VALVE BOUNCE

Escape from lockdown edition

NOVEMBER, 2021

Peter Gumley in his very successful supercharged VW-engined Formula Libre open-wheeler at Gippsland Park. Peter won numerous state and national titles in this car…but what to do with it when it's retired?

Put it in the pool room!

Here it is, a centrepiece in Peter and Kylie's new home.

(with thanks to Peter & Kylie for permission to include it here)

In this edition: coming events; driverless racers; more on the family of James Crooke; building a Targa car; and the history of Repco.

- Gippsland Car Club Inc PO Box 493, Morwell, 3840 A3759. ABN 76 691 013 424
- Website: gippslandcarclub.com.au
- Track: Bryant Park, Bill Schulz Drive, Yallourn, 3852.

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MAGAZINE CONTRIBUTIONS Forward by email to icfm710@gmail.com Contributions should be forwarded by the third Friday in the month.

BANK DETAILS: Bendigo Bank, BSB 633000, Account Number 1574 73836, Gippsland Car Club

WEB PAGE: www.gippslandcarclub.com.au

GIPPSLAND CAR CLUB VISION: To inspire and enable people to participate in motor sport.

GIPPSLAND CAR CLUB MISSION: To provide affordable motor sporting experiences for people of all abilities in a safe and friendly environment.

CALENDAR 2021

NOVEMBER

Friday to Sunday, 5/7	Historic Sandown
Saturday to Sunday, 6/7	Supercars at Sydney Motorsport Park
Saturday 6	**GCC Multiclub Hill Climb at Bryant Park- CANCELLED**
Saturday 6	**Practice for Sunday's hillclimb**
Sunday 7	**GCC Multiclub Hill Climb at Bryant Park**
Sunday 7	MSCA at Winton
Tuesday 9	Board Meeting, 7.00 p.m.
Wednesday 10	*Drive Events track hire at Bryant Park*
Friday to Sunday, 12/14	Excel Enduros at Winton
Thursday to Tuesday, 11/16	Bathurst Challenge
Saturday to Sunday, 13/14	Supercars at Sydnedy Motorsport Park
Saturday 13	M&DCC Boisdale Hill Climb (Noel Burley Memorial) Short Track
Saturday to Sunday, 13/14	PIARC Supersprints Round 5 at Phillip Island
Sunday 14	*Woniu track hire at Bryant Park*
Wednesday 17	*Targa Florio at Bryant Park* ***POSTPONED***
Thursday to Sunday, 18/21	Australian Grand Prix at Albert Park **CANCELLED**
Friday to Sunday, 19/21	Supercars at Sydney Motorsport Park
Friday to Sunday, 19/21	Shannons Nationals at Sandown
Saturday 20	Winton 300
Saturday 20	MSCA at Phillip Island
Sunday 21	AROCA Sprints at Phillip Island
Sunday 21	MG Car Club Youth Challenge at Rob Roy **NEW DATE**
Sunday 21	*Sporting Register at Bryant Park*
Saturday to Saturday, 20/27	RACV Alpine Trial Centenary **CANCELLED**
Thursday to Sunday, 25/28	Australian Hill Climb Championship, Mt Cotton, Queensland **NOTE NEW DATE - NOW CANCELLED**
Friday to Sunday, 26/28	HQ Enduro at Winton
Friday to Sunday, 26/28	Geelong Revival Motoring Festival **POSTPONED**
Saturday 27	*Nugget Nationals track hire at Bryant Park*
Saturday to Sunday, 27/28	Island Magic at Phillip Island
Sunday 28	*CCRMIT track hire at Bryant Park*
Sunday 28	Rob Roy Classic and Historic Hill Climb

DECEMBER

Thursday to Sunday, 2/5	Bathurst
Friday to Sunday, 3/5	Supercars at Surfers Paradise, Qld **CANCELLED**
Saturday 4	**GCC Multiclub Twilight Hill Climb at Bryant Park**
Tuesday 7	Valve Bounce collation
Friday to Sunday, 10/12	Shannons Nationals at The Bend
Friday 10	*Pilota Spoprtiva track hire at Bryant Park*
Saturday 11	*Pilota Sportiva track hire at Bryant Park*
Sunday 12	AROCA Sprints at Phillip Island (TBC)
Sunday 12	***GCC Khanacross at Bryant Park***
Tuesday 14	Board Meeting, 7.00 p.m.

CALENDAR 2022

FEBRUARY

Friday to Sunday, 11/13	Targa High Country
Saturday 12	**VHCC Round 2 at Bryant Park (Twilight Event)**
Sunday 20	RACV British and European Motoring Show at Yarra Glen

MARCH

Friday to Sunday, 4/6	Geelong Revival Motoring Festival
Friday to Sunday, 4/6	Repco Supercars at Newcastle
Sunday 6	*Porsche Club of Victoria track hire*
Friday to Sunday, 18/20	Bathurst 12 Hour

APRIL

Wednesday 6	*Targa Florio at Bryant Park*
Thursday to Sunday, 7/10	Australian Grand Prix at Albert Park
Friday to Sunday, 15/17	Bathurst 6 Hour
Sunday 24	**VHCC Round 4 at Bryant Park (PIARC track hire)**
Tuesday to Sunday, 30/May 1	Targa Tasmania
Saturday to Sunday, 30/1 May	Meguairs Motor Ex, Melbourne

MAY

Sunday 1	Meguairs Motor Ex, Melbourne
Sunday 1	Targa Tasmania

OCTOBER

Friday to Sunday, 14/16	MotoGP at Phillip Island
Saturday to Saturday, 15/23	RACV Alpine Trial Centenary
Sunday 30	*Kyneton Car Club track hire at Bryant Park*

DECEMBER

Saturday 3	**GCC Multiclub Twilight Hill Climb at Bryant Park**

NOTE:

- All dates shown above are subject to change - please check with the organisers of the events to confirm the dates.
- Events shown as **Bold** are rounds of the Gippsland Car Club Club Championship (some of these dates may be changed)
- Events shown as **Bold Italics** are rounds of the Gippsland Car Club Khanacross Championship.
- GCC Practice Days are for members and associate members only, and will run from 1.00 pm until 4.00 pm.
- If you believe that any of the dates listed are incorrect, please contact John Bryant and they will be amended.

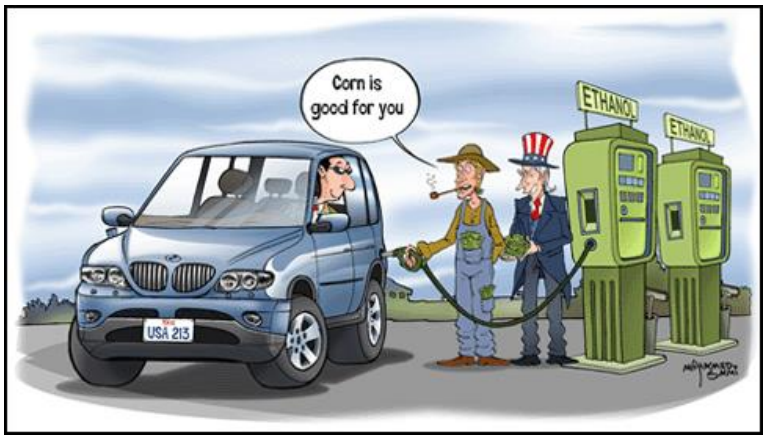
Editorial Ponderings:

A return to motorsport in Victoria! Yay!!!

By the time you read this, we should have been able to hold an actual hillclimb event on the 7th November, our first in a l-o-n-g time. Will we remember how it all goes? You may have to wait until next month to find out – unless you were there.

By my reckoning, the motoring world seems to be going a bit silly at present.
I've been reading a couple of articles lately about changes to fuel in the UK, which might be an insight into where we're heading. Basically, they are increasing the ethanol content in petrol, from a mandated 5% (E5) to 10% (E10) – this is done under the umbrella of reducing CO_2 emissions. Undoubtedly, this will affect older vehicles – which means a large number of competition vehicles – as these were not designed to run on ethanol fuels, which can be aggressive. Effects include damage to rubber fuel lines, seals and gaskets (with subsequent fire danger); rusting steel petrol tanks (ethanol holds more water); eroded soldered joints (common in older fuel lines and floats); lean fuel mixtures (ethanol contains more oxygen than straight petrol); and engines subsequentially running hotter. On top of this, ethanol fuels go 'off' more quickly, which is a concern for a car used only occasionally. You also need to burn more E-fuel for the same energy output, so motoring expenses will increase. None of this will sound terribly reassuring for those of us with older race or road cars. Here in Australia, mainstream pump petrol can already have up to 10% ethanol added, but must be labelled as such.

What can you do if this change was to come here? Use 98-octane, which is currently still low ethanol; use an additive; convert fuel lines, carburettors, seals, gaskets, etc to ethanol-tolerant; change carburettor tuning; or eventually, consider swapping to a synthetic fuel such as that currently being developed by VW AG for use in Porsches at their company drive days. Hmm…what's the chances of this in our smaller market? Oh, yes, you can also rip everything out, convert to an EV, and add to the electricity demand. Not a joyful prospect for anyone who enjoys the throaty roar of a competition motor. [1]



It doesn't end there.

For a few years now, you will have been aware of Formula E, or whatever variation is used: racing electric vehicles. This is a big thing particularly in Europe and the US, where fields of Indy-car open-wheeler look-alikes buzz and whir their way around tracks, jostling and out-braking each other just like 'real' race cars…but without the orchestral accompaniment of exhausts popping and crackling, Weber growls, flaming tailpipes, etc. It's a bit like sex without body contact. The parts of the picture are all there, but it just doesn't seem to be working somehow. Yes, it's a form of car racing, but I find it rather spirit-less and uninvolving – but that's just me - maybe you have a different view? What this

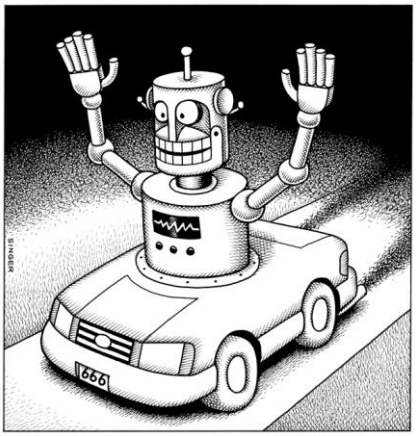
introduction is leading to is that I've come across something in the ABC news that takes this all a step further remote from the motorsport we all enjoy: driver-less race cars!

Yes, it's happening.

> *"Setting the record pace over two laps, a team from the Technical University of Munich (TUM) won a $US1 million ($1.34 million) prize in the first Indy Autonomous Challenge, an event dedicated to self-driving cars at the Indianapolis Motor Speedway.*
> *Their car, a Dallara AV-21 used by every team, clocked an average speed of 218kph to win the inaugural event.*
> *Each autonomous car relies on sensors, cameras, radar and GPS to guide the car around the circuit."* [2]

These cars still retain a combustion engine, so that's helpful, but…?! If electric car racing lacks soul, why this? As someone who has been involved in robotics, I can certainly appreciate the technical mastery that must go into one of these cars, and applaud the skill involved in co-ordinating the fantastic number of rapid inputs coming from a bank of sensors and using them to decide on a movement or response in a fraction of a second…but isn't that what a driver does? As an electronics-fest, or a mobile celebration of technical wizardry, it's probably without peer. Sort of like robotics at warp speed. I get that. But I think we need to regard it in that perspective. It certainly isn't racing in the sense we motorsport enthusiasts have come to appreciate.

Without doubt, the key element of any race car is the semi-intelligent organic mass perched in the driver's seat; the way he/she perceives the moving environment about them; and their all-important responses, honed and refined from countless generations of evolution since running from predators was a popular pastime. If you take out the driver, it's…well, a bit like a giant slot car set for people with big budgets. It's racing, but with humanity removed. Would a Bathurst win without Brocky or Moffat have been as enjoyable? How could Fangio have climbed the ranks if he was sitting in a bunker overseeing a mass of circuitry? Audiences want to see other people striving, and share the moments of passion, of loss, endurance, cleverness, of victory against the odds – this is what is so absorbing in motorsport! Think 'Johnson and the rock'-type moments.



No doubt this type of racing will have its followers, but for all its sophistication, it can't hold a candle to a duel between two people physically strapped into their projectiles, astride a damp track, fending off weariness with infusions of adrenalin, skimming down a long straight and testing the relative size of their gonads by leaving their braking until a short moment after the other has yielded first: *that's* motorsport – not an iPad on steroids bolted to a chassis.
As an aside, their inaugural meeting was not without hitches:

- A different team was winning, but had programmed their software for the car to race for five laps: the event was a 6-lapper ☹
- The GPS sensors on one car shut down while they were doing well, leaving the car largely blind. Remember, these cars were *averaging* over 220kph, and it's now sightless. I think the word we used to use for this situation was 'missile.' Hopefully, there was an algorithm that shut the car down immediately this happened.
- Not a problem, but an observation: each car is apparently worth around one million dollars, and you would have read earlier the winning team was the recipient of a $1.34 million (AUD) prize cheque. So, where's that sort of money in more conventional streams of motorsport?

-IM. The Ed

[1]Classic and Sports Car magazine, October 2021.
[2]ABC on-line news, 24/10/2021
AOMC News, October 2021

If your electric car runs out of power on the interstate, do you walk to a charging station to get a bucket of electricity…?

What do you need to know now?

- **CLUB CHAMPIONSHIP 2021:**

- **Next GCC HILLCLIMB:**
  - Sunday, November 7th (multiclub) -GCC Championship

- **Next GCC KHANACROSS:**
  - Sunday, December 12th -GCC Championship

- **VICTORIAN HILL CLIMB CHAMPIONSHIP 2021 - next round:**
  - There isn't one! But the Australian Hillclimb Championship has been re-scheduled to November 25th -28th at Mt Cotton, Queensland -if you can get there.

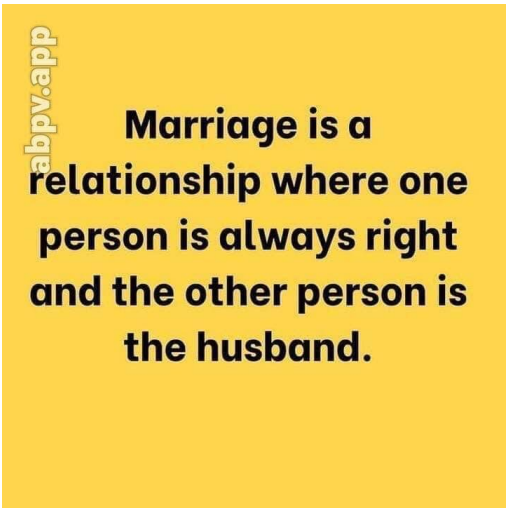
Chairman's report, November, 2021 - Rhys Yeomans

Since March 2020, I've never been more confident of an event being run than I am currently! Following the latest Government announcements, we are on track for 7th November Multiclub Hillclimb and we've received a flood of entries!
I've had a chance to speak to several members regarding this event and the enthusiasm is at a record high. I am excited for a return to competition at Bryant Park and an uninterrupted run as we move into 2022.
We also have a working bee this Saturday, which as a social event are one of my favourites and I'm just as excited to see those return. Ian Speight has called to confirm he can cook the BBQ!

As we near the end of the calendar year, you will find a Membership renewal form amongst the pages of this Valve Bounce. All Gippsland Car Club Memberships are renewed each calendar year.

I look forward to seeing you all as members and at numerous events in 2022. We have a great club, facilities that are unmatched by any other club in the state and a dedicated team of members who offer their time to ensure the facilities and events run as smooth as possible.

As always, thank you for your support and if you have any questions or suggestions, please don't hesitate to contact myself or any other member of the Board.



Next GCC WORKING BEE

Upcoming Working Bee and Club practice – To be announced

These will be great opportunities for us to complete some of the major projects we've had running at Bryant Park in 2021, which includes the timing building and the new scrutineering shed extension.
All members are welcome to attend working bees and we will endeavour to delegate a job to you that aligns with your skills.
The obvious task is cutting the grass, so if you have a lawn mower or whipper snipper, please bring it along. The gardens will need weeding and spraying; toilets, clubrooms & garages cleaning; etc.
The working bees start at 9:00am, with a free BBQ lunch provided at 12:00pm. Hill climb practice - **ONLY for GCC members who have assisted with the working bee** - is held from 1:00pm to 4:00pm. **If you have a valid reason for wanting to practice but cannot attend the working bee, please send Chairman Rhys an e-mail, or phone Rhys or Phil - beforehand.**

Wednesday working bees
We've had requests from people wanting to assist in the maintenance of Bryant Park during the week, outside of normal organised working bees.
It could be as simple as you cutting grass for an hour, weeding some of the garden or something else that is deemed as required.
These days will not be as formal as our regular working bees and there will be no practice or BBQ.
As Bill Jennings is at Bryant Park most Wednesdays, please contact him (details in front of Valve Bounce) if you would like to assist on an upcoming future Wednesday.

- What's on? -

Ed: Here's a selection of events scheduled by groups outside the GCC, that might be of interest to our members – all are subject to COVID restrictions.

Second Sunday of each month: why not join some of our members at the Gippsland Sporting and Classic Car Register's 'Breakfast Club' in Warragul? This is a very low-key, friendly event: people simply park their cars of interest (ALL sorts of vehicles welcome!) in th… hern end of the Woolworth's car park, off Vi… d wander around! Breakfast and co… at a number of local businesses. O… uns between 8:00 and 9:30am but m… rriving before this. Last month there w… on show! Everything from vintage t… even a restored tow truck!

Postponed

GIPPSLAND SPORTING & Classic Car Register

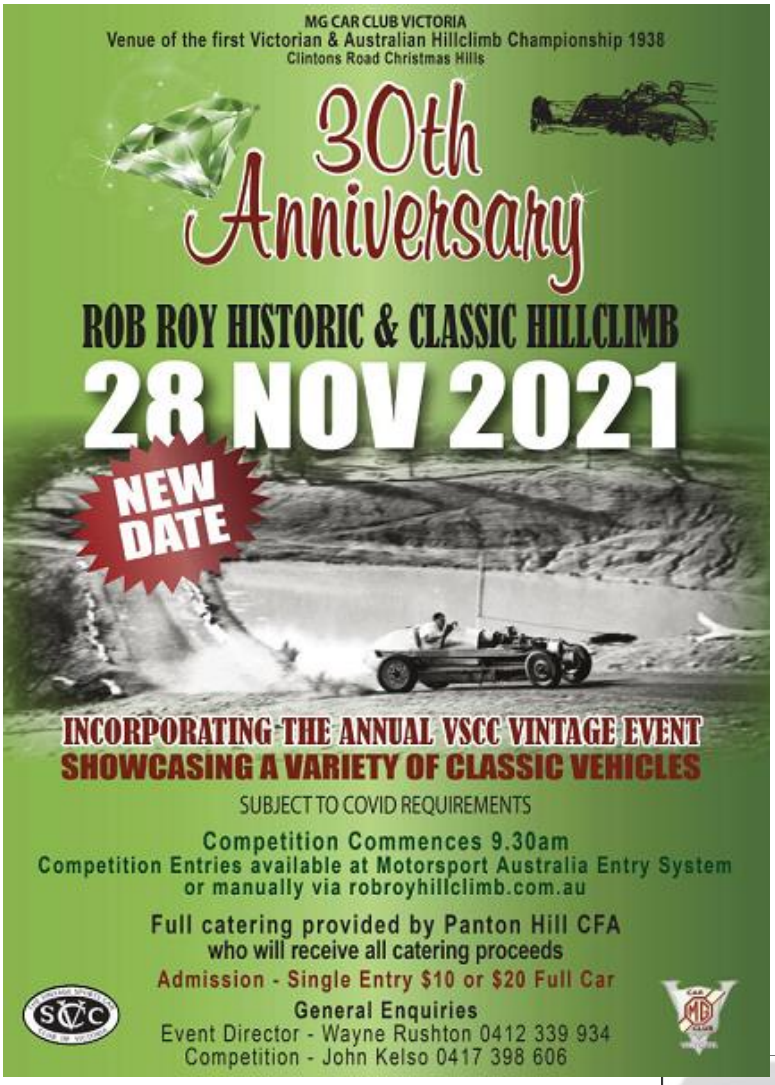
Postponed to Sun 21st Nov

vhrr news

VHRR Historic Sandown 2021 – 5-7 November

To All interested parties:
It has come to our attention that there is quite a bit of confusion/misinformation circulating regarding the "Covid Vaccination" status for this event.
Therefore, please note that All persons seeking to attend the Sandown venue for this event must be double vaccinated, and will need to produce satisfactory evidence of such to gain entry.
This is not optional, and there are no exceptions.
The above is a Direction of the Victorian State Government

-VHRR Sandown Race Committee
25 September 2021


MG CAR CLUB VICTORIA
Venue of the first Victorian & Australian Hillclimb Championship 1938
Clintons Road Christmas Hills
30th Anniversary
ROB ROY HISTORIC & CLASSIC HILLCLIMB
28 NOV 2021
NEW DATE
INCORPORATING THE ANNUAL VSCC VINTAGE EVENT
SHOWCASING A VARIETY OF CLASSIC VEHICLES
SUBJECT TO COVID REQUIREMENTS
Competition Commences 9.30am
Competition Entries available at Motorsport Australia Entry System
or manually via robroyhillclimb.com.au
Full catering provided by Panton Hill CFA
who will receive all catering proceeds
Admission - Single Entry $10 or $20 Full Car
General Enquiries
Event Director - Wayne Rushton 0412 339 934
Competition - John Kelso 0417 398 606


AUSTRALIAN HILLCLIMB CHAMPIONSHIP
MOUNT COTTON
SPEED HILLCLIMB
2021
* Incorporating the inaugural Australian Junior Hill Climb Championship.
Thursday 21 Octob
Sunday 24 O 021.
Now cancelled
nt record stands at 35.25 seconds set by Malcolm Oastler (Vic.) at the 2017 Qld Hillclimb Championships.
Promoted and hosted by the MG Car Club of Qld.
A National Championship event of
motorsport australia
Redlands Coast, everything from the bush to the beach.
For more Information:
Event Secretary: Annette Truscott
ahc2021@mgccq.org
mgccq.org.au/ahc2021

RACV British and European Motoring Show

-Incorporating the annual MG Concours

Mark your diary now

Sunday 20th February, 2022

RACV British and European Motoring Show

Incorporating the annual MG Concours

Open to all vehicles and motorbikes manufactured in Britain and Europe.

Yarra Glen Racecourse

Entry conditions as per COVID restrictions at the time Watch our website for up to date details

For club display bookings e mail to secretary@aomc.asn.au **.**

Trade site bookings and general enquiries to Iain on 0473 832 277

Report: GCC practice day for Regional Participants

Ed: This was offered on Saturday, 16th October. Unfortunately, as with the previous practice day, the weather was atrocious and only six members arrived to blow out the cobwebs and have a run.
I had asked Bill Jennings to take some photos for Valve Bounce, but apparently he was kept too busy acting as a towing service! One of the six tackled the scenery, while two others had a breakdown on the track. So, 50% of attendees needed towing – not what we're used to!
Let's try that again another day, shall we?

MOE PARKLANDS MOTEL

- Closest motel to Bryant Park!
- 3.5 stars
- Family restaurant next door
- Guest Laundry
- BBQ area
- Car and trailer parking
- Free wireless internet
- Solar heated pool
- At the Moe Parklands Motel, we invite you to picnic or use the guest barbeque in our delightful gardens.
- For your evening meal, Rookies Bar and Restaurant is next door.
- A dip in our solar-heated pool will relax you at the end of a day enjoying all that Moe and surrounds has to offer.

RECEPTION HOURS : 7.30 am to 9.30 pm

98 Narracan Drive, Moe, Victoria

Telephone 03 5127 3344

EMAIL: stay@moeparklandsmotel.com.au
WEBSITE: www.moeparklandsmotel.com

FOWLERS ASPHALTING

PO Box 199 Trafalgar Vic 3824

Bryant Park track was asphalted by Fowlers Asphalting
For domestic and industrial asphalting services, please call 03 56332918

BITS AND PIECES, INCLUDING 'FROM THE BOARD' - John Bryant

CALENDAR. Things change by the day, but now in a better way than was the case last month! You will notice that our Calendar has far fewer cancellations than was previously the case, and there are now new events that have been added – just this past week we have had three commercial hires in a row, with another two to come next week. There are very few spare weekends between now and Christmas, so we are now earning money instead of spending it! I have just come home from the working bee and club practice day on October 30 – a very successful day, even though we did have the usual rain and wind for some of the time. It was good to see a number of our Melbourne members who have been locked out of the regions for some time, although the presence of metropolitan people on our roads has detracted somewhat from our peaceful country lifestyle! One interesting thing here is that we in the country have not been allowed to go to the metropolitan area either – Carol and I can actually go and see out children and grandchildren for the first time in months. Back to the Calendar – we had a country practice day two weeks ago – another terrible day attended by six members. Of the six, three had to be towed back to the pits on a piece of string after they suffered various maladies – the other three kept going! It was much better today, although we did have periods of rain. Our first hill climb in some time is next weekend (November 7), with practice on the Saturday afternoon, November 6. Not all that long afterwards, we have our traditional end of year twilight event on Saturday, December 4, 2021. In between our two events, we have four other events, with more possibly to come, and then two more days after our last event – it has been quiet, but it is certainly not going to be in the next month or so!

MID-WEEK EVENTS. You may notice that some of our events are held during the week – these could be classed as track uses rather than hill climbs, and we do not need the timing for these events. What we do need on these days is a supply of people, either retired or part time or shift workers, who are able to spend half a day looking after the place whilst these hirers are there. We currently have a small pool of maybe half a dozen such people – I would like to hear from you if you are able to be added to this pool. Some of the weekend hires are not timed hill climbs either, and they just need babysitting – this would be an ideal opportunity for Monday to Friday workers to assist.

MONEY. It has been mentioned a few times by me and others that we are currently spending far more than we are receiving in the monetary area. Whilst the Club is not 'broke', it would not take too long for it to be so if we cannot run events, as has been the case for most of this year. Hopefully the days of lockdowns and not running events are now behind us. Just as a matter of interest, in the month of September our expenditure exceeded our income by $8,111,24 – in the same month, we received our rates notice from the Council (not yet paid) of $5,985.55, and also two of our annual insurance renewals – one for buildings being $5,561.85. It is an expensive proposition running a motor racing circuit!

KHANACROSS. One left for the year – Sunday, December 12 – entries will be open on the Motorsport Australia web site in the near future.

COMMUNITY MOTORSPORT PROGRAM – INFRASTRUCTURE FUNDING - ROUND 2. I mentioned last month about the grants that both Ian Maud and Scott Seddon were involved in preparing submissions for. We were successful with the $20,000 grant that Scott applied for, whilst the Ian Maud submission (we are asking for around $250,000 for a new multi-purpose building and a new toilet block near the pit area) is a somewhat more complicated proposal – I believe this has to be submitted in the near future. Ian has continued to work hard on his submission, and it is now approaching the finish line. It is an extremely onerous task completing such submissions – the money is there, but the hoops that have to be gone through certainly put many people off ever completing such submissions. Ian is certainly tenacious, and we are extremely grateful that he has undertaken this task (as well as writing Valve Bounce each month) – we can only hope that his hard work will be rewarded by a successful submission. It was also mentioned last month that we are investigating wireless display boards for timing information and a wireless PA system. I mentioned last month that I was a complete non–expert in this area – I am pleased to say that two "experts' are now investigating the two areas.

Have you noticed how the price of fuel has been creeping upwards lately? And just in time for people to come out of lockdown and start travelling again! Apparently, fuel prices at present are the highest the have ever been in Victoria. 😊

Ed: I've recently been featuring a fair bit about the Brabham team and its development through the '60s – and why not? Repco was an integral part of the Brabham story, and while a record of a company's history is usually a reliable cure for insomnia, I've included here the first part of a paper presented at a conference in 2006, which details the history of the Repco group and in doing so, shows how their association with Brabham originated and evolved, the people involved, while also giving a marvellous insight into how operations were conducted at the time, in a manner we are unlikely to see again with contemporary big corporations and micro-managing. You might also enjoy the number of trade names and groups mentioned here, as they played a part in our younger lives. (This article passed to me by Bill Freame: I have sourced the photos and captions.)

Harriet Edquist | RMIT Design Archives, RMIT University

The Repco racing programme 1940-1970: innovation and enterprise in the private sector

In 1966 Jack Brabham (1926-2014) became the first, and still the only, person to win a Formula One world championship driving one of his own cars. The BT19 was designed by Ron Tauranac and powered by a Repco Brabham engine (RB620) designed by Phil Irving and engineered by Repco under the supervision of Frank Hallam in Melbourne. While built in England, the BT19 was an all-Australian affair.

Brabham's story is well known; an online search will bring up dozens of sites dedicated to him and his three Formula One world championships. The contribution of those who worked with him is less well known to the general public, if not to those interested in the history of Australian motorsport.[1] With this in mind, the intention of the present paper was to account for the surprisingly widespread Australian involvement in international post war racing, focussing on Brabham, Tauranac and Irving with some consideration of Repco. Once in the Repco archive, however, my attention turned to the company itself and the development of its racing program. This research showed that Repco's commitment to racing was almost as old as the company, and was not a response to Brabham's 1963 request for a replacement for the Coventry Climax engine, as much of the literature suggests. It also showed that Repco's decentralised company structure, that encouraged personal initiative within its groups, may have been instrumental in providing the conditions under which a racing culture could thrive, a culture that was not necessarily nurtured for financial gain.

Robert Geoffrey Russell (1892-1946) and the Repco organisation

In November 1922, 30-year old Robert 'Geoff' Russell registered Auto Grinding Company, an engine-reconditioning business he had established in a galvanised iron shed at the corner of Gipps and Rokeby Streets in Collingwood.[2] Catering to the growing automotive industry, the venture was successful, and in 1924 Russell moved to larger premises at 278 Queensberry Street on the corner of Berkeley Street, Carlton, near the centre of Melbourne's motor trade, which clustered around the top end of Elizabeth Street near the former Haymarket.

In 1926 he and a friend Bill Ryan formed Replacement Parts Pty Ltd and a year later Russell Manufacturing Company was established in North Melbourne for piston-grinding and finishing. The office for Replacement Parts moved to a more central location at 618 Elizabeth Street in 1930, which fronted the Berkley Street building. Carrying the largest stock of its kind in Australia, they invested in good point of sale design and customer relations and famously comprehensive catalogues; stock was always ready to hand, it was kept up to date and the staff were well trained, factors that explain 'the remarkable speed with which the right part comes to light when asked for'.[3]
In the four years from 1932 to 1936 staff numbers increased from 50 to 150, premises grew and Repco extended its activities into the accessory and equipment fields.[4] The Elizabeth Street premises were rebuilt. Replacement Parts (known as Repco from 1930 and incorporated as Repco Limited in 1937) expanded into regional Victoria (Sale and Hamilton) in 1932 and interstate to Tasmania in 1933 when it purchased 50% of Edmondson's Auto Spares in Launceston, soon buying out the remaining 50% to create Replacement Parts (Tas). In 1941 Repco also acquired engineering firm A T Richardson and Sons.

In 1930 Russell had bought 89-95 Burnley Street, Richmond and created a new company, Russell Manufacturing Co. Pty Ltd where they established a foundry to manufacture their own piston castings and piston rings, operating out of open sided buildings on the extensive Richmond site. Growth of the business and its foundry footprint continued during the war when it ramped up production to meet wartime demand.[5] A new building on the corner of Burnley and Doonside streets was erected in 1942 that, along with the Auto Grinding and Elizabeth Street buildings, still exists.[6] So, from the earliest years Russell created a particular business culture - of manufacture as well as merchandising, of acquisition, decentralisation (which was a new idea at the time),[7] experimentation and training that not only gave him considerable market advantage over his competitors but was to characterise Repco for years to come. Auto Grinding, Replacements Parts and Russell Manufacturing were the core around which Repco built its organisation.

John Storey (1896-1955) and industrial management
Russell retired in 1945 due to ill health, and died the following year. In 1945 John Storey became Chairman of Directors and during his ten years at the helm Repco enjoyed a period of extraordinary growth. Storey was a supremely accomplished industrialist and businessman. In 1934 he had become director of manufacturing at GM-H, based in Melbourne, and joined the board. He supervised the erection of GM-H factories at Fishermans Bend (completed 1936), and Pagewood (1940) and the refurbishment of plants in Brisbane and Perth. Denis Nettle argues that Storey used his position as Director of Manufacturing at GM-H to try to persuade GM’s US management to allow Australia to manufacture its own car, both through advocacy and "through the way he adapted Sloan system management approaches to Australian conditions". For example:
In the US GM had outplayed Ford through its ability to coordinate mass production of components from several plants to manufacture multiple models. Storey used these techniques to show how the coordination of small lot production of components across plants could also be used to efficiently produce cars in small volumes.[8]

Storey was appointed a director on the board of Commonwealth Aircraft Corporation and during the war when the decision was made to undertake complete local manufacture of the Beaufort aircraft, Storey, having resigned from GM-H, was put in charge.

Beaufort bomber

Building the Beaufort bomber was one of Australian industry's more spectacular achievements.[9] In this role Storey sub-contracted to some six hundred firms across Australia the production of components which were fed into seven sub-assembly workshops and, finally, the main assembly factories at Fishermans Bend and at Mascot, Sydney.[10]

Thus, by the time Storey came to Repco he was highly qualified to transform the company 'from a distributor and manufacturer of engine parts, rings and pistons into the largest integrated manufacturer and distributor of car components in Australia'.[11] Importantly, in terms of the organisation's future, in 1949 he reconstituted Repco as a holding company with subsidiary and associated firms becoming self-contained units or companies within its overall structure.

During the 1940s and early 50s Storey undertook an aggressive acquisition campaign bringing in successful manufacturing enterprises that complemented the core business of servicing the automotive sector. These included Patons Brake Replacements (1947), Warren and Brown, which included gasket manufacturer Brenco (1949), Precision Metal Stampings (1949) Specialised Engineering Co (1950), P J Bearings (1952), Hardy Spicer (Aust) specialists in universal joints (1954), and piston manufacturer Brico (1955). At the same time Repco created new companies that sat alongside the acquisitions, including Repco Electrics (Replex 1946), Repco Cycles (1947), Repco Bearing Co. (1948) and others.[12] It was a pattern that continued for many years and resulted in 'a strong Australian-owned components sector, which meant that as large US component suppliers began to enter the Australian market in the 1950's they were required to negotiate with Repco'.[13]

In 1970 when interviewed about Repco's success, then Managing Director Peter Rosenblum referred to these owned and affiliated companies as 'profit centres', terminology that had been coined by Austrian-born American management theorist Peter Drucker in about 1945.[14] In 1943 Drucker had conducted

research on the GM organisation and in his findings, Concept of the Corporation, published in 1946, he used the term ‘federal decentralization’ to describe the way GM was organised around a number of autonomous businesses each under its own manager. A factor in its dominance over Ford by the late 1920s was the way in which Alfred Sloan, unlike Ford, had embraced the idea of management and welded his ‘undisciplined barons’ into an effective management team.[15]
Similarly, under Storey's leadership, Repco's structure could be likened to that of 'federal decentralisation', in that when a new company was acquired, it continued to operate as before and its manager became part of the larger management team. Storey also adhered closely to the "line and staff" management principles he had encountered at GM-H.[16]
Not surprisingly given this background, Storey established a close relationship with Holden, in the supply of parts, such that, according to Murray and White, "Repco rode on the Holden's back to spectacular growth".[17]

Charles McGrath (1910-1984) and Repco Racing
The acquisition strategy adopted by Repco had to do with enhancing core business and lessening dependencies on outside resources. But from the 1930s there emerged another field of enterprise that was not core business but did bring Repco local recognition and eventually, international fame. This was racing.

In 1934 Repco sent Charles 'Dave' McGrath, who had begun as a messenger boy at the company in 1927, to re-organise the Launceston business along Melbourne lines, which he did with great success. McGrath, a motorcycle enthusiast, assembled a riding team from his engineers who eventually included Frank Hallam, Gordon Dangerfield and George Wade and the business attracted other keen motorcyclists for parts and advice.[18]
During the war McGrath used his own initiative to expand the Launceston workshop to manufacture engine bearings and other components essential to the war effort. The bearings business eventually became a separate company in the established Repco manner.[19]
Repco management was impressed with McGrath and in 1946 he relocated to Melbourne to assist the joint managing director O R Wadds.[20] This position gave him access to Storey, and with Storey's backing his rise through the organisation thereafter was fairly seamless. In 1947 he was appointed general manager of Replacement Parts, director of Repco Ltd in 1948, director of sales in 1952 and managing director under the chairmanship of Storey in 1953.[21] Storey died in 1955, and following the death of his successor W T Richardson in 1957, McGrath was elected Chairman of Directors.[22]

The significance of McGrath to this story is I believe, paramount. He was a racing enthusiast, and fellow enthusiasts Wade and Hallam joined him in Melbourne and Hallam was to have a central role in the development of racing engines as chief engineer of Russell Manufacturing (1955) and chief engineer of Repco in the engine parts group (1959).[23] When McGrath stepped down as managing director in 1967, the Financial Review noted:
Just as triple world champion Jack Brabham has steered the Repco-Brabham to numerous racing circuit victories, so Mr. McGrath has led Repco through a period of dramatic growth.[24]

The identification of Repco with racing was complete: but how had it come about?

Horace Charles (Charlie) Dean (1914 - 1985) and Repco Research
As McGrath, Hallam and Wade were settling in, a memo of November 1946 Storey informed staff that 'a new department of the business was created to manufacture specialised automotive electrical equipment' to be under the management of Charles Dean.[25]

Replacement Parts had established a workshop at 50 Sydney Road, Brunswick, during the war 'to manufacture some electrical test equipment'.[26] They also sold ‘Ajax’ battery chargers that were manufactured by a small operation set up by Dean soon after the war in rented space in Elizabeth street, opposite Repco.[27] Importantly for this story, Dean was a racing enthusiast who had built his first special at the age of 17. He also developed an interest in electric vehicles, an enthusiasm he shared with Russell who advised him on setting up in electric charger production; it was Storey who made the offer in 1946 to incorporate the business into Repco. Dean was appointed manager, with products using the trade name 'Replex'.[28]

This acquisition, however, was unusual - Repco usually acquired businesses with track record, assets and some standing as successful enterprises. Dean's business was relatively new and had not yet established any market prominence although Dean was said to design and manufacture 'the first "fast" battery chargers in Australia'.[29] What is significant is the fact that throughout his 27-year career at Repco, Dean's line manager was nearly always McGrath and a number of important decisions about the Repco engines discussed here seem to have been Dean's that had McGrath sanction.

Replex was not financially successful until it began to produce electric wheel balancers, which while important for the day-to-day automotive industry were also critical in racing. Dean was responsible for this development and in 1951 Replex moved from Sydney Road to larger premises in Weston Street, Brunswick where an assortment of existing buildings, including dwellings, was pressed into service. In 1960 they were all demolished and a new factory built.[30] The Sydney Road premises were therefore vacant and it was here that Dean had the space to develop and test cars.

In 1946, the year he joined Repco, Dean had begun construction of what has become one of Australia's most successful early open-wheeler racing cars, the Maybach. It was not the first locally-designed open-wheeler. In 1929 Alan Chamberlain and his friend Eric Price built a special, now known as the Chamberlain 8, powered by a Daytona Indian motorcycle engine. Continuously modified thereafter it raced throughout the 1930s and briefly after the war.[31] But the Maybach was more sophisticated and more successful.

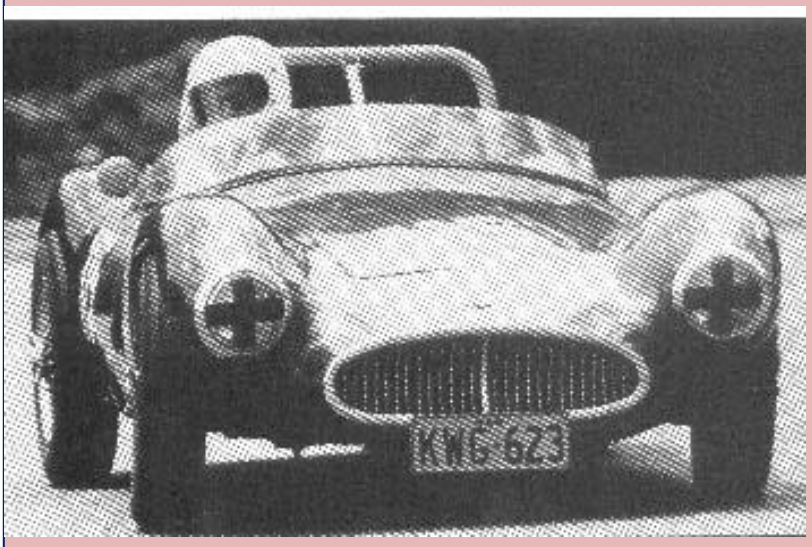
The Chamberlain 8: two-stroke smoke bellowing from the exhaust, Jim Hawker takes on Rob Roy hillclimb in June, 1946. Source: primotipo.com

Dean had bought a 1940 Maybach engine that had been used to power a German Army scout car captured from the Afrika Korps in the Western Desert and then shipped to Australia.[32] With Wade, Hallam and Jack Joyce from Repco, Dean designed and constructed a two-seater, sports racing chassis to house it.[33] It debuted at the Rob Roy hill climb in November 1947 and over the next few

years, during which time it acquired a body, and competed in hill climbs, speed trials and road races, including the 1948, 1949 and 1950 Australian Grand Prix, and Bathurst in 1951. At the Rob Roy hill climb championship in November 1951 the Maybach set a new race record for its class, while newcomer Jack Brabham won the overall championship in a speed car of his own construction.[34]

Maybach – 1.
Source: Ultimatecarpage.com

However, prior to this in June, Dean had sold the Maybach to driver Stan Jones but came to an arrangement with McGrath to house it at the Sydney Road premises now vacated by Replex, where he could continue to work on it - the benefit to Repco being publicity and a test bed for its products. The building also housed a Holden 48-215 used for testing Repco components as well as young employee Paul England's Ausca special, then under construction.[35] When Dean was sent overseas in 1951 to look at licensing agreements with firms in the USA he took time to visit the Maybach factory in Stuttgart and was surprised to learn they had heard of his Melbourne venture.[36]



Auscar, designed by Paul England, and fitted with a Repco-Holden engine.
Source: dlgspeedfreaks.com

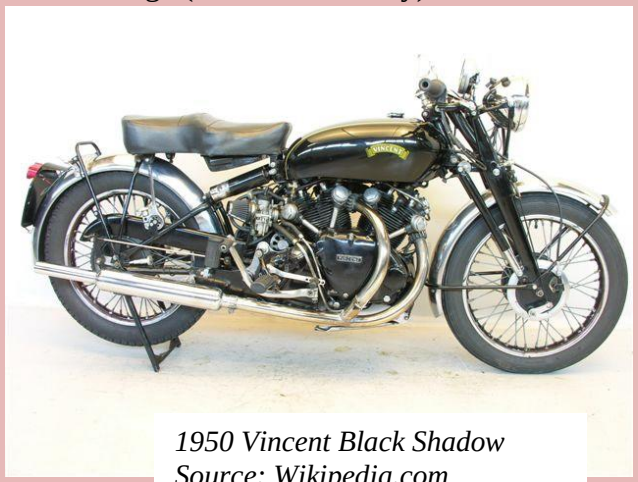
Jones drove the Maybach with great success through 1952 and 1953, and in 1954 took out the New Zealand Grand Prix against significant Italian and British cars including Brabham in a Cooper Bristol.
By this time, if not before, Repco had claimed the Maybach as its own. Indeed, in their literature they designated it the Repco-Maybach, presumably because of the quantity of Repco parts Dean used to modify the original engine.[37] Two articles published by Russell Manufacturing in August 1954, proprietarily illustrated the rings, bearing, piston pins and pistons used in the car. Patons Brakes also helped out. The Maybach became at this time Repco's 'unofficial mascot'.[38] After the New Zealand win Dean rebuilt the car as the single-seat Maybach II in which Jones had initial success before he crashed and destroyed it in the November 1954 Grand Prix at Southport, Queensland.

Prior to their crash: Maybach II, with Stan Jones driving, competing at the 1954 Australian Grand Prix held at Southport, Queensland.
Source: Pinterest.com

Phil Irving (1903-1992) and the racing engines

Dean had been appointed chief automotive experimental engineer at Repco reporting to McGrath in 1954.[39] A little later Phil Irving appears on the salary books. He had approached Dean, whom he had met years before at the racetrack, when he heard of plans to build the Maybach III on completely new, radical lines.[40] He had been working with Chamberlain Bros (with whom Repco had close business connections through their Rolloy piston rings), on an engine for their famous Chamberlain tractor but now he was ready to leave.[41] He was taken on in Dean's experimental division, but to do what is not clear. If it was to work only on the Maybach, which was essentially Dean's private project, Repco was being quite extravagant hiring him. But then again, Irving was easily the most credentialled racing engine designer in the country, so employing him was shoring up specialised resources in that field.

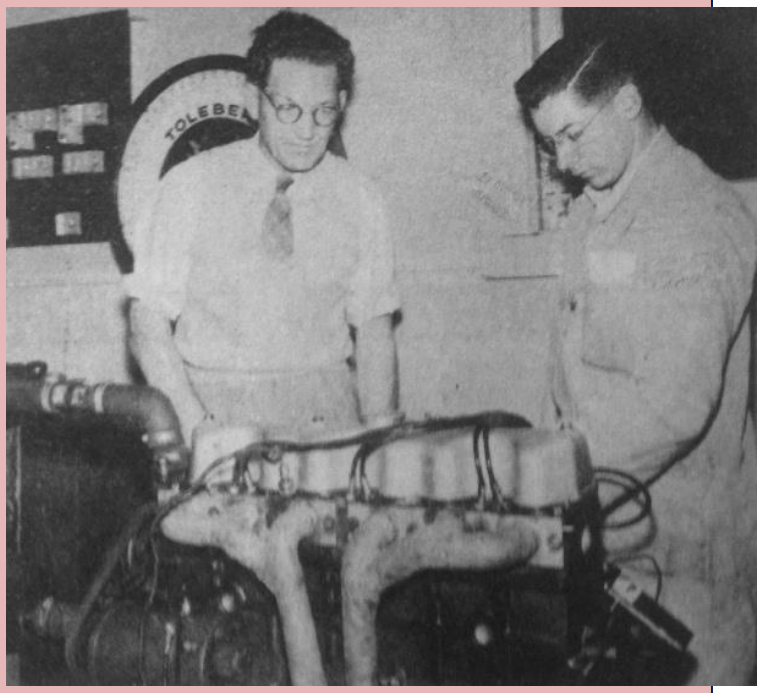
Irving was over fifty and came with an established international reputation as an engine designer and author. He was a maverick, something of a loner, and over the years acquired an almost legendary status for engine design in the automotive world. After studying mechanical and electrical engineering at the Melbourne Technical College (RMIT University), and thwarted in his ambition for further study at Melbourne University, in 1922 Irving obtained his first job with the eminent and brilliant Australian engineer Anthony Michell at the firm of Crankless Engines in Fitzroy.[42] In 1930 he left Australia as a pillion passenger on a Vincent HRD and eventually fetched up in England. He spent the following nineteen years working for Velocette motorcycles where he patented a number of designs and with Philip Vincent with whom he designed the legendary Black Shadow Vincent motorcycle, while during the war he designed



1950 Vincent Black Shadow
Source: Wikipedia.com

a submersible lifeboat engine for the RAF. In the 1930s and 1940s, Irving wrote a technical column in Motor Cycling and he published several books of which Tuning For Speed was the most celebrated.[43]

Dean and Irving started a new project, with the blessing of McGrath, to make rallying more lively. The new Holden had proved a boon to road racing and rallying which had been popular from the early 20th century. Then the preserve of the few, the Holden made rallying accessible to many more Australians: 'engine tuners began to exploit the latent possibilities of the FJ Holden engine with such effect that they 'converted a fairly humdrum tourer into a respectable is not actually formidable device for sedan car racing'.[44]
However, as tuning required skills that not everyone had, Irving designed a high-power cylinder replacement head that produced enough power to make a 'racing Holden sedan capable of over 115 mph'.[45] In 1953, Repco assisted the country's best racing drivers, Stan Jones, Lex Davison and Tony Gaze in the set-up of the Holden 48-215 they drove to 64th place in the Monte Carlo Rally. By 1956 Russell Manufacturing was running its own trials for its staff.[46]



Phil Irving (L) and Paul England, fettling the first Hi-Power head on the Russell Manufacturing Co dyno, Richmond, Melbourne. This was the same cell in which the first RB620 F1/Tasman engine burst into life in 1965. This first head was fitted to England's Ausca sportscar, a very successful race car.

Source: Primotipo.com

In the first issue of *Repco Record*, an in-house magazine McGrath established in September 1956 to replace Storey's *Repco Topics*, there was a separate motorsport section, a feature that would continue well into the 1970s. Under the title 'stories of initiative' the issue reported on Irving's cylinder head, Paul England's Ausca, another private venture carried out on Repco premises with Repco staff, and Repco's support of PIARC in the establishment of which Irving was heavily involved.[47] In fact in the early years of Phillip Island circuit development, Repco support was rewarded with the naming rights to the 'U' bend opposite Grandstand Hill which became known as 'Repco Corner' while in 1955 Repco guaranteed PIARC a bank loan of £10,000 thus helping to ensure the circuit's development was completed.[48]

In 1957 McGrath led a Repco staff team of 19 to assist at the racetrack during the races where Dean and Irving were 'directors of the meeting'. Both were on the PIARC committee, and Irving was vice-president.[49] Irving's extensive involvement in motorsport, including his Mobilgas rallies in 1956 and 1957, was closely followed by Repco Record and his fame as the designer of the Vincent engine was a constant source of company pride.[50]

By this time, sanctioned by McGrath, ably fronted by Dean, helped by the charismatic Irving, and operationalised by Hallam and his expert team, a diverse and vibrant racing culture was embedded in Repco.

Ed: ...and that's a good place to leave things for this month: the remainder in December's VB. ☺

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[1] Jack Brabham, *When the Flag Drops* (London: William Kimber & Co,1971); Jack Brabham with Doug Nye, *The Jack Brabham Story* (Mindi Windsor NSW, 2004); Mike Lawrence, *Brabham, Ralt Honda, The Ron Tauranac Story* (Motor Racing Publications, Croydon, UK 1999); Phil Irving, *Phil Irving. An Autobiography* (Sydney: Turton & Armstrong, 1992); Simon G Pinder, *Mr Repco-Brabham. Frank Hallam* (Geelong: Victoria, 1995); Malcolm Preston, *Maybach to Holden. Repco, the Cars, People and Engines* (Mansfield QLD: Hughes Graphics & Design, 2010).

[2] For Russell see Robert Murray, 'Russell, Robert Geoffrey (1892–1946)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, http://adb.anu.edu.au/biography/russell-robert-geoffrey-11588/text20687, published first in hardcopy 2002, accessed online 13 June 2016. The history of Repco up to 1960 is outlined in R A Murray and K B White's unpublished typescript "History of Repco" c. 1985, kindly made available to me by David McGrath.

[3] 'A parts service built on Ford-like principles', *The Australian Automobile Trade Journal* (27 January 1930): 33, Repco company files, University of Melbourne Archives.

[4] 'Repco's ten years of progress' in *Repco. Tenth Anniversary Celebrations*, Repco company files, University of Melbourne Archives.

[5] R G Russell, 'A modern Australian foundry', *Foundry Trade Journal* (7 September 1933): 129-130, Repco company files, University of Melbourne Archives; 'Repco. In step with the nation's war effort', *GM-H Pointers magazine* 8 (4) (Nov 1941); I owe this reference to Norm Darwin.

[6] Bryce Raworth, 'Former Repco Factory 81-95 Burnley Street, Richmond' Expert witness statement o panel amendment C149 to the Yarra Planning Scheme (March 2013): 4-6.

[7] 'In these days [1930s] when the idea of decentralising industries was still new, replacement parts followed a definite policy of decentralisation in the building of its country branches', 'The story of replacement parts', typed notes p. 2, Repco company files, University of Melbourne Archives. Each branch was a smaller replica of the Melbourne warehouse and workshop model. See also Murray and White, "History of Repco", chapter 4.

[8] Denis Nettle, 'John Storey and the Nature of Australian Management Practice', sydney.edu.au/business/__data/assets/pdf, accessed 1 June 2016.

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[10] Nettle, 'John Storey and the Nature of Australian Management Practice'.

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[13] Nettle, 'John Storey and the Nature of Australian Management Practice'.

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[16] Murray and White, "History of Repco", 51 and chapter 5.

[17] Murray and White, "History of Repco", 88.

[18] *Repco Record* 1972, p. 28 notes that Repco racing began in Tasmania with these motorcyclists. In 1950 McGrath had negotiated for Repco to sell imported DMW motorcycles from England, although this came to nothing. Frank Hallam arrived at Repco in April 1943 having been transferred from CAC. He came from a distinguished family, being a descendant through his father of English historian Henry Hallam and his poet son Arthur Hallam, and through his mother, of Tasmanian attorney general and Australian explorer J T Gellibrand; Pinder, *Mr Repco-Brabham* Chapter 1.

[19] Murray and White, "History of Repco", chapter 7.

[20] Murray and White, "History of Repco", 56, 112.

[21] O R Wadds, management memorandum no. 6, 17 September 1946 announced McGrath's appointment as assistant to managing director; O R Wadds, management memorandum no.18, 23 May 1947 notes McGrath's appointment to Replacement Parts; John Storey, management memorandum no. 30, 4 May

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[26] 'Replex', *Repco Record* (September 1962): 2.
[27] Murray and White, "History of Repco", 80.
[28] O R Wadds, management memorandum no 4, 21 August 1946, Repco company files, University of Melbourne Archives. Dean's various appointments were noted in Storey's office memoranda for 6 August, 24 August, 17 September, 8 October, 6 December and 17 December 1946; 11 November 1948; 31 January 1951, Repco company files, University of Melbourne Archives.
[29] *Repco Record* (December 1973): 8. According to Malcolm Preston, Dean also produced large industrial transformers and services and reconditioned automotive electrical components, Preston is incorrect however about the name of Dean's business and the address of its initial premises, *Maybach to Holden*, 26; Murray and White, "History of Repco", 80.
[30] 'Replex', *Repco Record* (September 1962): 4.
[31] Harriet Edquist and David Hurlston, *Shifting gear. Design Innovation and the Australian Car*, (Melbourne: National Gallery of Victoria, 2015).
[32] 'The technical history of Australia's fastest car - the Repco-Maybach', *Repco Technical News* (August 1954): 1 Repco company files, University of Melbourne Archives.
[33] *Repco Record*, special 50th anniversary issue (1972): 28.
[34] Preston, *Maybach to Holden*, 28-30.
[35] Preston, *Maybach to Holden*, 37.
[36] Preston, *Maybach to Holden*, 39.
[37] 'The technical history of Australia's fastest car - the Repco-Maybach', *Repco Technical News*, 1.
[38] *Repco Record* (1972): 28.
[39] C G McGrath, management memorandum no 88, 28 June 1954, Repco company files, University of Melbourne Archives.
[40] Irving, 'How we beat the world', 3; Irving, *An Autobiography*, 457.
[41] Irving, *An Autobiography*, 457ff on Chamberlain.
[42] Irving, like Frank Hallam, came from a distinguished family. In 1855 his grandfather, Martin Irving, son of famous Scots preacher and heretic Edward Irving, was appointed professor of Greek and Latin Classics at the University of Melbourne; he was later headmaster of Wesley College, which Phil Irving attended. G. C. Fendley, 'Irving, Martin Howy (1831–1912)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, http://adb.anu.edu.au/biography/irving-martin-howy-3840/text6099, published first in hardcopy 1972, accessed online 13 June 2016.
[43] Irving, *An Autobiography*, 154-398.
[44] Phil Irving, 'Chapter 14: How we beat the world', typescript, Repco company files, University of Melbourne Archives.
[45] Irving, 'How we took on the world', 5.
[46] *Repco Record* (December 1956):
[47] 'Stories of initiative' *Repco Record* (September 195): 6,13; 'Stories of progress', *Repco Record* (December 1957): 10, followed up on Dean and Irving and the Hi-power Head. See also Jim Scaysbrook, *Phillip Island. A History of Motorsport since 1928*, (Melbourne: Bookworks, 2005): 47,50.
[48] http://www.islandmagic.net.au/about-piarc/history-piarc/, accessed 13 June 2016 quoting PIARC Newsletter, 8.6.1954 and PIARC letter to Repco Ltd, 9.8.1955. Murray and White (84) note that the Repco Board agreed to pay "£4000 in sponsorship of the Phillip island Racing Club, believing that it would be an excellent advertising medium".
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CHANGES TO THE CLUB PERMIT SCHEME

On 30 September 2021, the Road Safety (Vehicles) Interim Regulations 2020 will be replaced by the Road Safety (Vehicles) Regulations 2021.

This letter is to advise that the new regulations introduce some important changes to the Club Permit Scheme, including the introduction of penalties for failure to comply with existing logbook obligations. Furthermore, a definition of a replica vehicle is now included in the regulations.

Please find enclosed a brochure that describes the changes that apply to the Club Permit Scheme.

To find out more about your Club Permit Scheme obligations, search 'Club Permit Scheme' at **vicroads.vic.gov.au.**

Introduction of penalties for failure to comply with existing logbook obligations

Club Permit holders must ensure that:

- the Club Permit is affixed inside your club logbook
- each day the Club Permit vehicle is driven outside the vehicle's local zone, you must ensure that the next available entry in the club logbook is completed before you begin your journey
- if your journey begins before midnight and continues into the next day, an entry must be made in the club logbook for both days
- you do not complete or partially complete entries in a club logbook which relate to a future day
- if a club permit is a 45-day Club Permit, only the first 45 entries in the club logbook are used, unless a second 45-day Club Permit is issued for the Club Permit period and affixed inside the club logbook
- if all available entries in a club logbook have been completed, or the Club Permit has expired or been cancelled, the vehicle is not driven outside the vehicle's local zone until a new Club Permit is issued.

Club Permit holders are responsible for ensuring any driver of the vehicle operated under the Club Permit complies with these obligations.

Penalties now apply for logbook offences.

A specific offence for using a Club Permit vehicle as a commercial passenger vehicle is being introduced

There are now financial penalties for using a vehicle operated under a Club Permit:

- for hire or reward for the carriage of goods or freight, or
- to provide a commercial passenger vehicle service as defined by the *Commercial Passenger Vehicle Industry Act 2017*.

Operating conditions

In addition to the general conditions, VicRoads may impose an operating condition on a Club Permit that specifies the permissible use of the vehicle operating under that Club Permit.

VicRoads may suspend a Club Permit if it is reasonably suspected that the Club Permit holder has failed to comply with any operating condition of the Club Permit specified in the certificate of approved operations. Internal review rights apply.

Cancellation of a Club Permit

VicRoads may cancel a Club Permit if the payment of a relevant fee and the appropriate transport accident charge is dishonoured or not paid within 3 months after the date of expiry of the Club Permit.

Surrender of a Club Permit

A Club Permit holder may surrender a Club Permit. When doing so, you must ensure that at the time the Club Permit is surrendered, the Club Permit, the Club Permit label and the vehicle's club logbook are removed from the vehicle and destroyed. If VicRoads requires it, you must return the Club Permit number plates to VicRoads. Penalties apply for failure to comply.

Definition of a replica vehicle

The Regulations now define a replica vehicle. 'Replica' means a light motor vehicle that is an individually constructed vehicle that resembles, as close as practicable, the appearance and dimensions of the production vehicle on which its design is based. To be eligible for the Club Permit Scheme, replica vehicles must have the appearance and dimensions of a vehicle manufactured more than 25 years ago.

For a replica vehicle to be eligible for inclusion in the Club Permit Scheme, it must meet this definition, and a VASS approval certificate must be provided with the Club Permit application. Individually constructed vehicles and production vehicles are defined in the Vehicle Standards Bulletin (VSB) 14.

Some regulatory reform proposals will not be progressing in 2021

Based on consideration of stakeholder feedback and an assessment of current feasibility, the Victorian Government will not at this time be progressing the following reforms which were proposed in the consultation process:

- increasing the vehicle eligibility age from 25 years to 30 years for Club Permit vehicles
- requiring vehicles older than 15 years to be recorded on the Written-Off Vehicles Register (WOVR).

There is no plan to introduce the proposal to increase the Club Permit Scheme eligibility age. However, other regulatory proposals will be considered for introduction in the future.

For more information

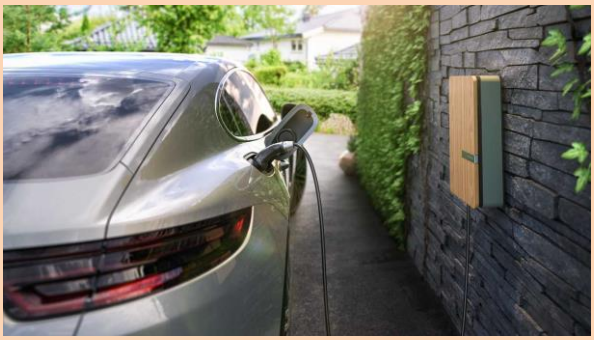
For more information about the consultation process visit **engage.vic.gov.au**

Information provided in this brochure is an update of changes to the Club Permit Scheme. Search 'Club Permit Scheme' at vicroads.vic.gov for a full description of all Club Permit Scheme requirements and obligations.

Ed: now, who would have seen this coming? *Source: www.insideevs.com/news*

UK Proposes Law To Switch Off EV Home Chargers During Peak Hours

Going into effect next year, a new law aims to protect the grid from excessive strain; it won't apply to public chargers, though.



Sep 29, 2021

By**: Dan Mihalascu**

The United Kingdom plans to pass legislation that will see EV home and workplace chargers being switched off at peak times to avoid blackouts.

Announced by Transport Secretary Grant Shapps, the proposed law stipulates that electric car chargers installed at home or at the workplace may not function for up to nine hours a day to avoid overloading the national electricity grid.

As of May 30, 2022, new home and workplace chargers being installed must be "smart" chargers connected to the internet and able to employ pre-sets limiting their ability to function from 8 am to 11 am and 4 pm to 10 pm. However, users of home chargers will be able to override the pre-sets should they need to, although it's not clear how often they will be able to do that.
In addition to the nine hours a day of downtime, authorities will be able to impose a "*randomized delay*" of 30 minutes on individual chargers in certain areas to prevent grid spikes at other times.

The UK government believes these measures will help avoid putting the electricity grid under stress at times of peak demand, potentially preventing blackouts. Public and rapid chargers on motorways and A-roads will be exempt, though.

The Department for Transport's concerns are justified by the projection that 14 million electric cars will be on the road by 2030. When so many EVs will be plugged at home after owners will arrive from work between 5 pm and 7 pm, the grid will be placed under excessive strain.
The government argues that the new legislation could also help drivers of electric vehicles save money by pushing them to charge their EVs during off-peak night hours, when many energy providers offer "Economy 7" electricity rates that are far below the 17p ($0.23) per kWh average cost.

In the future, Vehicle-to-Grid (V2G) technology is also expected to mitigate strains on the grid in combination with V2G-compatible smart chargers. Bi-directional charging will enable EVs to fill gaps in power when demand is high and then draw power back when demand is extremely low.

Ed: if you know of someone 18-30 working in the field of classic car restoration, you might like to pass this on to them:

AHMF
AUSTRALIAN HISTORIC MOTORING FEDERATION
Driving Australia's Motoring Heritage

The Robert Shannon Foundation was established in 2003 to perpetuate the memory of Robert Shannon, founder of Shannons Insurance, who died unexpectedly in March 2000. Robert was an avid classic car enthusiast, who especially enjoyed his 1930 Invicta S Type. He was a strong supporter of the historic motoring movement and was concerned that it was not attracting enough younger people, particularly in the areas of the preservation and restoration of classic vehicles. The Robert Shannon Foundation has no connection with the Shannons Insurance organisation. All correspondence related to the Robert Shannon Foundation should be sent to the Robert Shannon Foundation through the relevant State Council.

AIM: After the success of the Shannons 2001 National Motoring Tour, the Australian Historic Motoring Federation (AHMF) established the Robert Shannon Foundation. The AHMF is the national body representing classic and historic vehicle clubs in all states and territories. The purpose of the Foundation is to encourage people under the age of 30 to become involved in the restoration and preservation of veteran, vintage, post-vintage, historic 50's, historic 60', historic 70's and historic 80's vehicles up to 30 years old.

The Foundation may:

- help with the purchase of specialist tools or equipment
- assist with the actual cost of restoration work
- contribute toward TAFE or other fees
- contribute toward any project considered worthwhile by the Trustees.

Funds: The Robert Shannon Foundation operates a limited funds account to fund these grants. Essentially the funds are invested for the year at the best current rates available through an Australian financial institution. The sum available for grants is then based on sum of the interest earned on that investment.

To assist in increasing the value of these grants we would appreciate donations to help build our investment funds. Unfortunately, although having gained recognition as a charitable organisation we are still working on the made to be tax deductibility of donations.

ELIGIBILITY: Any person or group of people under the age of thirty years and engaged in studying automotive restoration and preservation or actively working on historic vehicles is eligible to nominate for a grant.

Applications for 2022 grants must be received by the AOMC

by 30th May 2022

Seeking Oil Leaks

-Bill Revill

We all know our old Triumphs have some continence problems when it comes to oil. But sometimes these leaks are hard to find – so often the oil runs down several areas before it gets to where it is visible or, if we go for a drive, the wind blows the oil everywhere. To make the oil pathway more visible, we need something like a dye penetrant crack detecting system which is used for finding microscopic cracks in steel components. These test kits operate in three stages – first a cleaner, then secondly by spraying a dye on the steel surface and wiping off the excess. This allows the dye to penetrate into cracks in the surface. The third step is to spray on a 'developer', which is in the form of white powder, so any dye in a crack soaks into the white powder, thus showing the crack location.

So, if we want to use this technique to check for oil leaks, head for the supermarket to get some "Dry Shampoo". This comes as an aerosol spray and is usually used as a desiccant for hair, to clean and dry the oil out when milady can't shampoo with water. A photo of it is shown – "*Batiste"* is worth about $3 a can. It consists of white powder which is usually sprayed on one's hair and brushed off.

The oil leak test is in three stages: Firstly, all excess oil must be removed from the area for testing. I use a spray can of 'wax and grease remover' and vigour with a cleaning cloth. – it needs to be really clean, otherwise all the powder will discolour, and the leak test will not work. Second step – get out the dry shampoo and spray the area to fully cover it with white powder then give it a few minutes to dry and harden. Then start the car up, jump in and go for a drive.

And the final step - Immediately on your return, put it up on the hoist or the ramps and have a look. The leaked oil will have flowed into the white powder and the source of the leaks are instantly visible. The two photos show this – oil was leaking off the clutch slave cylinder bracket, but its source was unclear. Now with the powder we can see the line at the top where the oil was running across and then down to drop off the clutch cylinder bracket. The other photo is of the diff plug, which had leaked in the past. I thought I'd fixed the leak and sure enough it could be easily be seen to be dry.

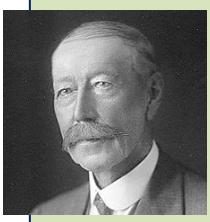
The white powder is easily cleaned off afterwards. It usually takes a couple of tries to get a final answer (eg: I thought the oil filter hose union was leaking, checked it several times, only to check a wider area and find the breather in the block was leaking instead). It's a quick and easy method to clearly show where any leaks or weeping is occurring.

James Crooke – the family legacy

-Ian Maud

Sometimes you have to be careful what you write! Last month I included an interesting account of James Crooke, who achieved an impressive array of titles, championships and 'firsts' in his life, as you may recall.

Little did I know that his direct descendants – Jon and Dean Crooke – are members of the GCC! Jon contacted me for a yarn and I discovered there is quite a motorsport legacy in this family, so I thought I would continue last month's tale to 'round off' this remarkable motorsport legacy:



JR (James) Crooke (1847-1932): was the winner of Australia's first car race, at Sandown Park in 1904. In 1906 he organised and held the world's first race on a purpose-built circuit on his property at Aspendale, Victoria. There is much more to his story, that you can read in detail at: https://www.hyperracer.com/history

Dr Peter Crooke (1924-2014): a successful rally driver in the 50's, Peter won the 'open' class in the blue-ribbon event of 1955, the Sun Rally. In 1962 he became the CAMS Victorian Medical Officer and succeeded Dr Lloyd Buley as CAMS National Medical Advisor in 1966, a position he held for 15 years.

Peter led an Australian initiative in 1971 that introduced the motor racing safety standards that we enjoy today, ie; modern helmet design, seat belts, fire proof suits, etc. He introduced these standards along with a set of international medical standards to the rest of the world at an FIA meeting in 1971 in Milan. The FIA adopted these standards and Jackie Stewart, and others, then ran with his recommendations in Europe.
Peter was awarded CAMS highest honour, the Award of Merit, in 1982.

Above: Peter purchased Fangio's 1954 Monza-winning Maserati 250F

Jon Crooke (1951-): began his racing career in Sprint Kart racing in the '60's and 70's. In 1986 he decided to try his hand at car racing and purchased a Formula 2 car, where in his first year of car racing, on tracks he had never driven on before, he won seven of the nine rounds of in his first year of the Australian Formula 2 Championship, setting multiple lap records, fastest laps and pole positions along the way. In 1987 he joined Peter Brock as a Group A driver for the Holden Dealer Team. This was the year Brock's Bathurst Commodore famously expired early in the race and Brock took over the number two car before Jon could have a drive, going on to eventually win the race after appeals against the Sierras – these events conspired to deny Jon his Bathurst drive. From the time he retired from top-level driving at the end of 1987, Jon remains the all-time highest 'race win rate' driver at national level competition in Australia.

Three years later he would design and build the Hyper Simulator – the world's first racing car simulator. In 2007 Jon co-designed and built a new concept in kart chassis, the Hyper MAX racer, which would go on to beat the best of the world's leading kart manufacturers. Drawing on his past experiences, he co-designed and built the prototype Hyper PRO Racer (2009), Hyper TERRA Racer (2016) and Hyper X1 racer (2017-2019) – each a greatly advanced and successful race car.
Jon is currently Head of Sales and Design at Hyper Racer.

Dean Crooke (1984-): Jon's son, Dean, also began in karts at just 8 years of age, winning the Junior and Victorian Superkart Championships before moving to cars. He obtained his CAMS race licence on his 12th birthday, becoming the youngest-ever CAMS licence holder at the time.
He co-designed a new kart chassis with Jon, using this to beat the world's leading kart manufacturers and setting several lap records on his way to multiple State championships, and receiving Driver of the Year award. In 2011, Dean contracted to Nissan Motor Sport – Kelly Racing – to provide fabrication and composite material services. Together with Jon, he co-designed and constructed the prototype Hyper PRO Racer, Hyper TERRA Racer and Hyper X1 Racer, all purpose-built and highly effective race cars. In 2018 Dean clinched his 8th successive Formula 5 Hyper PRO Racer Championship. He is currently CEO and Head of Engineering at Hyper Racer.

Above: Hyper MX Racer superkart.
Below: Formula 5 Hyper PRO Racer

So, how's that for an accomplished family record in motorsport?
For this article, I have unashamedly drawn on details provided at:
https://www.hyperracer.com/history-crooke

I don't feel I can leave this story without a reference to Jon and Dean's Hyper Racers. The manufacture of the MAX, PRO and TERRA Racers are actually on hold at this time due to the high demand for the X1 Racers. The Hyper X1 Racer is a specialized, high-performance race car any one of us (with a suitable budget) can order and compete in, with the potential to be at the top of the class. Very impressive, and worth a look!

Above and below: Hyper X1 Racer

Visit: https://www.hyperracer.com/

The building of another Targa Car

-- Bill Freame

When the cute-looking Black and White FIAT 124 Spyder slid sideways off the road on the Gunns Plains stage during Targa Tasmania 2005, it rolled over twice on the way down an 18-metre ravine. Fortunately, it all came to rest wheels side down, straddling a shallow creek. The fibreglass hard top roof had been ripped off during the incident and just after it came to rest, a large lump of timber landed inside the car, between the crew. The roll bar mounted video camera had recorded all of this and that recording, having been grabbed by Targa officials, was flashed into news casts around the world that evening. This dramatic incident also caught them by surprise again when they found it had been included in the Eric Bana film, 'Love the Beast'! Until then they had no knowledge of it having been added into the movie.
Incidentally, the car was lifted by crane truck back to the road the next day, using a sling wrapped around the aluminium roll bar, with the whole weight of the car suspended on it, such is the strength of aluminium rollbars.

Why did I mention all that? Well, while the crew were recovering from their bruises plus completely repairing the Spyder over the following 18 months, they both came to the sensible conclusion that next time they did a Tarmac Rally, it would be in a car with an integral roof, a roof much more difficult to remove and thus making it much harder for the scenery to get at them. That fully and very carefully restored Spyder is now semi-retired, being used occasionally in some State Race meetings at Philip Island and Sandown. Only the considerably damaged left door and front guard were kept and are the only parts hanging on a wall in the BOI Performance workshop, as reminders that it can all go wrong!

When the crew did return to Targa Tasmania, in 2007, their return was in a turbo diesel-powered FIAT Grande Punto Sport, in the newly introduced 'Showroom category'. Surprisingly this was the very first diesel to compete in Targa Tasmania, and it actually dominated the diesel class, with three wins in a row, against the might of the Mazda Team and their Mazda 3 diesel. The team then built yet another car for tarmac rallying, this time they returned in 2015, via the 'Late Classic category', using a 1975 FIAT 131. Its first outing was in a shake-down run for the car as one of the five Victorian 'Fiat Team' cars in the Alfa club 10-hour Regularity Relay at Winton, in October, 2015. Then, if all went well, it could be further rally- prepared and used in Targa High Country (THC) following in November, 2015.

Phil Buggee, the very proud owner of BOI Performance, had eventually become aware that his unique business would be much more recognized and appreciated by the owners of the

older sporty FIATs. By competing in Targa events in a FIAT 131, a classic car again, it would be a really great opportunity to again showcase his vehicle preparation skills, as well as his Weber and Dellorto carburettor tuning expertise. Phil had decided early on that he would build a four-door 131, not use the two-door shell that Abarth (the Fiat tuning arm) used very successfully in world rally championships in the 1970s. Surprisingly, the two door 131 was sold in NZ, but not here. Regretfully, the recent price of old two door 131s has skyrocketed in NZ, particularly when that purchase enquiry is coming from here in Australia. Anyway, the practicality of a four-door shell gives far better access to use the storage space available behind the firmly fixed rally seats!

Phil was able to start this project by acquiring a long-time stalled gravel rally car project that he knew about because he had done much of the original preparation. Fortunately, the car had been stored under cover and in a garage for over ten years. It was an almost complete car, with a half cage and with all the mechanicals still in place. Unfortunately, the roll cage no longer complied with the updated regs so it was replaced with a custom-built roll cage using 48 mm diameter tube everywhere in the realization that the trees can be going past very fast on tarmac rallies. This was agreed and considered to be a very good starting point! Phil already knew what spring and damper rates should best suit his requirements for tarmac rally stages; most parts he already had in stock. There was also the choice of several optional ratio 5-speed 131 gearboxes that are almost bullet proof, capable of handling much more torque than it would receive in tarmac stages. Likewise with the strength of the rear axle, although not surprisingly, those differentials are now beginning to show their age, but only if they're not maintained in good condition. You just need to be paying careful attention to maintain the correct backlash and oil quality used.

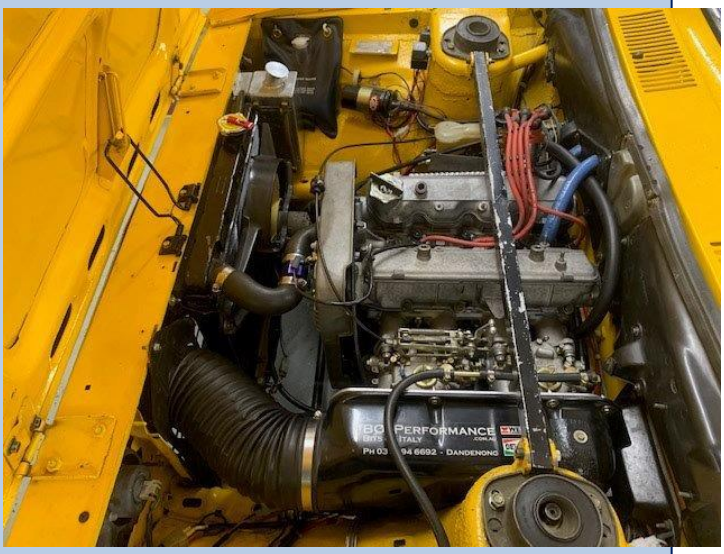
The very first release of the twin-cam 131s were only available for the USA market, fitted with the 1756cc engine as the largest option. Whilst these engines are considered by FIAT tuners as almost unburstable, they do require careful maintaining to keep them at their best. From Phil's personal collection, a well-seasoned block was chosen with a set of high compression pistons selected from BOI Performance stock. The pistons and crank were then highly modified 'in-house' before the block was bored and parts balanced as necessary. Phil had already decided on using a very light clutch/ flywheel assembly, but one with heavy clamping pressure, a successful performance recipe he was very keen to continue using.

The cylinder head and inlet manifold were carefully ported to BOI Performance specs, with slightly larger valves and increased spring pressures that are another performance part that he keeps in stock. The bolt-on cam boxes were machined (decked 1.5mm) to suit the re-profiled camshafts that were chosen as the best to give excellent torque in this application. This then permits the use of thinner valve shims in the FIAT range, a useful trick to reduce valve train inertia at high revs, but this tweak then requires the use of two adjustable cam wheels, also made 'in-house' at BOI Performance.

The chosen pistons were larger than the required bore size, deliberately with the intention that they could be reduced in diameter, another regular happening 'in house' at BOI Performance, thus allowing a change to the skirt cam profile and increased land clearances for improved performance and reliability in serious motoring applications! There are few production pistons that are ideal for racing applications, straight out of the box, without some modification, provided you know what to do to them! This engine was not going to be used for shopping trips, or delivering kids to school, it was now going racing, in some very serious competitions. The piston crown shape was also altered, plus the valve pockets were moved and deepened to allow for the larger than standard valves, but this was also to permit adjustments to the cam timing up to a few degrees when trying timing changes, searching for everything that can be squeezed out of the parts we were using, always searching for the best spread of torque and power.

The crankshaft started as a standard FIAT item. However, it was much modified to reduce some rotational inertia, as well as finely balancing of all the attached parts. The block was bored and honed with a torque plate (that is owned by BOI Performance) to suit the pistons' new shape, the deck was 'O'-ringed and ARP studs and nuts were used to clamp the head gasket. A better competition quality ring-set was supplied by Pacific Engine Parts, who specialize in providing performance ring-sets. The lubrication of the engine is handled by a new, but standard FIAT oil pump, with the inclusion of a clever thermostatic control of the oil cooler plumbing so that the oil in the seriously baffled wet sump should always operate at a relatively constant temperature, regardless of the early morning low air temperature on top of Mt Buller during each Targa High Country event and also through the demanding highlands of Targa Tasmania in Autumn.

Induction was initially by 42 DCOEs but is now successfully handled by 45 DCOE Webers, the final choke sizes selected after further testing on the BOI Performance dynamometer. Phil always works very diligently with the choke to butterfly ratio, searching for the most responsive engine, with a useful spread of torque and HP, to best cope with the additional weight of a tarmac rally car, plus it has also been fitted with a BOI Performance developed and manufactured cold airbox to gain additional torque. The exhaust system is



built from the extractors back, hugging the floor all the way and with just sufficient muffling to compliment the unique FIAT twin-cam rasp, without it being too noisy inside the car on long transports; noise that can be very tiring for the crew. It's been flange jointed at three places for ease of rapidly servicing in the field, easily handled by one person, if and whenever it might be necessary.

As with many performance FIAT twin cam engines, the distributor is driven by an integral gear on the exhaust cam shaft, thus it bolts onto the outside of the exhaust cam box, remaining just below the bonnet. That makes for very easy servicing and keeps any vulnerable electrical bits well away from water splashes, especially through deep puddles. Phil has also paid careful attention to the spark plug heat range and the ignition advance curve, both being developed and selected to be the best suited to this state of tune and as it should only ever be running on 98ULP. This was initially all determined by a brief session on the chassis dynamometer, firstly to run the new engine in, then to tweak it a little to find a suitable, yet conservative state of tune, while also maintaining good fuel economy. With the 2015 Winton AROCA 10 hour only three weeks before THC, we all wanted the ensure the car could survive both events, at least mechanically.

I have deliberately skipped over all the work that was needed to make it into a running car. That's fuel and brakes plumbing; the electrical wiring includes the extra wires for a few extra circuits; plus relocations of some major components. The battery and fuel pumps are now located in the boot, as an example. A lift pump pulls fuel out of the main tank, into a surge tank. There, another pump sends fuel to the front of the car, to the carburettors. Also, the doors needed to be bolted on, then glass fitted and trims added. The springs and shockers/ struts were swapped to better suited components as well as the best brake package that would fit inside 13-inch wheels. If you have never done any of this to a car, you cannot imagine just how much time that all takes, being thorough and not missing something important.

The week before the 10-hour the wheels were aligned, set for track work at Winton and then a log book was issued by CAMS. The speedometer wasn't working consistently during the engine running in on the dynamometer; however, it was fixed and working correctly again for the RWC and road testing. When it was finally rolled off the trailer at Winton, ready for the 10-hour, the speedo had clocked up only 5km!

Phil was quite happy with the handling and reasonably satisfied with the lap times it was doing in practice; however, there was a slight oil leak from the left rear wheel caused by a hard old axle oil seal, but that was quickly and easily replaced at the rear of the pits. All we had done in our very 'time short' preparation was to change the differential oil. The back axle was already on the long plan for

rebuild after the 10-hour with it possibly also including a ratio change for THC. With the experience of this shake-down event, a ratio change would be discussed and an alternative ratio selected at the team debrief after we had successfully completed the AROCA 10-hour regularity event. Pleasingly, the 131 had a very successful 10-hour event, with over 3 hours spent lapping on the track, about an hour longer than planned for a new car, but it was desperately needed for the Victorian FIAT team effort that year.

THC preparation began early the following week, with many navigation items needing to be added for the navigator (Paul) to do his job without any hassles. Additionally, geometry changes were made to the front suspension for although the 131 was already handling very well, Phil decided that we could further improve it, to get even better tyre life during THC. During the final week, Paul and I worked full time putting in the finishing touches to the car. Front wheels bearings were again cleaned, inspected, repacked and adjusted. The alternative differential plus a spare were stripped, inspected, rebuilt and adjusted, ready to be used. A tool box and a simple, lightweight jack were needed to be secured inside the car, and two spare wheels were strapped into the boot recess, with an electric wheel brace also included. Electric wheel brace? That's a battery powered rattle gun, complete with the socket, ready for rapid wheel changes. One of the final jobs tackled was improving the brake ducting to help control brake temperatures, especially for the three competitive down-hill runs off Mt Buller and also to try to slow down pad wear.

With the vehicles all packed and prepped for its first THC by the Wednesday night, the 131 was readied to leave early Thursday morning and was towed straight to Mansfield, where it was then unloaded and driven the approximately 50km to the top of Mt Buller, this to help bed in the new brake pads and scrub in the tyres. Later that afternoon, at Mt Buller, all the competition vehicles were scrutineered, in an annoying but constant drizzle of light rain. The 131 successfully passed scrutiny and was ready for the competition.

Targa High Country is a three-day event, with the first day, Friday, seeing the cars parked for display in the main street of Euroa during the lunch break. By then there had been three competition stages, with a further three on the return to Mt Buller, using all the same roads but now in the opposite direction. The service crew added 30 litres at a 'near to Violet Town' refuel location, before we sent the car off to lunch in Euroa. We also added fuel at Merton, for the return to Mt Buller and the return stage up the hill.

Saturday had the cars travel to Whitfield, where they are refuelled before lunch and they then retrace and return to Mansfield for a show stage through the town, with the cars then

being on display in the main street. There was an opportunity to provide some service before the show stage, so the 131 had fuel added and the wheels were swapped around to even out the tyre wear. On inspection, while off the car, the tyres were wearing very well and Phil was very pleased with how they were performing.

Sunday had the cars run to Eildon, via Jamieson, using the longest stages of the event. The service crew added fuel near Alexandra, just prior to the final stage before lunch. There the service crew also cleaned the bug-spattered windscreen while the fuel was added. The service crew then travelled the long way to the Eildon lunch break where we were to swap the tyres around again, for the stage retrace to Mt Buller.

Just as we arrived at Eildon, we got a 'phone call to say that our rally was over, the 131 had collided with the rear of another competitor in the event and there was too much damage to continue. Despite the 'Rally Safe' device that all competing cars are fitted with, to warn of an approaching car, the lead car had pulled across in front of the 131, at a slow speed, leaving the 131 with nowhere to go and they collided with the car when they had been expecting to pass it safely. It doesn't matter who was at fault, the end result was a DNF for the 131.

The service crew were instructed to drive back to Mt Buller, collect the trailer and then return to Eildon to retrieve the 131. The trailer needed to be collected and off the mountain before the final Mt Buller stage began, with the road closure expected to be for about 4 hours. Fortunately, the trailer was collected just before the road closure came into effect and the 131 was able to be collected, in a reasonable time, and towed back to Mt Buller, finally proceeding up the stage after it had been reopened to normal road use.

It was a disappointing early end to the event as the 131 had been in a good position in its category and the whole crew was very pleased with how it was performing. They would like to have some more power and they miss the torque of the diesel Punto on the hills. However, for a first event, the 131 was doing all that was asked of it and we knew that we would make further improvements to it.

The majority of this build was done by just Phil, at home in his very well set up home workshop. He has the luxury of a hoist and that just makes it a lot easier to work at a comfortable height for most projects. Any spare time after the evening meal on most nights and also most Sundays were the main work time on this project. Only the roll cage, the outside paint job and some of the engine machining were farmed out.

The repairs included cutting the front off at the sway bar mounts and welding on a salvaged front complete with grille, lights and bonnet. After painting, the engine and all the under-

bonnet bits were refitted, wheels aligned and it was back ready for further action a few weeks before Christmas.

In the following six years there have been two diff ratios used: 3.9:1 and 4.1:1 to suit the competition it is entered in. A second engine has been developed, with custom pistons and other tricks installed. An 85-amp alternator was also installed to keep up with the demands of fuel pumps, fans and headlights on the many electrical circuits and to keep the battery always fully charged.

Since it was built it has entered and completed four Targa Tasmanias, entered five and completed four Targa High Countrys, plus historic race events at Sandown, Winton and Phillip Island. It has also been a Victorian FIAT team car in about three AROCA 12-hour Regularity events at Winton. With an excellent reliability record it is also a very competitive 'class car', with 3rd place at the 2021 THC, held in February and 8th place at the 2021 Targa Tasmania, held in April, despite having one of the smallest engines in the 'Late Classic Category'. The car is owned and driven by Phil Buggee, usually navigated by Paul Freame, (the exception being the 2021 TT when Jeremy Brown substituted for an unavailable Paul) and is service crewed by Bill Freame and Shayne Williams.

The original of this story was provided for publishing in RACE Magazine, in 2015. This version of that story has been brought up to date with more clarity of some technical details.

1976 Renault R12:

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Suit club rally, classic competition, khanacross or commuter.

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Tyres for a project car:

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2 x LN106 4-spot callipers
2 x STD Verada vented discs STD size never machined
1 x 6 Inch brake booster (been tested OK) with new 1-Inch master cylinder
1 x Second-hand master cylinder, same as new one ok for overhaul

Asking $500.00 for the lot.
Darryl Hamilton
0408380758

...and a parting shot:

I don't know anything about the courageous pair shown in this photo – I don't even remember where I found it – I thought it worthy of inclusion here for the sheer commitment demonstrated by the sidecar passenger. It's enough to give the local O, H & S Inspector a seizure!

'Handy People to Know'

Ed: In my dithering with classic and competition cars over the years, I have dealt with a number of businesses: some were not worthy of a second visit, but others stand out as excellent people to deal with; exceptionally skilled; or perhaps able to perform a process that is a rare and dying art form. I will include a couple of my own discovery in the next editions of VB, but would welcome any member who can contribute a short blurb on a business they favour. Our current sponsors of course automatically fall into this category!

Murray at Victorian Brake Company (Vic Brakes)

While Murray bought Vic Brakes from the previous owner just eight years ago, the business itself has been operating for some 40 years. Originally at premises in Lang Lang, it now occupies a modern factory site in Bormar Drive, Pakenham. As you would expect from someone deserving of a mention in this feature, Murray has an impressive wealth of knowledge and experience in the industry. He maintains a healthy level of stock, and his tales of previous jobs and solutions seem endless, demonstrating the breadth of his involvement in the past, from race and classic cars to vintage motorcycles, Lanz Bulldogs to unco-operative new forklift trucks. Murray has a relaxed, very helpful and can-do manner which I have appreciated in my dealings with Vic Brakes. He is one of a shrinking number of brake and clutch specialists who still selects his own friction materials; does his own bonding on-site; offers specialist linings and fittings; makes custom hoses and brake lines; re-manufactures hydraulic components; can convert hydraulic cylinders with stainless steel sleeves; and does specialist machining such as drums, rotors and flywheels.

Murray and his son Chris have been members of the GCC for four years (Chris drives a green Skyline), and he has offered our membership special service and pricing if you make yourself known to him.

You can contact Murray on (03) 5940 1177; at 2/13 Bormar Drive, Pakenham; or through

victorianbrakeco@bigpond.com

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