

- Next meeting March 22
- Magazine deadline April 19

*The official Organ of the Classic Rally Club Inc.
(Affiliated with Motorsport Australia)*



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STOP PRESS

Trophies for The Twilight Zone will be presented at the next CRC meeting on Tuesday the 22nd of March (next Tuesday)

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John's Jabber

And just like that, most of the Covid-19 restrictions are a thing of the past! The powers that be now just say it is to be treated like getting the flu. I think this means we are nearly back to some sort of normal, except for all the rain, floods and potholes. Please

say safe everyone from either catching or spreading Covid, keep your feet dry and dodge those nasty potholes. We certainly copped a lot of water over the last month, mainly on the eastern coast of NSW and QLD. I hope everyone fared well and were not too badly affected. Now we don't have Covid to blame for postponing our events but now we have lots of water. Jonathan and Tina attempted to do a final recce for the upcoming Southern Cross Classic, a two day rally scheduled for 19/20th March overnighing in Yass but the roads for the first half of day one and the second half of day two were found to be either under water or badly affected by water. With a long range forecast predicting more rain for that weekend we had little choice but to make an early announcement to call it off in the name of safety to our entrants and their cars. We will reschedule later in the year to a weekend to be advised. Ross and Jon may have a new date to announce at this month's meeting.

Anyway, it's now March, one quarter of the year gone already and here I present to you the March edition of the Club's magazine, "Rally Directions" for your enjoyment and information of all things CRC. (gee I hope someone else has submitted some articles 'cause you must be all getting sick of me being one of the very few that try and fill it with some meaningful content). By the way, did you all know Karl Marx was a historically famous philosopher but no one ever remembers his sister Onya, the inventor of the starting pistol.

General meeting for March is on Tuesday the 22nd at Strathfield Golf Club. Meetings will now start at 7.30 as they want us out by 9pm and the bistro is open from 5.30. Hope to see lots of your smiling faces there seeing we are allowed out now. Last

weekend some of our CRC mob participated in the Phillip Island Historic race meeting, the largest historic race meeting in Australia and the 6 hour relay race at Sydney Motorsport Park, maybe some articles and photos coming our way from those involved for next month's mag. Next up is the Classic Outback Trial. Finally after four postponements over the last two years it is definitely going ahead starting in Parkes NSW on Saturday the 26th for 4 days then to Orange for 2 days, then over to Bathurst for the remaining 3 days. Full on competition for some of our CRC crews and supported by numerous CRC officials and service crews. It's not that far to come on up to check out the action over the week. Some of us like me may be a little older and rusty behind the wheel, if you can't get up there you can follow our times and placings on the Classic Outback Trial web page. Wish us luck, we might need it.

You may have seen some photos in last month's magazine, { if you got around to reading it } or on Facebook, of Ross Warners Austin 7 that he has been building over the last nine or so years, well with a little bit of luck, hard work and frantic last minute finishing off we may see it completed, engineered, blue slipped, registered and test driven very soon. In fact it needs to be all done before we go away on the COT. Then upon our return after that week and a half rallying we have a three day turn around and a long drive to Warrnambool in Victoria to show it off for a world first premier at the 2022 Austin 7, 100th Anniversary National Rally. No, we don't have time to drive it that far as we only have three days after the COT before we have to get on the road and tow it there on my car trailer. Should be a very enjoyable 10 day trip with our lovely better halves.

In Ross's spare time he is busily putting together our Club's next Rally "The Wondaiah", a two day rally starting and overnighing in Maitland see the flyer in this magazine. Book your accommodation, print off the sup-regs, get your entries in and pay your money, oh yea, no Z boards (maybe he has turned the Z boards sideways and now calling them N boards, you better read the sup-regs just to check). Alfa Club rally coming up in June the 19th. Our Club is host to the Repco Mountain Rally Reunion on May 21st. I am getting enquires for a lot

of past CRC members about coming along. If you were part of the first 20 years or know someone that was, or just interested to be part of the reunion, get on board with submitting an entry form to Glenn Evans, pay your \$40 per head fee and that will save me having to chase you up. Let's make it a huge affair. Gerald Lee is flying in from South Australia and Ian Reddock from Melbourne to be part of it.

FFFF, First Friday Free Flings have been put on hold during Covid and finding suitable venues for our vast membership location demographic. So to start these off again I am looking for someone to take on the role as FFFF Ferson, or maybe a title of Hon Social Secretary who could plan, organise, coordinate and put on the return of FFFF. Or maybe it might grow more in popularity if it was changed to Saturdays and renamed FSFF being as some find it hard getting away from work on a Friday and have to battle the traffic. I assume I will have to brace myself with the rush of members wanting the position.

Last month we had quite a few of our members join in with the HRC - Historic Rally Club's Tour to the North, a non-competitive, Club Social rally starting in Heatherbrae to overnight in Port Macquarie, then to Nambucca Heads for two nights. Much socialising was had after some long driving kilometres mainly on unsealed roads and tracks commonly used in the 1970's for the

Southern Cross Rallies. The event proved popular with those that participated.

On day two the rally route took us straight past CRC member Tim McGrath's new place in Congarinni,

near Macksville with the help of wife Ngarie and the other CRC couple residing nearby. Greg and Karen Yates set up and manned a very impressive passage control for all crews. Promoting the CRC with their appearance, marking road cards WD,



handing out lollies, having a huge laugh and putting a smile on everyone's face after they learned WD was for well done. If you are ever heading north take the time to give Tim and Greg a visit, their ranches are very impressive and you will be made most welcome. It's pretty good to be able to catch up with some of the rally competitors and champions from the pass rally days. Here's a photo of me with two CRC Rally legends, three Australian Rally Hall of Famers, multiple NSW and VIC rally driver and navigator State Champions, and one Australian rally driver Champion. Dave Johnson, Bob Watson and Barry Ferguson.



There are a few spots left if you would be considering driving from Perth to Sydney retracing in the wheel tracks of those cars from the 1968 London to Sydney marathon. Come and join the other 70 plus cars already entered for this marathon in Oct/Nov this year. Check out the new Web page for more details. Lots of CRC people along as officials and entrants, it will be a great adventure and a lifetime memory, taking 10 days to cross Australia on most of the original route they took over 50 years ago. Those lucky enough to have been able to get back on the road in their caravans and getting the WA borders open, including Vince and Kay Harlor taking in the sights of the great open roads, might be able to get some insight of the road conditions for our Marathon trip later in the year. It's shaping up to be a busy year. We also have The Sheep Station Rally on Sunday 18th August, the club's main event The Alpine Classic, 19/20th November and I would think we will be back to our usual Presentation lunch early December and I haven't forgotten Presentations for 2020/21, just finalising a suitable date to be soon announced.

In the last few weeks Wendy and I have been fortunate enough to share some special milestone celebrations with Club members and good friends, Ross Warner turning 60, Dennis Ward from the Studebaker Club turning 80, and Bill Stevenson wedding to long time partner Myrna, congratulations to them all.



That's about my bloomin' lot for this month. Get out and start enjoying our freedom again and get back in your rally car, get an entry into our events and I will see you soon, cheers for now.

JOHN COOPER





presents

Repco Mountain Rally Memories

A reunion of all past Mountain Rallyists in the events conducted by
our friends in the Jaguar Drivers Club of Australia

Celebrating 30+1 years anniversary highlighting the early years.

An invitation is extended to all past participants, Drivers, Navigators, Officials,
Organisers, partners, friends, and all interested parties.

SATURDAY 21st MAY 2022

Cost \$40 per head

PENRITH PACEWAY, RANSLEY ST PENRITH

LEVEL 2, SKY LOUNGE, [1:00 PM](#) BAR SERVICE AVAILABLE, AFTERNOON TEA,
HOT FINGER FOOD SERVED.

An afternoon of fellow mountain rallyists to reminisce together about the
good old days of navigation and sporting rallies.

- Memorabilia
- Guest speakers
- Original entrants' car display
- Continue on in the club's downstairs bar and bistro
- Stay the night at Panthers just across the road if you wish

John Cooper, President, Classic Rally Club Inc.

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The JDCA is conducting the current Mountain Rally as a tour the following week.

Info at www.jaguar.org.au

the Wondaiah



14th - 15th May 2022



Categories to suit all levels of participation:
Social - (No MA Licence required)- Just for the fun of it...
Tour - Competition with no mapping
Apprentice - Mapping but not too difficult
Masters - Challenging mapping

The Wondaiah will start on Saturday in Maitland and finish on Sunday in Minmi. Entrants will travel a meandering scenic route each day. The overnight stop will be at the start location in Maitland, where competitors will have the opportunity to spend a relaxed evening with their new-found rally friends.

The event is open to all cars of any age or marque.

The entry fee is \$ 200 per car (unlimited number of passengers). Accommodation and meals are not included in the entry fee.

Accommodation / breakfast and dinner packages are available directly from the Monte Pio Hotel and Conference Centre (start and overnight location).

Your rally pack will contain all maps and or instructions needed for the event and your windscreen car number. The event is limited to 80 cars, and entries close on Saturday 30th April 2022.

Come and enjoy some fabulous driving roads in the scenic Hunter Valley. If you only enter one event this year, this is the one for you!

An event by the CLASSIC RALLY CLUB Inc.
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THE TWILIGHT ZONE—Mr Norman and the Goose

By Martin Leaver

With the usual protocol that the winner of the event should write something about it, this is only the second time that I've had that obligation since I started in competing regularly in 2015. I lined up Andrew as a driver after my first driver wanted to spend his time racing (and earning the nickname Puddles along the way). My first event as an apprentice was Tony Norman's 2015 event - Highway 31 Revisited. It started at the Mittagong RSL with lunch in Goulburn. After various errors, such as approaching a T-junction as a road junction, and making a mess of a clock reference, I did a cut and run for lunch after about 80 km into a 150 km division.

I mention this history after seeing Andrew and Bruce stepping up to apprentices for this event. Opinions on this may vary, but I think that Tony's events are among the more difficult for new apprentices as he is mostly using the instructions to lead you to think one way, when the correct solution is another. It is relatively easy to take the wrong roads or get the wrong VIA point. Navigation isn't for everyone, but it does get easier with experience.

The following year, after I'd done four events at apprentice level in 2015, I got my first placing with the Wollondilly in 2016 (Heather Brumby had won on debut in apprentice). The next event was one of Tony's events in the lower Hunter Valley area, the Compass Run. I remember Tony calling me to say that he'd initially scored me as the winner, then noticed that for a question involving a phone number that I'd only written seven digits. I think in Tony's current regulations, rather than those in 2016, I would have done enough to show I was on the correct route. I got two other questions wrong, including writing a bridge name and a creek name, not the other way around, but didn't miss any VRCs, unlike the winners.

Tony ran a second event in the middle of 2016, and Andrew and I placed third in a field of six cars in Masters, in an event Tony tried to make a bit easier, so we stepped up a division.

Tony's 2017 event was the April Fools Fun Run, which ran in the Southern Highlands. Possibly subconsciously remembering the reasons for losing the Compass Run, I found a shorter route around Exeter than Tony had intended. A review of the scoring was required, but it only got me second place in the event. This may have contributed to Tony at one point, later on, jokingly calling me "my nemesis".

In 2018, Tony ran the first event of the year, the Autumn Challenge, which was the last event he has run north of Sydney having moved to Dapto. This was also the first event I could recall having a mid-afternoon driver revive break. The break was a bit of a navigator brain scrambler as I confused crossing N-S gridlines with going north or south. Apart from that, the event largely came together, sussing out Tony's tricks, and I got my first win. The Nemesis was temporarily getting the upper hand.

The Escarpment Escape was Tony's season opener for 2019, with an event taking in the Shoalhaven area, Cambewarra, Robertson and Jamberoo. The morning went smoothly, but it took me three goes to get Tony's route, to avoid opposing rally traffic correct, as we made repeated trips up and down Mount Cambewarra. I remember my interpretation of a canal versus a watercourse was wrong, and I then had little chance of getting the correct route through Burrawang. The Nemesis grumbled about this and then fell for a trick with a very craftily created herringbone: there were two solutions, but one was shorter than the other, or it opposed rally traffic. We burnt up our remaining time and had to dash to the finish, which was good enough for third place.

After a COVID-induced break in 2020, it was back to similar territory for the Shoalhaven Shuffle in 2021. The morning was going pretty smoothly for us, with very few U-turns. Then the run into lunch had a question that didn't turn up. Recent heavy rain had put road around Bombaderry underwater earlier in the week, so Tony modified the route, changing the final instructions. In a case of 'purely random chance', one of the sets of instructions wasn't updated and it was given to me. After that was adjusted, the Nemesis car was leading at lunch time (not that we knew for certain), but a couple of recoverable errors in the afternoon had me well behind time, and a few more mistakes crept in. Eighth place. It was almost 2015 all over again, except, it seemed to happen several times in 2021 that I'd make a mess of one of the divisions.

Tony did agree to be the clerk of the course for my first event as tour director in early 2020. I am intending to run another, probably in early 2023, as a two-day event in the area roughly bounded by Yass, Tumbarumba, Albury and Wagga Wagga. Working titles include the Goldfish Rally (ref drivers asking: "what are we doing next?") and in the spirit of CRC puns on famous events, The Ire of Man Tablelands Tour. Unlike Tony's carefully hand-modified maps, I'm looking to use current electronic maps to produce the event maps if I can.

Back to the Twilight Zone. My only previous experience of navigating in the dark was the 2016 Barry Ferguson Classic, which didn't go so well with my Alfa 164 engaging in mutually assured destruction with two kangaroos. After the twilight collision, somewhere in the Barnawartha area, getting to Mulwala for dinner with a leaking radiator was more about limping in, rather than finding VIA points. Things like clever lighting so that

the Andrew doesn't suffer from reflections in the windows while I'm attempting to navigate, is a problem to solve for another event if it happens.

The late start to the day was definitely appreciated, and it allowed for plenty of time to read Tony's notes on the out of bounds and study the map. Unusually, the entire event was on a single, 1:100,000 scale, A3 map, meaning no shuffling of maps or map priority tricks (but more suburban driving than normal). Tony had modified the map in several places. Gates, fords and some tourist route symbols were out of bounds, with a couple of gates on major roads. I didn't find one of the fords until looking at an impassable road from the interior of our BMW, but locating all of the tourist route markers before the start was invaluable later on.

We left about five minutes after M1 opened, with a route plotted towards Berrima, back to Mittagong, Bowral, Mount Gibraltar and back into Bowral. I'd seen Ross and John head down Centennial Road towards one of Tony's inserted gates, and I said to Andrew "they'll sort that out once the question doesn't turn up. Some would argue that more boards on incorrect roads would catch more of us out, but the questions saved us on a few occasions later in the day.



In Bowral, I'd not spotted a shorter route, but we were looking for a property name at a given house number and the numbers weren't working. I'd gotten a bit confused with the intersection on Mount Gibraltar, and this meant some tour cars had caught up and were coming the other way. A P for a manned passage control just out of sight was a big red flag and we turned around. We saw Mike Stephenson in Dom's very orange Kia Cressida having similar thoughts after I'd unpicked my error.

Into northern Moss Vale and I didn't check the instruction carefully at all and also somehow thought that the shortest distance overall was relevant. I missed doing a loop and this was the only bit of the route that I didn't work out eventually. Next came the ford that I didn't find on the map, and from back-tracking and then seeing tour cars in the opposite direction to say that Plan B wasn't working either, there was enough uncertainty in my distances to be unaware that I'd missed the short loop in Moss Vale.

The rest of Division 1 came up as expected, although we were drawn in by a board just after the railway crossing that was placed for Division 2 traffic. After correcting that and visiting the second manned passage control, we saw Alan and Robbie contemplating the same error we'd just made.

For Division 2, I tried to get away once M3 opened to give plenty of time. Again I didn't spot Tony's shorter loop, but the question not coming up prompted a re-think. By the look of the score sheet, most of the masters' crews made the same error, but didn't go back to correct it. Once I'd corrected that error, we'd used up all of the slack in the available time. Tony then tested us with a check that we were paying attention to direction we travelled in Division 1. I'd worked it out correctly, then forgotten why and changed the route to a wrong one, and then had to correct it back once the board after 1 km on dirt didn't come up. I tend not to trace the route I'm going on my map as there the risk of making a mess and adding confusion. Possibly not a wise strategy, but we all have our

techniques.

Making a mess of these sections meant that I hadn't plotted as far ahead as I should have. Tony had an instruction to drive between two lookouts. He had four on the map and initially I'd not sorted out the correct direction for the loop and half thought about the meaning of driving between points. To take Ross' Alpine Classic definition of passing when at right angles, the line between two lookouts would cross the road at approximately 90 degrees to the direction of travel. The other pair of lookouts were offset from each other relative to the road. When you are not concentrating, Tony will give you enough information to convince yourself the wrong route is correct. However, cars coming in the other direction were a bit of the hint that something was up. We found Mike Batten initially having the same confusion, although he'd been thinking about it for longer. Fundamentally, I'd made a basic error of leaving a VIA point before I'd determined the route to the next VIA as I thought we were short on time.

As with at least a few other masters' crews, we initially missed McGrath's Hill on the map and headed off to Robertson on a longer route. Andrew looked at the question and said, this is an odd way to get to Moss Vale. It was only really when the distance didn't work that I found the route we should have taken, and we headed back to Burrawang. A closed road had made a mess of Tony's intended loop and my attempts at working out how much distance we had saved were wrong. Andrew spotted the answer along the way ("it had a three in it") and my ruler said that must be thirteen. The night had set in, and Tony's next VIA point needed more careful measurement than I'd given it. There were three intersections that were approximately possible, and I'd measured one that suggested Range Road for the way home. A few kms up the road and the next question wasn't there. A look at the route to the finish showed the distance from the western end of range road to then complete the route wasn't going to work.

After a map scaling error, we made it onto

Aylmerton Rd where we found Mike and Peter looking at the second last question with a bright torch. We followed them onto the Old Hume Highway and then watched as they drove through the first out-of-bounds tourist route marker that I had found before lunch.

Submitting our road card, I knew it said we'd followed the correct route in Division 2 – apart from the inaccessibly bit at Burrawang – although you can't be certain you didn't miss a board, as we had all the questions at the right distances. The road card didn't reflect any of the errors that I'd made and then corrected. Maybe after four years we were a bit more competitive/desperate for a good result. Last year I was quite good at getting one division right and stuffing up something in the other. In Tony's event last year, the Shoalhaven Shuffle, Andrew and I had clean sheeted the morning (even though Tony had given 'his nemesis' a previous version of the instructions), but the afternoon became a bit of a disaster.

Although the official results say we won, the unofficial results are that Tony beat his nemesis quite convincingly.

[Nemesis is the Greek goddess of retribution .

She is portrayed as a winged goddess wielding a whip or a dagger.

The story goes as she fled from Zeus' embrace she took the form of a goose.]

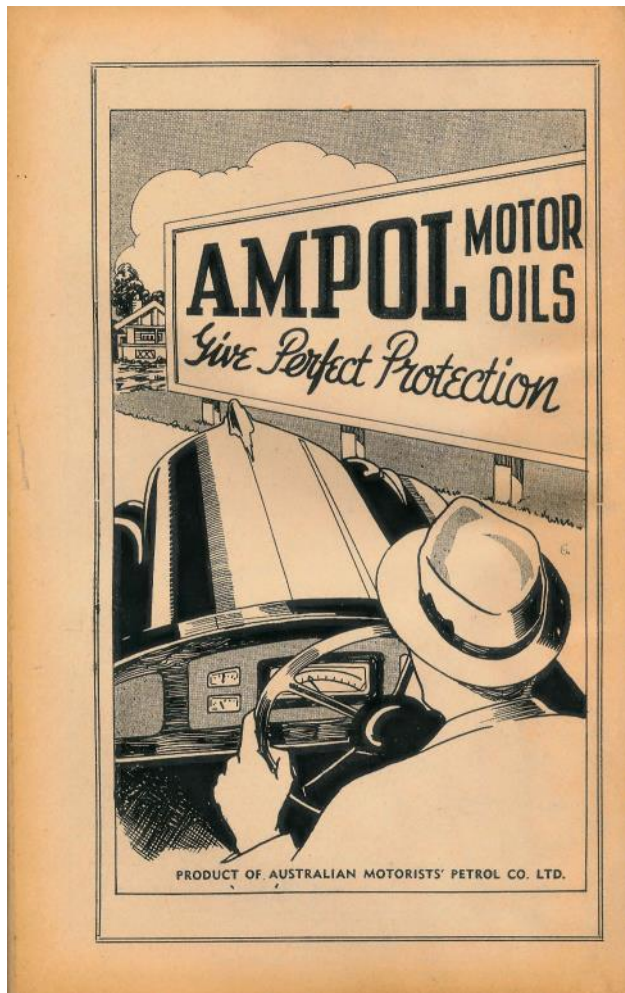


Some fuel additive history and fact and fiction:

As part of the series of articles in these pages- about petrol products of the 20th century that we don't see anymore, it is appropriate to spend a moment on the subject of fuel additives and innovations. Whilst there were a lot of claims that were more spin than substance, some were very real....

Even before 1920 oil refiners and petrol companies were striving to produce superior quality petrol/ gasoline- or to at least appear that this was true...

From truly simple beginnings oil refining became



progressively more scientific and complex during the 20th century, coupled with increasing knowledge of how to make better engines, and fuel for them. World War 2 and the emphasis on improving aero engine performance also led to major advances, and the 1950s saw a focus on

understanding how to make higher octane (engine knock resistant) fuels for spark ignition engines that were affordable- the engines and the fuel.

Although aviation high octane fuels were still made after the second world war, such as for the Super Constellation airliners, with their complex piston engines- during the short post war pre- jet airliner era, these fuels weren't affordable for ground level engine operation, and were too much even for most motor racing applications. Once the jet engine largely took over in commercial aviation, the aviation emphasis changes significantly, since the vast majority of jet engines operate on kerosene based fuels.

No, for oil companies it was fuels for mainstream motoring that was where the sales volumes and profits were to be made.

First of all the king of petrol additives of the 20th century deserves attention. That would be, in a no competition situation- the compound known as Tetra Ethyl Lead, or ethyl fluid. First to backtrack a bit, the USA popularised the use of Tetra Ethyl lead as a fuel improvement additive, and was also amongst the first to ban its usage from about 1972. Elsewhere the same move to unleaded fuel and the end of leaded fuel were being taken in Europe, the UK and Australia, but not too suddenly.

So, although widely used for decades, leaded petrol disappeared from Australian roads and petrol stations largely from 1987. Officially this was due to the recognised need to protect health, especially young children from the effects of lead from vehicle exhaust emissions. Perhaps not coincidentally lead had to be removed from petrol to allow catalytic convertors to work on newer car engines to meet more stringent emission limits applied in Australia and elsewhere on carbon monoxide, and oxides of nitrogen. Is safety a better selling point, as a community message, than new, complex costly changes to vehicles now on sale- to sell the change

to the public? (Just asking for a friend)....

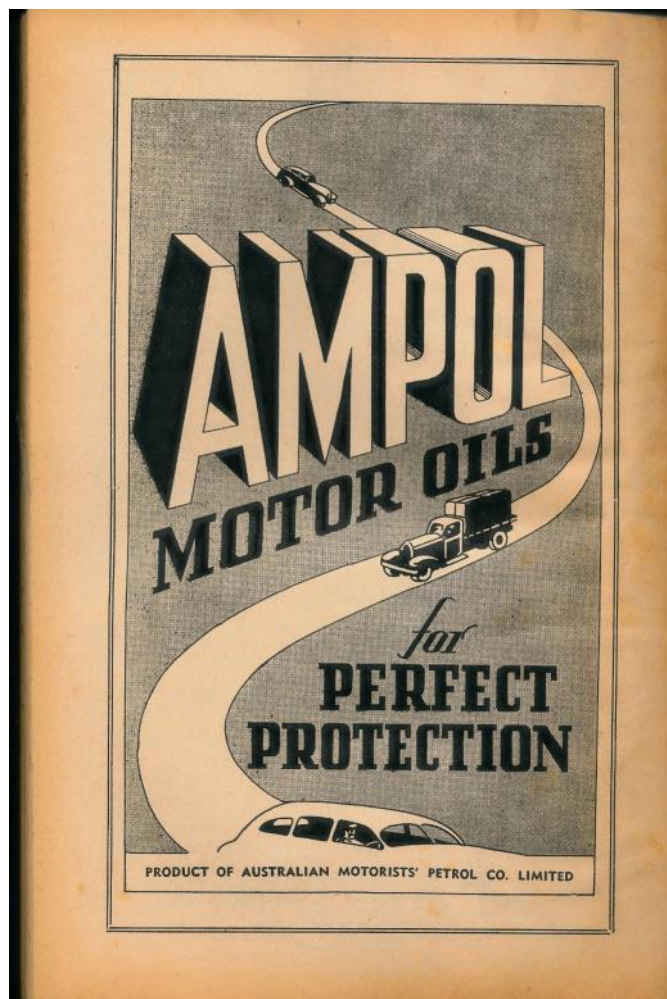
Despite dire warning from many “experts” older engines did not promptly suffer catastrophic damage from the adoption of unleaded fuel-provided the octane rating was adequate for the engine design, and its mode of usage. Lead replacement petrol was provided for a while to cushion the blow of transition (mostly a government and oil company PR stunt) and changeover of the nation’s vehicle fleet to newer models was expected to deal with the issue of stubborn or poor folks continuing to run engines designed for leaded high octane fuel when the lead was removed. Leaded super in Australia had been 98 octane, later reduced to 97, whilst Australian ordinary unleaded petrol was only 91 octane, compared to earlier standard grade petrols of around 89 octane from the 1960s- whether leaded or not.

Fickle or uncooperative, the Australian motoring public did not immediately buy new 91 octane designed/compatible unleaded petrol vehicles en masse. Soon enough premium unleaded petrols of 95 and then 98 octane became available for people that wanted, or in some cases actually needed higher octane fuel. The prices though from the new premium unleaded petrols made the old 98 or 97 leaded super seem cheap by comparison. This was not entirely profiteering though, the increased octane without TEL required the inclusion of greater quantities of high energy/high octane compounds called aromatics. Benzol/benzene had been a notable aromatic constituent, especially by BP in its super and racing fuels, but its usage became clouded in the 1970s due to its carcinogenicity. Today the permitted benzol maximum limits in petrol are tiny. Bear in mind that petrol may typically contain up to around 300 discrete hydrocarbon chemicals....

Because Australia had gone its own way with the introduction of a regulated octane level for “our” unleaded petrol, we had the 91 octane product specified for the Australian marketplace. This was

no doubt the government’s response to the oil companies telling them that the production of say, leadfree “eurosUPER” of 95 octane would increase refinery/production costs, so to minimise the claim by refiners of cost impacts from the phase out of leaded petrol, the fuel quality, with respect to octane, dropped quite significantly. The yield of 91 octane ULP petrol from a barrel of crude was not expected to change too much from what had been refinery business as usual. As history showed, the answer to this question about refinery costs and impacts from the changeover to 91 octane ULP, would turn out to be “It depends....”

Today, after the demise of the local car manufacturing industry, many importers have decided that it is OK to sell overseas models that require 95 or 98 octane, and if going bush where the only petrol pump in town is 91 octane plain



ULP, bad luck- the engine management system will just have to put up with the lower octane, which it is designed to do- to a point. Add this observation

about where Australians take non diesel vehicle these days and you can see why AMG Mercs and M series BMWs, as two examples of vehicles that virtually mandate premium octane and priced fuels- are happily bought despite their dependence on more expensive PULP. They sound impressive ripping around city carparks and suburban streets.

The drama that was predicted about E10 petrol that followed some years down the road from the introduction of 91octane ULP will be covered in a later article- but for now, note that less expensive E10 fuel, of 94 octane rating is virtually the same in real world octane as no-ethanol 95 octane PULP. This is due to latent heat of vaporisation of the ethanol content, and other factors. The answer to why we started with 91 octane ULP and later got 94 octane E10 ULP can be discussed in technical terms- but the brief explanation is that they are a result from the same cause- politics and bureaucrats attempting to manage "problems".

If only the E10 discount per litre was enough on a percentage basis to truly offset the minor consumption increase and recognise its origin- as not from fossil fuel sources- as with E10, 10% of a litre of petrol does not come from price volatility associated with imported crude oil? Politics again I fear.

So now having set the stage, lets introduce the star of the show- Tetra Ethyl Lead!

Throughout the period from the 1950s to the late 1970s, almost worldwide the addition of tetra ethyl lead was normal refinery/fuel blender practice to gain the last few points of octane rating. Pre 1990- to illustrate one haven for unleaded fuel, the Soviet sphere of influence apparently would not buy TEL products from the Americans as additives for their normal motor fuel, and hence had 80 octane or less "petrol". So they had 6.5 to one compression ratio engines, still- when most of the world had the benefit of better performing engines of nine to one, or more, compression ratio engines. Other explanations for the low octane rating of soviet sphere petrol include refinery design and

operation....

So to re-cap-higher compression engines, with suitable fuel- were more powerful and economical on fuel consumption than earlier lower compression designs. The use of TEL as a cost effective octane improving additive was well demonstrated, and at normal levels did not produce obvious negative impacts on engine operation. It was kind to cast iron cylinder heads with (cheap) integral valve seats, maybe not so kind to lower grade engine valve steels.

In the beginning: One of the 20th century's major talents, with respect to greater understanding and development of internal combustion engines, was Sir Harry Ricardo. In his 1941 book, Ricardo describes the work of Midgley in 1922 that the efficacy of the addition of tetra ethyl lead as an anti -knock additive is best illustrated by stating that ONE molecule of TEL in 50,000 molecules of mixture (being the fuel and air mixture) may raise the highest usable compression ration by one full ratio.

WOW! A gentleman named Callender proposed a detailed and plausible theory explaining this profound effect, and somewhat later Egerton proposed another theory about the physics and chemistry of the demonstrated anti -knock effects. Meanwhile over in the USA, at General Motors the good folks were perhaps more concerned at the practical benefits and profits seen in results, than in esoteric theories. Before 1929 oil companies could make any quality claims they wanted, as the system for quantifying octane rating was not introduced until 1929.

A real gain though in fuel quality would get publicity automatically.

Following trials, during September 1923, GM teamed up with Standard Oil of Indiana to introduce Ethyl gasoline on a large scale. In August 1924 GM and Standard Oil of New Jersey formed the Ethyl Gasoline Corporation to franchise the Ethyl additive to gasoline (petrol) marketers

worldwide. Some problems, including deaths, occurred from the handling of the TEL concentrate at small depots/retailers and the business expansion was halted for over a year whilst the US Surgeon General examined the issues. It was clear that in concentrated form the chemical was extremely poisonous, so appropriate handling protocols had to be developed. From there, with new operating procedures, "Ethyl" as a fuel additive was on its way. It would play a large part in world war 2 aviation, and in the 1950s advances in engine designs that built on the war time incubation of engine design knowledge and new designs applied to post war motoring.

After World War 2, in the USA individual refinery operators increasingly applied their own knowledge and research efforts, often exploring the usage of novel processes and additives. Presumably access to official ethyl additive came at a significant real cost. As well as fuel products- the motor oil, petrochemicals and other lubricants and refinery products were also undergoing rapid development. For example Shell and Conoco had probably learned from aviation, that a chemical known as TCP (tricresyl phosphate) was an effective lead scavenger that kept combustion chambers and spark plugs relatively free from mobilised deposits that could cause plug fouling when engines were

worked hard with highly leaded fuel. Other fuel companies added upper cylinder lubricant additives to reduce valve sticking(?), and solvents and detergents- similar to what premium petrols claim today- to clean your engine internally with a couple of tank refills. There was plenty of interest in finding a technical and marketing edge that didn't cost too much.

To more fully service the petroleum industry, the Ethyl Corp provided a couple of different TEL based anti-knock products, for motor and aviation use (containing about 60% TEL and other chemicals to aid mixing stability) and other additive products that were effective at very low rates of addition to prevent the formation of gums, corrosion and other problems which had been associated with the low tech gasolines of the 1930s.

Next episode we will look specifically at an innovation pioneered and patented by Standard Oil of Ohio, to use the element Boron, as a petrol additive. In Australia the Ampol company would take this exciting innovation up, with enthusiasm, in 1959. The story of Ampol and Boron will be told in a future article. For now I'll leave you images of some early and later Ampol advertising from the first era of the Ampol brand name.

Tony Kanak



Many Hands Motorsport at Targa High Country 2022

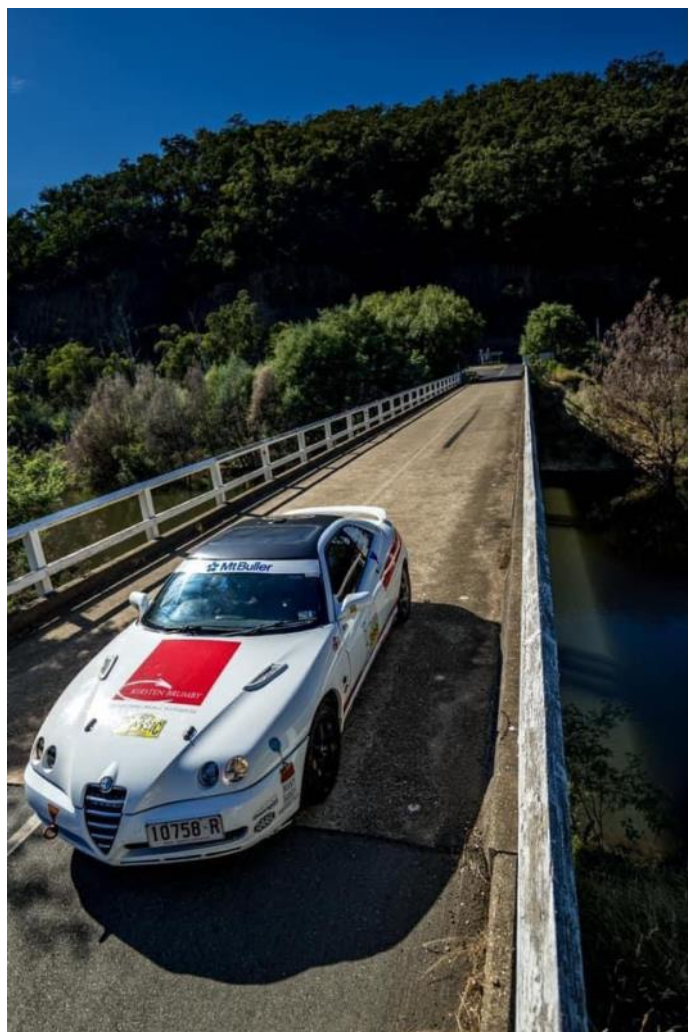
It had seemed like ages since we'd actually been able to compete. We had a run at the North Shore Sporting Car Club's wonderful Tarmac Rally Sprint which is conducted at Sydney Motorsport Park but nothing else since Targa Tasmania in Apr 2021. COVID border closures had meant that we (and all the rest of the country - bar Queenslanders) could not race at Targa Great Barrier Reef in Sept 2021 and so all we had to look forward to was Targa High Country 2022.

Targa High Country is a three-day event based out of the Victorian ski resort at Mt Buller and uses roads in the King Valley, Euroa and Jamison/Eildon regions and also including several runs up and down the very challenging Mt Buller access road. With the car prepped and prepped and prepped we were happy to be finally heading southward.

Our category, TSD, had had some recent rule changes that we needed to get our head around. Previously based on achieving an overall correct average speed the requirement now was to achieve a given time to complete the stage. The net effect of this change was that the window allowed to cross the finish line had opened (and closed) to one second. When using an average speed the window varies from stage to stage with small stages providing a very small window (a tenth or less) to much larger windows on longer stages (sometimes several seconds) so the change meant short stages got a little easier and long stages harder.

The other significant change was the requirement to participate in Restricted Time Zones (RTZs). RTZs are a bit like virtual chicanes and have been widely used as an effective way to slow down the overall average speeds of the open competition cars. In Targa events an RTZ is a 200m marked zone that you must remain in for 20secs. This is achieved by slowing as you approach the zone and then sitting on the required speed to achieve not reaching the end of the zone within the 20secs. It's about

71kmph. The organisers use this to reduce the overall average speeds of the top cars (as is required by the governing rules for rallying) but it had not been a requirement in our category previously because our overall average speed is well below the target. The effect of introducing them into our category is that it increases even more the mathematical challenge it takes to figure out how to arrive at the finish line at the right time.



The weather for the event was shaping up to be pretty good and as always seems to be the case cool up on the mountain but pretty hot down where most of the stages were to take place. At least this year there was no snow predicted. Arriving on the Wednesday prior we smartly got the car through scrutineering and checked ourselves into the event at Mansfield with the toughest part being finding space for yet another ready to compete

sticker on the rear window; space being at a premium. It was then on up to the mountain to settle in with Thursday just seeing some event prep and a catch-up dinner with great friends.



And before you know you're sitting on the start line, helmet on, with all the previous hours nerves quickly fading into the concentration that is required to get through the first corner at speed and then the many, many others throughout the day. Easily the best thing about rallying is that that next corner, the one up ahead is new and different to every other corner you've done so far. And we had a great day ending in first place in our category.

Day two went well as well. Heading out to Euro it used stages that had not been used for several years. All of the road roads were amazing but some stages were pretty rough and bumpy making the day pretty challenging. And it finished with the iconic run through the streets of Mansfield. It is a very short stage but so much fun. The short stages are difficult to get right and we dropped a couple of points after slowing a little too much in the second half of the stage. After the run there is a display of all the cars in the main street and an opportunity for dinner in the Mansfield Hotel; again, catching up with friends.

When the dust settled on the day, we found ourselves in a strong second place.

Day three of Targa High Country sees the field tackle some monster stages such as the 49km long 'Jamison' and 42km 'Eildon' as well as a second 19km run up the Mt Buller road. Not only are they long they are very left, right, left, right so really quite challenging. The Jamison stage starts with a long uphill climb and we found ourselves half way through the stage realising that we hadn't gone quick enough which made the second half of the stage fun but not long enough to make up the time we had lost. As a result, we dropped into fourth position where, despite really good results on the remaining stages, we stayed till we hit the finish line.

In something like ten or eleven events together Heather and I have competed in we worked out we've come fourth about seven times now. It's true we could put a bit more effort into reconnaissance (well any effort would be more) and take things a bit more seriously and sure it's a bit frustrating but we have an absolute ball at every event and if we had to sacrifice the great times we have with friends for a rung on any ladder we'll choose to stay where we are.

Having said all that don't worry; we'll be having a red hot go in Tassie in April. We'll let you know how we go.



THE TWILIGHT ZONE - ENTRY LIST

No.	Cat.	Crew	Vehicle	Year
1	M	Andrew Inglis - Martin Leaver.	BMW 535i	1988
2	M	John Cooper - Ross Warner.	Ford Escort	1971
3	M	Peter Reed - Mike Batten.	Datsun 1600	1969
4	M	Dominic Votano - Mike Stephenson	Toyota Cressida	1991
5	M	Graham Pettit - Phill Stead	Volvo 240GL	1985
6	M	Dave Shaw - Ray Arthurs	Ford Cortina	1963
7	M	Rob Panetta - Alan Walker	Alfa Romeo 147	2006
14	A	Andrew Taurins - Bruce Millar	Ford Capri	1972
15	A	Murray Baker - Nikki Baker	Porsche 944	1990
16	A	Peter Parry - Ian Gilhome	Nissan Skyline	1983
17	A	Mark Hoyle - Tanaz Dhondy	Mazda MX5	1992
18	A	Bang-on Mansell - Jon Mansell.	Toyota Corolla	1997
21	T	Chris McDonald - Roger Ward	Alfa Romeo Giulietta	2015
22	T	Michael Malgo - Geoff Hemsall	Audi A5	2010
23	T	John Croft - Annette Croft	MGB MKII	1968
24	T	Edul Dhondy - Shaneen Dhondy	Subaru WRX	2001
25	T	Warren Herrick - Glenda Lawrence	Toyota Celica	1984
31	S	Dennis Oste - Anthony Oste	Nissan Skyline	1990
32	S	Strat Mairs - Eddy Furlong	Mercedes 560 SEC	1990
33	S	Mark Pentecost - David Odell	Honda Jazz	2004
34	S	Brian Doyle - Pru Doyle	Mercedes Benz 190E	1987
35	S	Justin Bedingfield - Charles Doggett	VW Golf GTi	2020
36	S	Greg Yates - Karen Yates	Mercedes Benz 190E	1990
37	S	Michael Olsson - Harriet Jordan	Alfa Romeo GT	

THE TWILIGHT ZONE FINAL RESULTS

DIVISION 1 - MASTERS & APPRENTICES

PAGE 2 OF 5

CAR NO.	VRC AND PASSAGE CONTROL PENALTIES													QUESTION PENALTIES	SPEEDING PENALTIES	PENALTIES THIS DIV.					
	XU	F2	XU	T4	XE	PC.1	LV	F7	H2	PC.2	TN	H9	CB						E8	A9	VRC ON WRONG ROUTE
1							12										0	0	12		
2					12	30	12	12	30	12	12	12					99	0	231		
3																	0	5	5		
4							12								15		0	8	35		
5																	0	13	13		NON-COMP.
6					12	30	12	12			12				15		55	6	154		
7					12												0	1	13		
14	12	12	12		12		12				12	12					99	5	188		
15											12						44	5	61		
16		12	12	12								12					141	0	189		
17	12					30	12	12		30					15	15	55	13	194		
18																	11	2	13		

DIVISION 2 - MASTERS & APPRENTICES

PAGE 3 OF 5

CAR NO.	VRC AND PASSAGE CONTROL PENALTIES													QUESTION PENALTIES	SPEEDING PENALTIES	PENALTIES THIS DIV.	TOTAL PENALTIES	POS'N.			
	4V	4V	PC.3	CB	TZ	GE	A9	TZ	FK	E4	PC.4	L7	H7						H7	VRC or PC. WRONG	AB
1																	0	0	0	12	1
2	12	12												12		15	110	0	161	392	6
3																30	22	0	52	57	2
4	12															15	0	6	33	68	3
5	12													12			33	1	58	71	NON-COMP.
6	12													12		30	55	0	109	263	5
7	12													12		15	33	0	72	85	4
14				12	12									12		30	66	0	132	320	4
15	12			15	12												22	0	61	122	2
16									15							15	60	15	193	382	5
17				15	12												33	0	60	254	3
18													12			30	22	0	64	77	1

VRC-L7 CANCELLED DUE TO CLOSURE OF McGRATHS RD

THE TWILIGHT ZONE FINAL RESULTS

DIVISION 1 - TOUR & SOCIAL RUN

PAGE 4 OF 5

CAR NO.	VRC AND PASSAGE CONTROL PENALTIES													QUESTION PENALTIES	SPEEDING PENALTIES	PENALTIES THIS DM.				
	XU	F2	XU	T4	EB	H7	PG.1	LV	H2	GE	PC.2	7N	4V						7N	CB
21																11	0	11		
22																17	12	29		
23	D	N	S															-		
24																11	0	11		
25																11	0	11		
31																11	15	26		
32																0	15	15		
33		12		12				12				12				83	17	148		
34													12	12		22	7	53		
35																11	15	26		
36																11	0	11		
37																17	10	27		

DIVISION 2 - TOUR & SOCIAL RUN

PAGE 5 OF 5

CAR NO.	VRC AND PASSAGE CONTROL PENALTIES													QUESTION PENALTIES	SPEEDING PENALTIES	PENALTIES THIS DM.	TOTAL PENALTIES	POS'N.	
	AB	PC.3	H9	PC.3	CB	A9	FK	E4	PC.4	FK	TF	H7	H7						
21															0	2	2	13	1
22															0	4	4	33	3
23			12	30											11	10	63	-	NON-COMP.
24			12	30											11	0	53	64	4
25															11	0	11	22	2
31												12			0	9	21	47	
32						12			12			12			0	8	44	59	
33	NO CARD FOR DIVISION 2																-		
34												12	12		55	1	80	133	
35															11	5	16	42	
36															0	0	0	11	
37						12	12	30	12	12	12	12			110	2	214	241	

CRC CHAMPIONSHIP POINT SCORE

Masters Drivers

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6			
	The Twilight Zone	Southern Cross Classic	The Wondaiah	Tour d'Course	Sheep Station Rally	Alpine Classic			
	1 day	2 day	2 day	1 day	1 day	2 day			
Competitor								Points to date	Position to date
Andrew Inglis	20							20	1
Peter Reed	19							19	2
Dominic Votano	18							18	3
Robert Panetta	17							17	4
David Shaw	16							16	5
John Cooper	15							15	6
Graham Pettit	0								

Masters Navigators

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6			
	The Twilight Zone	Southern Cross Classic	The Wondaiah	Tour d'Course	Sheep Station Rally	Alpine Classic			
	2 day	1 day	1 day	1 day	1 day	2 day			
Competitor								Points to date	Position to date
Martin Leaver	20							20	1
Mike Batten	19							19	2
Mike Stephenson	18							18	3
Alan Walker	17							17	4
Raymond Arthurs	16							16	5
Ross Warner	15							15	6
Phill Stead									

CRC CHAMPIONSHIP POINT SCORE— Continued

Apprentice Drivers

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6			
	The Twilight Zone	Southern Cross Classic	The Wondaiah	Tour d'Course	Sheep Station Rally	Alpine Classic			
	2 day	1 day	1 day	1 day	1 day	2 day			
Competitor								Points to date	Position to date
Tina Mansell	15m						15	1	
Murray Baker	14						14	2	
Mark Hoyle	13						13	3	
Andrew Taurins	12						12	4	
Peter Parry	11						11	5	

Apprentice Navigators

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6			
	The Twilight Zone	Southern Cross Classic	The Wondaiah	Tour d'Course	Sheep Station Rally	Alpine Classic			
	2 day	1 day	1 day	1 day	1 day	2 day			
Competitor								Points to date	Position to date
Jon Mansell	15m						15	1	
Nikki Baker	14						14	2	
Tanaz Dhondy	13						13	3	
Bruce Millar	12						12	4	
Ian Gilholme	11						11	5	

CRC CHAMPIONSHIP POINT SCORE— Continued

Tour Drivers

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6			
	The Twilight Zone	Southern Cross Classic	The Wondaiah	Tour d'Course	Sheep Station Rally	Alpine Classic			
	2 day	1 day	1 day	1 day	1 day	2 day			
Competitor								Points to date	Position to date
Chris McDonald	10m							10	1
Glenda Lawrence	9							9	2
Michael Malgo	8m							8	3
Edul Dhondy	7m							7	4
John Croft									

CRC CHAMPIONSHIP POINT SCORE— Continued

Tour Navigators									
	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6			
	The Twilight Zone	Southern Cross Classic	The Wondaiah	Tour d'Course	Sheep Station Rally	Alpine Classic			
	2 day	1 day	1 day	1 day	1 day	2 day			
Competitor								Points to date	Position to date
Roger Wood	10m						10	1	
Warren Herrick	9						9	2	
Geoff Hemsall	8m						8	3	
Simone Dhondy	7m						7	4	
Annette Croft									

CRC CHAMPIONSHIP POINT SCORE— Continued

Future Stars in a Rally Car									
	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6			
	The Twilight Zone	Southern Cross Classic	The Wondaiah	Tour d'Course	Sheep Station Rally	Alpine Classic			
	1 day	2 day	2 day	1 day	1 day	2 day			
Competitor								Points to date	Position to date
Tanaz Dhondy	13							13	1
Simone Dhondy	7m							7	2
Please let Mike Batten know if he has missed any other young competitors (under 30 years of age)									

NOTICE BOARD



THi,

I would like to request your support in promoting our upcoming Kidney Kar Rally event. In its 33rd year, the [Kidney Kar Rally](#) proudly supports Kidney Health Australia. Every year, teams drive thousands of kilometers across the beautiful Australian countryside with one ambition - to change the lives of children and young people affected by kidney disease.

This year the rally runs 10 – 20 August and teams will drive approximately 5,000kms from Cairns, QLD to Dubbo, NSW via Gold Coast.

The rally raises vital funds to support the Kidney Kids and Youth Program, which provides age and life-stage appropriate resources, information and activities to ensure kidney kids can live their best life.

I would be very grateful if you could place an ad on your website or in your upcoming newsletter to promote this event to your audience and support Kidney Health Australia.

Can you please let me know if this would be possible?

I look forward to hearing from you.

Kind regards,



Hi all,

The monthly membership reports 11 memberships have been renewed since I last asked Peter for a bank statement on 24 February. None had sent me confirmation of payment, so I didn't know about them, hence the delay.

Kind regards,

Glenn

Your Membership Secretary

Thanks to John Cooper, Martin Leaver, Tony Kanak and Steve Brumby

CRC Event Calendar 2022

Updated 11/11/2021

Date	Day	CRC Championship Events	Other events / notes
22/02/2022	Tuesday		Club Meeting
4/03/2022	Friday		FFFF
5/03/2022	Saturday		Minis Downunder
19/03/2022	Saturday	Southern Cross Classic (NA) - Jon / Tina Mansell	
20/03/2022	Sunday	Southern Cross Classic (NA) - Jon / Tina Mansell	
22/03/2022	Tuesday		Club Meeting
26/03/2022	Saturday		Classic Outback Trial
27/03/2022	Sunday		Classic Outback Trial
1/04/2022	Friday		FFFF
2/04/2022	Saturday		Classic Outback Trial
3/04/2022	Sunday		Classic Outback Trial
9/04/2022	Saturday		Mt Baw Baw Sprints (8 - 10 April , from Website)
10/04/2022	Sunday		Mt Baw Baw Sprints (8 - 10 April , from Website)
26/04/2022	Tuesday		Club Meeting
30/04/2022	Saturday		Targa Tasmania (26th April to 3rd May - from website)
1/05/2022	Sunday		Targa Tasmania (26th April to 3rd May - from website)
6/05/2022	Friday		FFFF
14/05/2022	Saturday	The Wondaiah (NA) - John Cooper / Ross Warner	
15/05/2022	Sunday	The Wondaiah (NA) - John Cooper / Ross Warner	
21/05/2022	Saturday		Repco Mountain Rally Reunion
24/05/2022	Tuesday		Club Meeting
28/05/2022	Saturday		Snowy River Sprints (28 - 29 May , from Website)
29/05/2022	Sunday		Snowy River Sprints (28 - 29 May , from Website)
3/06/2022	Friday		FFFF
19/06/2022	Sunday	Tour d'Corse (NA) - Alan Walker	
28/06/2022	Tuesday		Club Meeting
1/07/2022	Friday		FFFF
26/07/2022	Tuesday		Club Meeting
5/08/2022	Friday		FFFF
20/08/2022	Saturday		Rylstone Classic (Not confirmed)
21/08/2022	Sunday		Rylstone Classic (Not confirmed)
23/08/2022	Tuesday		Club Meeting
2/09/2022	Friday		FFFF
3/09/2022	Saturday		Targa Great Barrier Reef from website
4/09/2022	Sunday		Targa Great Barrier Reef from website
18/09/2022	Sunday	Sheepstation Rally (NA) - Jon / Tina Mansell	
27/09/2022	Tuesday		Club Meeting
7/10/2022	Friday		FFFF
25/10/2022	Tuesday		Club Meeting
29/10/2022	Saturday		Perth to Sydney Marathon
30/10/2022	Sunday		Perth to Sydney Marathon
4/11/2022	Friday		FFFF
5/11/2022	Saturday		Bathurst 1000 (From website) and Perth to Sydney Marathon
6/11/2022	Sunday		Bathurst 1000 (From website) and Perth to Sydney Marathon
19/11/2022	Saturday	Alpine Classic (TRE) - Phillip Stead / Alan Walker	
20/11/2022	Sunday	Alpine Classic (TRE) - Phillip Stead / Alan Walker	
22/11/2022	Tuesday		Club Meeting- AGM
2/12/2022	Friday		FFFF