, Office Works, Big

- | | |
|---------------------------------|---|
| 1. Photo of the front view | 5. Photo of the engine |
| 2. Photo of the rear view | 6. Photo of the Vin or Chassis number |
| 3. Photo of the right side view | 7. Drivers view of the car showing the steering and |
| 4. Photo of the left side view | dash preferably taken from the back seat |

W etc. All photos should have date imprints on them with the owners name and signature on the back of each photo. If in doubt please contact Barry Smith.

CPS Handbook

The CPS handbook is available from Barry Smith or Eddie Reynolds at meetings or runs. The price is \$5.00 in person or \$6.00 posted

VicRoads queries 9854 2432
60 Denmark Street, Kew 3010.

Club Merchandise

The following items are for sale to members.
Contact Property Officer, Eddie Reynolds at meetings or
phone (03) 97701231 or 0429142460



25 Year Anniversary Badge....\$5.00
(65mm. diameter)



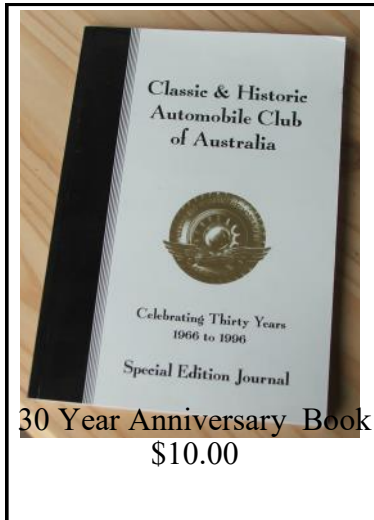
Lapel Badge
\$5.00



Early Annual Tour
Badges. \$2.00each.



Name Badges..\$10.00



30 Year Anniversary Book
\$10.00



25 Year
Lapel
Badge
\$2.00



Club Decals.
\$2.00 each



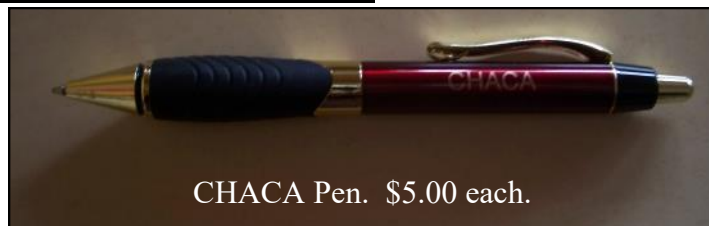
Model Car (Lledo).....\$15.00



Bumper Bar
Badge.....\$40.00
(100mm. Diameter).



Iron-on Cloth
Badge ...\$2.00
(80mm.Diam).



CHACA Pen. \$5.00 each.



FRAME FOR YOUR CAR

Colored documents with embedded club
logo is available for your car.

\$15.00 each

Please contact editor to provide information.

editor@chaca.com.au



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