

Wheelspin

July 1999

Official Newsletter of the TWIN CITIES AUTOSPORTS CLUB Inc.
PO Box 7697, Garbutt QLD 4814



First and Second place at Charters Towers Rallysprint. Doug McCubben and Gary Meehan

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MAGAZINE SUBMISSIONS:

Anyone wishing to submit Articles, Information, For sales, etc. for the next magazine please call me or send the article. Closing deadline for magazine is the Tuesday following meetings.

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I am open to suggestions for articles in the magazine eg. Tech Tips, News and Views, etc. so don't be shy. A club magazine is the lifeblood of a club, it informs members, sponsors (I hope you give the people that support you a copy) and keeps the interest up. So if you have something to say, say it in the magazine so ALL members get to know about it.

PRESIDENTS REPORT

EDITORS REPORT

The Charters Towers Rallysprint has been run and won, and congratulations to Doug McCubben. The event went well and the roads were very good, even though some people 'beached' themselves on the grader rills. The trial of the new clocks got off to a confused start but once the process was worked out they turned out to be very good and look like the way to go for the QRC.

For any of you that run Avgas in your rally car, there is an article in this edition about the phasing out of that particular type of fuel in the future.

SECRETARYS REPORT

TCAC GENERAL MEETING – Thursday 17th June at Bellevue Hotel.

Meeting opened: 7.15pm

Minutes from previous meeting read and accepted.

PRESENT: Steve Cruttenden, Grant Ross, Lindsay Stone, Robyn & Ron White, Gary Hewson, Mike, Tracy Poore.

APPOLOGIES: nil

VISITORS: Dave Howse, Ben Lunt, Mark Lewis.

TREASURER'S REPORT: As per report.

INCOMING MAIL:

CAMS QSC News
Invoice from Printworx \$25.50
CAMS membership survey by 2/6/99
CAMS Credit Card applications
Revolution Racegear advertisement.

GENERAL BUSINESS:

QRC – DPI advise that the use of roads at Lannercost sections will be excluded unless TCAC pay for cost of road repairs for QRC 1998 at \$539.30. – S Cruttenden to follow up and pay if correct.

CLUB CAR – As breaks need attending to, discussion as to who will be responsible for its use, ie. Storage/responsibility. Steve C to look after it until QRC and organise logbook to stay in car.

QRC SUPP REGS – Stewards/Scrutineers need to be confirmed before Supp Regs are sent out.

FIRE EXTINGUISHERS – 'P&O Firepro' are offering 1kg tagged and bracketed extinguishers at \$28 each, and offered to test/tag untagged units. Speak to Ron White.

MEETING CLOSED 9.15pm.

EDITOR'S SAY

As indicated in last months magazine the QRC has been postponed two weeks to the 7th and 8th of August. This is

now confirmed. This was necessary due to there not being any accommodation available in Townsville that weekend because of major sporting events.

The venue, although tentatively changed in last magazine, is now confirmed as the Mecure Inn as for the last few years and we thank them for their support of this event each year.

However, as always we are looking for helpers. If you are available and can help out, please call Greg Van-Dinter on (07) 4775 2344 (w) or 0418 782827 (m). All necessary training will be given prior to the event.

FROM THE WEB

Building or Repairing a Road or Racecar? Then Get Motorvated!

Australia's National Parts & Performance Directory is now offering discounts from selected premium automotive retailers and service providers.

This membership is now included free of charge with your CAMS membership. Take advantage of the discounts offered and use the guide to find Australia's best products for your road or racecar

You can buy a copy of the directory for just \$5, or you can check the website regularly for updates:
www.motorvated.com.au

And you can add your business to this list, too. Contact Steve Griffiths on (03) 9759 6800.

AVGAS to be Phased Out

It is realised by the Board and administration of CAMS that this decision may not find immediate favour with our members, and it was not taken lightly. However, as the governing body of motor sport, it is our responsibility to take the hard decisions to ensure the long-term viability of our sport.

After a somewhat dismal qualifying or race performance, many a team manager has delivered the oft-quoted words to his or her driver: "Why don't you get the lead out?"

Well, after a fashion, CAMS is aiming to do precisely that. As from 1 January, 2002, CAMS will be adopting the FIA regulation prescriptions for fuel. Whilst not eliminating leaded fuel in itself, this will mean that AVGAS will be phased out as it is not in compliance with the general prescriptions.

In general, the FIA prescribe a maximum Octane rating of 102 for ULP and PULP, and 100 for leaded fuel. AVGAS, in both forms, is a leaded fuel with an octane rating of around 106. The following article highlights the reasons why CAMS has taken this decision.

Information on Introduction of FIA Fuel Specifications

Introduction: The use of fuels in motor sport in Australia has remained unchanged in specification since the banning of methyl benzene and similar additives and the addition of unleaded fuels in the mid-1980s. The widely used fuels today in motor sport are premium unleaded (PULP) and aviation gasoline (AVGAS 100LL and 100/130).

Leaded (super) makes up most of the rest with some alcohol fuels used in Historic vehicles, diesel in trucks and LPG being an occasional novelty in some Speed Events. With the exception of AVGAS, all the present widely-used fuels comply with the current FIA regulations.

Aviation Gasoline has been the fuel of choice by the majority of serious competitors for more than 30 years. Its widespread use began after the Second World War when the development of incredibly large, powerful piston aircraft engines brought about an equal leap in fuel technology, largely through the addition of tetra ethyl lead. Its ready availability and high octane rating made it a natural for motor sport applications.

With an eye to Australia's vast distances, and the rural vote, successive governments have refrained from adding the massive taxes to AVGAS that have been applied to motor fuels. As a result, in spite of its greater production costs, its price has been little higher than commercial motor petrols. However, its relative lack of availability and the controls applied by government to automobile manufacture have meant that there has been little demand outside of the realm of enthusiasts.

Advantages of AVGAS: It is made in batches controlled within rigid parameters and this has made it popular with engine tuners, as, unlike motor fuels (MOGAS) the fuel they used did not vary in its composition throughout the year. However the prime attraction of AVGAS has always been its ability to generate a little extra power compared to MOGAS. This is because of its higher octane rating, which is a measure of its ability to resist detonation. Up to a point, raising the compression ratio of an engine will produce greater power, all other things being optimised to suit. However, the greater the compression ratio, the greater the chance of detonation (also called pinging or pinking after the characteristic sound it makes in an engine), where the combustible air/fuel mixture explodes instead of burning. No engine can take detonation for any period of time and will fail in some manner from the simple blowing out of a head gasket to the catastrophic breaking of a piston, conrod or crankshaft.

The simple equation has been: higher octane = higher compression possible without detonation = more power!

Fuels Compared: The table below gives a summary of the octane ratings and typical lead contents of most of the currently available fuels. These figures are necessarily generalised, but reflect the general nature of the quantities shown. PULP and ULP may be higher than that shown for octane as these figures are government minima.

In particular, the FIA specify a maximum Research Octane rating of 100 for leaded fuels, rather than a maximum lead content. Both forms of AVGAS considerably exceed this octane rating and have lead contents of between three and four times the agreed maximum level for leaded automobile fuels in Australia.

Fuel	Lead (g/L)	Octane (Research or RON)
Regular Unleaded (ULP)	0.013 Max.	91
Premium Unleaded (PULP)	0.013 Max.	95
Leaded (Super)	0.200 Max.	96
Shell V8 SUPERCAR (Unleaded)	< 0.001	96
Elf Super Tourer (Unleaded)	< 0.001	102
FIA Spec. (Unleaded)	0	102 Max.
FIA Spec. (Leaded)	NA	100 Max.
Avgas (100LL Blue)	0.56	106
Avgas (100/130 Green)	0.84	106
LPG (Variable Propane/Butane mix)	0	97 ñ 108

Disadvantages of AVGAS: Until fairly recently, the only disadvantages suffered by the users of AVGAS have been that it cost slightly more than for MOGAS (typically 85 c/L compared with 65 c/L). Most circuits have AVGAS supplies on site or brought in, though Rally and Off Road competitors have had to arrange to collect fuel from local airports. Even so, this has hardly been an issue. The high lead content in itself has little effect on the engine, save perhaps for spark plug fouling in poorly tuned engines. With the development of electronically controlled fuel systems in popular vehicles, and its increasing accessibility to the motor racing fraternity through after market computer systems, leaded fuels, and high-lead AVGAS in particular have become less popular as they render ineffective the exhaust mounted oxygen sensors used to measure engine tune in as little as 25-50 hours of running, compared to over 500 hours for unleaded fuels. However, this is basically an issue of cost, not technical merit.

The legal issues: In June 1998, the Federal government implemented changes to the excise it collects on AVGAS. As a political response to the increasing charges it has levied on the light and general aviation sectors through its programs of "user pays" cost recovery in the aviation Industry, it reduced the excise on the aviation use of AVGAS by some 20 cents per litre, bringing AVGAS down to the level of discounted metropolitan motor fuels. Simultaneously, it increased the excise on AVGAS for non aviation purposes, pushing it to over \$1.25 per litre. This has immediate serious legal implications for our members.

On top of the Federal government controls on excise, and hence cost, some individual State governments have imposed additional, environmental based restrictions on the use and sale of high-lead fuels, primarily in harmony with federal policy.

Tasmania has banned the sale of high-lead fuels (greater than 0.3 g/L) under its Environment Protection (Prohibited Fuels) Regulations 1991, unless they are sold at motor racing venues. It is not sufficient that it is sold for motor racing purposes. Therefore, AVGAS cannot be sold for events such as Targa Tasmania, or any Tasmanian Rally as they are not held at a motor racing venue. Interestingly, the use of AVGAS has not been banned, only its sale. Negotiations were underway at the time of writing to try to resolve this issue for this years Targa.

NSW has gone one step further. As well as imposing similar restrictions to Tasmania on the sale of high-lead fuels, it has banned the use of high-lead fuels on public roads [Clean Air (Motor Vehicles and Motor Vehicle Fuels) Regulation], and imposed stiff penalties on anyone caught using high-lead fuels on public roads in NSW. Once again, it is Rally competitors in the firing line as many of them use AVGAS in their PRC cars, and must drive them on open public roads from one stage to the next.

The legal position in the other States is still uncertain at the time of writing. It would appear that Victoria has some form of restriction applied to the sale of AVGAS as Mobil have instructed all their Victorian agents who sell AVGAS for non-aviation purposes to obtain a written disclaimer from the purchasers that the fuel is for off road use only. The form supplied for purchasers to sign also provides that the purchaser indemnify Mobil against prosecution. In practice, should Mobil be found liable for selling AVGAS which was then used on the road, the purchaser would be liable to reimburse Mobil's legal expenses and any fines imposed. This could potentially run into millions of dollars. A similar disclaimer form is also used in NSW.

The Political Issue: The introduction of the FIA prescriptions on fuel, and the consequent banning of AVGAS is a political issue, not a technical one. Indeed, on balance of the information above there is some benefit from retaining it from a performance point of view, as we are in the "go faster" business. However, political events outside of the control of CAMS are already conspiring to cause major problems had CAMS allowed the continued use of high-lead AVGAS.

Firstly, from the legal perspective outlined above, the use of AVGAS in vehicles used by our members in Rally and Touring Road events in NSW is already illegal regardless of vehicle age. In the rest of Australia, AVGAS (and indeed any leaded fuel) used on any public roads in a vehicle manufactured since January 1986 is also illegal, irrespective of any "Rally Registration" which may be held by that particular vehicle for that State.

Secondly, the sale of AVGAS is also an issue of great concern. In order to purchase AVGAS, our members in the two most populous states are being asked to sign indemnities which potentially have disastrous financial consequences should "something go wrong". Similarly, not all AVGAS is sold from the well-regulated major airports. Anecdotal evidence is mounting that fuel is being

sold illegally at regional airports at aviation prices, with no indemnities or guarantees being asked nor given. Any CAMS member engaging in such practice and it would seem that many are, largely it seems through ignorance of the new excise requirements and more so the retailer involved, is exposed to the real risk of prosecution. The writer can confirm that, at two regional airports contacted, staff selling fuel had little idea of the recently-introduced changes.

Whilst the above is a question of civil regulation, and CAMS could not be held responsible for the actions of its members or any other outside body, CAMS nevertheless has some moral responsibility.

If CAMS had continued to allow AVGAS to be used by our members in events sanctioned by CAMS, it could be seen as maintaining a climate of demand for the product, in which context, at some time, one of our members would inevitably be prosecuted. That would then reflect on our sport, providing "fuel" for a small but vocal minority who would see motor sport relegated to the pages of history.

This then leads on to the third, and primarily important, reason why CAMS has chosen to phase out the use of high lead fuels, and that is the image of motor sport. We are heading into a new millennium and, while much hype is being generated by this event, it is also the beginning of a period of incredible change for our society. This was brought home to the writer at the "Transport, Beyond Oil" conference recently attended.

Conventional oil supplies will begin to decline early in the new century, placing renewed focus on the use of fuel in our society. Similarly, environmental concerns will increasingly be brought before a population whose awareness of such issues is already rising. As such, CAMS as motor sport managers, needs to ensure that our sport does not become the focus of an increasing nervous population, or the politicians who govern it. CAMS needs to stay ahead of public opinion, rather than follow it, and justifiably point to its record of achievements rather than try to patch up its perceived failings.

Rightly or wrongly, the effects of lead in petrol is an issue with the general public. The use of leaded fuels in motor vehicles was banned in the United States in 1977, and Australia in 1986. There are now few countries where leaded fuels are available, and the Federal government is now looking at bringing forward the total phasing out of leaded fuel to 2005. CAMS will, out of practical reality, need to work within the guidelines set out for us by our governments, and the population they represent. Talk of "high lead" in an era of "no lead" will immediately and needlessly marginalise our sport, against a great many other sports whose use, directly or consequentially, of fuel is far greater than our own.

Environmentally, we will need to keep all this in mind in many ways over the next few years, as we travel into the rocky regions of the new millennium. Noise, fuel economy and pollution will all become issues thrust at CAMS in the early years of the next decade. Catalytic converters are

already looming on the horizon from the FIA, and are already a reality in a lot of European motor sport, along with a total ban on all leaded fuels. These latter issues have some serious technical problems associated with them, and politically, CAMS will find it easier to delay them by taking the early stand on the phase out of AVGAS, which creates fewer technical problems.

Who will be affected? V8 SUPERCARS, Super Tourers and GT Production vehicles already run on unleaded fuels as part of their Technical Regulations, as do the new "saloon cars". Groups N and A rally cars must comply with the FIA prescriptions. Our premier classes are therefore not affected. CAMS also acknowledges that "genuine" Historic vehicles with a Certificate of Description should also be exempt, as the alterations required to make them run on the lower octane fuels would not be permitted, in general as it would be against their "as raced" description. Groups N and S are effectively contemporary cars built to a hybrid set of "older" regulations, and could be modified to cope with the lower octane fuels as they have no "original specifications" with which to comply.

All other vehicles and classes may be affected in some way. For many vehicles, this will simply involve a reduction in compression ratio through the use of revised pistons or cylinder heads. Provided that "super" is used, no valve train modifications (inserts etc) should be needed. A carburetted engine could run to around 9.6-9.8 compression, whilst the more accurately controlled EFI engines could stand 10:1, as do the V8 Supercar engines. Turbocharged engines are at once more sensitive to any drop in octane ratings, and at the same time somewhat easier to adapt as their effective compression ratio is governed by boost. A reduction in effective ratios can be achieved by a reduction in boost pressure, together with a degree of retuning. These of course are generalisations but, by giving a two-year lead time, CAMS has allowed time for engine redevelopment. The bottom line will be a small loss of performance, but this will apply to all vehicles so the relevant competition will not suffer overall.

It is realised by the Board and administration of CAMS that this decision may not find immediate favour with our members, and it was not taken lightly. However, as the governing body of motor sport, it is our responsibility to take the hard decisions to ensure the long-term viability of our sport.

~ Peter Lawrence, Manager Technical Services, CAMS

QUEENSLAND STATE COUNCIL NEWS

Meeting dated 20th May (Excerpts of minutes)

- 2610 Ref.ScAP99.041 Sunroofs in Competing Vehicles.
Resolved that the contents of ScAP99.041 be forwarded to the National Technical Office for clarification and taking into account the comments published (pertaining to sunroofs) in the NSW Scrutiny Panel Minutes of the 01/03/99.

- 2612 Ref.ScAP99.043 Helmets
Resolved that QuMan communicates with the NSW State Manager in regards to identifying the age of helmets.
- 2614 Ref.ScAP99.045 CAMS Manual of Motorsport
Resolved that the contents of ScAP99.045 be forwarded to the National Office.

SCRUTINEERING ADVISORY PANEL

Meeting dated 4th May (Excerpts of minutes)

- 99.041 Re: NSW Scrutiny Panel Minutes, 01/03/99 – Sunroofs in any competing vehicle.
Panel suggests that where these items are factory fitted that providing the unit is closed according to manufacturers specifications, then the vehicle should be allowed to compete in any speed events.
- 99.043 Re: VIC Scrutiny Panel Minutes, 20/04/99 – Helmets.
Panel suggests that Helmets serviceability should be upto the Chief Scrutineers assessment based on condition, internal and external. Panel disagrees with NSW sate Managers advice that 10 year old helmets are not eligible. Panel seeks advice of NSW Manager as to how to positively identify the age of a helmet.
- 99.045 CAMS Manual.
Panel suggests that all active S1 and S2 Scrutineers should be supplied each year with an FOC CAMS Manual.
- 99.046 Numbers on Cars.
Panel expressed concern that competing cars are being allowed to have numbers that differ from the CAMS Manual specifications. Panel requests National Office issue a directive covering all categories and that this be included in the next CAMS Report.
- 99.052 Fire Extinguishers – Schedule H – 6 – 17.
It has been bought to the Panels attention that currently fire extinguishers are not being sold with inspection tags, and therefore it is necessary to have an additional inspection carried out on a new fire extinguisher. Panel seeks National Office advice if it can appoint suitable accredited persons from its own ranks to carry out testing and tagging.

AIDE MEMOIRE

QUEENSLAND STEWARDS EXECTUTIVE

Meeting dated 23rd Feb (Excerpts of minutes)

- 99.019 Ref. SE98.070 – Issue of Supplementary Regulations.
Supplementary Regulations to be issued three weeks prior to an event.

AIDE MEMOIRE

QUEENSLAND STEWARDS EXECTUTIVE

Meeting dated 13th Apr (Excerpts of minutes)

- 99.033 Ref. SE99.018 – Stewards Training
The 'Train The Trainer' form of course will be conducted by the Queensland Co-ordinator, Paul Overell, on 21 April. After completion of this course persons will be accredited as official CAMS Course Trainers and implementation of the B3 Stewards Training Course can be undertaken.
- 99.034 Ref. 99.019 – Issue of Supplementary Regulations.
Issue of Supplementary Regulations in accordance with State Council resolution, ie. Three weeks before an event. Panel members to discuss with other Stewards to confirm if this is taking place.
- 99.043 Panel noted that the handwriting of some Stewards was so poor that the report was virtually impossible to read.

MEMORANDUM

TO: All State Offices **File No.: A 13/7**

FROM: Peter Lawrence **Doc No.:**
Manager - Technical Services **990525-04**

DATE: 26 May 1999

SUBJECT: Shell Avgas

Dear State Office Staff,
Please circulate the following widely to your Clubs.

I am in receipt of a letter from the Shell Company of Australia Ltd. indicating that Shell 100/100LL (Avgas) is not to be sold for Non Aviation uses. This applies to all distributors, dealers and airport agents across Australia. Shell have taken this step to avoid the possibility that Avgas may be being sold without the appropriate Federal Stamp Duty and State Fuel Taxes being added. The Federal Excise Duty for aviation purposes is 2.71 cents per litre, but for non-aviation use it is 37.35 cpl. The sale of such fuel without the appropriate excise payments would render Shell liable to prosecution.

However, Shell market a fuel known as Racing Fuel 100U, which is available in 20 litre and 200 litre drums. Shell RF 100U is identical in every aspect to performance to Avgas 100LL, save that it is packaged for non aviation use and hence all the appropriate duties are included in the price.

Shell RF 100U is available from all Shell Distributors, and many retail Shell outlets as well. It can be ordered from any Shell retailer. It may also be available as a bulk delivery for commercial customers, such as Race Tracks.

Shell RF 100U is accepted by CAMS as a commercially available fuel and may be used wherever CAMS regulations permit Avgas.

For the good of our sport and those involved, do not ask Shell agents at airports to sell you Avgas. They are putting their own businesses at risk to do so, both from

their dealings with Shell and from federal customs regulations.

Caution: Shell also market a product known as Racing Fuel A. Do not use Racing Fuel A. This is commercial grade Methanol, and is not suitable for use in conventional petrol engines. The use of Methanol in an engine not designed for this fuel may seriously damage the engine. CAMS restricts the use of Methanol to certain 5th Category historic vehicles. It is not a defined Commercially Available Fuel.

For more information, visit the Shell Aviation web site at:
www.Shell-Aviation.com.au or on call Shell on 1800 813 198

Peter Lawrence, Manager, Technical Services

BOXHEADS REALLY LONG RALLYSPRINT 19/6/99

Firstly, Sam and I would like to congratulate Aaron, Ben and Boxa for preparing an excellent ralliesprint track. It's a credit to you and all your helpers. It had everything, tight corners, very tight corners, tight straights, tight creeks, tight mine shafts and all in all basically "TIGHT!" as a few of us found out there were rills of dirt about ½ metre high on each side of the road.

After a small briefing and a look at the track so we would safely cross the creeks, the ralliesprint was under way. Stage one, everything went well, Sam done well, car went well and I was pretty happy with everything until after the finish !?! I saw the flying finish signs and just held it flat. Big trouble, road went sharp left and we're still doing 100. After running up the rill of dirt and breaking a tierod I thought our rally was over. But no, thanks to Kerry Lark taking the tierod and welding it up like a bought one, we could keep going. I owe you a beer Kerry. Another stupid stupid thing I did was bet Boxa a carton that I wouldn't break the car. D'OH! Lost it on the first section, we ended up fastest on 5.43, Gary with 5.50 and Speedy with 5.53.

Stage two and thanks to Boxa and Gary Hewson, we were allowed to run stage two later on cause Boxa had changed it from A to A to A to B timing. Thanks Boxa, I owe you another carton. We ran it while everyone was having a burger (thanks to Kate and Angie for cooking, burgers were great) and it helped Boxa's decision to put the night sections out at 4 minute intervals as the dust wouldn't move. Gary Meehan was fastest with 3.12 with Speedy driving equally speedy with 3.16.

Stage 3 & 4 were run in reverse direction to 1 & 2. In Stage 3 Ron White was sitting on a spectator corner, would have got some great photos. Coming into the end of control, I thought the timing boards were caution boards and kept going until I saw Goof running for cover and Sam yelling out to stop. That's what happens when you haven't rallied for 10 years, you go brain dead. Ian Oges had a great run and recorded fastest with 5.51 with us having a second slower and Speedy with a 5.55. Thanks for the barley sugars Angie!?! Stage 4 was driven brilliantly by Shane Shatchwell in a 1200 Ute recorded the fastest with 3.13 and Gary had second 3.19 and we had third fastest with 3.20.

Wheelspin

Stage 5 & 6 were the two night sections run in the same direction as 3 & 4 and I was starting to wish I had Colin Ugarte's car number as dust was going to be a bit of a worry. Boxa sent Aaron out to zero the track, and if you are going out with Aaron to zero, you must hang on cause Aaron does not stop for anyone, not even if you fall out "apparently". Colin Ugarte drove well to record a 6.15, Speedy a second slower with third on 6.15. Stage 6 is a stage I think Tracie wants to forget, as she found one of those rills of dirt. I couldn't believe what Ken keeps in that rally car eg winch, shovel. I don't even carry a shovel

in my farm Ute. Col again drove well with 3.23 and Ian Oges and Gary Meehan (stuck in 4th) tie second with 3.25. I'd like to thank NQ Autosport Centre and Dannar Amusements for sponsoring and everyone that helped run the event, control officials, stewards, cooks and Ken Long for adding scores without a computer. It's great to be back rallying especially with good friends and company (except Goof)?

Yours in Motorsport
Doug McCubben

FOR SALE

Mags for sale – all to suit Datsun, Mitsubishi and Toyota

4 – 13 x 6.5 Hustlers \$150.00

4 – 13 x 6 Raiders plus motorkhana tyres \$150.00

4 – 13 x 5 1/2

4 – 14 x 8 Supra with as new 225/65 Brigstones \$500.00

4 – 14 x 6 Hot Wires \$150.00

4 – 13 x 8 Magnums + 2 tyres \$250.00

4 – 13 x 6 Cheviot same as 200B SX + motorkhana tyres \$150.00

1 x Bluebird 5 speed (noisy bearings) \$100.00

1 x Bluebird 5 speed – loose main shaft nut \$100.00

1 x Stanza SSS 5 speed \$100.00

1 x 2lt Escort twin Weber manifold (side draft) New \$180.00

Phone Boxhead 4774 6900



THE ASSEMBLY PROFESSIONALS

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DIAMONTINA RALLYSPRINT 19 June 99

No	Driver	Navigator	Car	Class	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Total	Place	+2000	-2000	-1600	Class5
13	Doug McCubben	Sam Nicolosi	Stanza	+2000	05.43	03.20	05.52	03.20	06.15	03.27	27.57	1	1			
3	Gary Meehan	Jeff Thomasen	180B SSS	-2000	05.50	03.12	06.05	03.19	06.20	03.25	28.11	2		1		
4	Shane Ogilvie	Malcolm Dee	323 Familia	+2000 4WD	05.53	03.16	05.55	03.23	06.12	03.33	28.12	3	2			
1	Colin Ugarte	Kerry Lark	Supra	+2000	06.05	03.24	05.59	03.22	06.11	03.23	28.24	4	3			
11	Ian Ogilvie	Colin Ugarte	Supra	+2000	06.00	03.20	05.51	03.33	06.29	03.25	28.38	5	4			
16	Shane Shatchwell	Clint Kelly	1200 Ute	-1600	06.06	03.29	06.01	03.13	06.32	03.40	29.01	6			1	
18	Graham Struber	Ray Wilson	Scorpion	+2000	06.00	03.25	05.59	03.22	06.40	03.37	29.03	7	5			
15	Mick Harding	Ben Lunt	Stanza	-2000	06.03	03.27	06.10	03.23	06.33	03.45	29.21	8		2		
17	Geoff Plozza		Subaru	Class5-1600	06.17	03.26	05.58	03.29	06.42	03.38	29.30	9				1
14	Jeff Thomasen	Gary Meehan	180B SSS	-2000	06.23	03.23	06.17	03.38	06.44	03.41	30.06	10		3		
19	Graeme Telford	Kate Brehaut	Escort	-2000	07.18	04.04	06.12	03.27	06.32	03.40	31.13	11		4		
10	Robyn White	Ken Long	Escort	-1600	06.38	04.33	06.37	03.45	07.24	04.18	33.15	12			2	
5	Rob Wilkins	Craig Hawkins	L200 Ute	+2000	05.50	03.34	06.02	07.41	06.57	03.50	33.54	13	6			
2	Sean Hampson	Peter Jones	Escort	-2000	06.08	06.16	07.12	06.20	06.34	03.43	36.13	14		5		
7	Lindsay Stone	Shannon Croft	RX2	+2000	06.10	03.35	14.04	03.51	06.29	03.30	37.39	15	7			
9	Tracie Donovan	Ken Donovan	Escort	+2000	06.25	03.43	06.22	03.25	06.50	13.31	40.16	16	8			
8	Kirk Jensen	Kylie Eastlake	Bluebird	+2000	05.59	03.26	06.34	dnf	dns	dnf	dnf		9			
12	Peter Jones	Sean Hampson	Escort	-2000	DNF	DNF	10.43	10.50	09.12	04.11	DNF			6		

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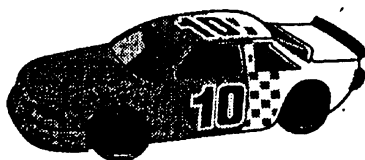
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CLUB CALENDAR

11 th JULY	Khanacross	Nannas	TBA
15 th JULY	Meeting	South Townsville Football Club*	
25 th JULY	Combined Motorsport Swap Meet	Reid Park	Gary Hewson 0409 415 655 (m)
NB: 7th and 8th AUGUST (new date)	QRC3	Cardwell	Steve Cruttenden (07) 4725 2047 (h)
14 th /15 th AUGUST	Autocross	Crystal Creek	TBA
18 th AUGUST	Meeting	South Townsville Football Club*	
21 st /22 nd AUGUST	Autospectacular	Tvl Showgrounds	Kate Brehaut (07) 4773 3053 (h)
11 th /12 th SEPTEMBER	Rallysprint	Charters Towers	Colin Ugarte

* Club Meetings are held third Thursday night (7.00 pm) of every month at the South Townsville Football Club corner of Bell St and Morey St. All welcome and why not bring along a friend or sponsor.

Confirmation; The QRC round 3 has been rescheduled to the 7th & 8th August, and the venue for accommodation and presentations will be the Mecure Inn.
For more information contact Steve Cruttenden (Critto) Ph: (07) 4779 0200 (w) (07) 4725 2047 (h)

On the 25th JULY there will be a Combined Motorsport Swap Meet to be held at Reid Park next to the Civic Theatre. This will be a good opportunity to promote our club and also your sponsors. We're looking for about four cars to put on display as well as a static display. Set up time is 7.00am Sunday. For more information contact Gary Hewson on 0409 415 655 (m)

The Club Grounds (Nannas) can be found by travelling from Townsville to Woodstock and then turning south towards Giru, follow the road (approx 6 Km) until you get to the turn off at Majors Creek Road. Follow that road past the school and keep left at the Y junction and a further 200 meters and your there.
For more information contact Grant Ross (Boxhead) at NQ Autosport on 4774 6900.

NEW MEMBERS/OFFICIALS

The Twin Cities Autosports Club Inc. is looking for competitive members and Control Officials for the NQ Forest Rally which is a round of the Queensland Rally Championship (QRC). The NQ Forest Rally is the only event of it's type held outside of Brisbane/South East Queensland area and for the fourth year running and with competitive numbers growing, the Twin Cities Autosports Club is trying to make it bigger and better each year.

New members who haven't been to a rally or been involved in the official capacity have no need to be concerned as a training night will be run to bring everyone up to speed, this will be done at a club rally prior to the QRC.

TWIN CITIES AUTOSPORTS CLUB Inc.

MEMBERSHIP APPLICATION FORM

PRESIDENT:	Steve Cruttenden	Ph; (07) 4779 0200 (W)	(07) 4725 2047 (H)
VICE PRESIDENT:	Greg Van Dinter	Ph; (07) 4775 2344 (W)	0418 782827
SECRETARY:	Lindsay Stone	Ph; (07) 4727 6440 (W)	(07) 4774 5530 (H)
TREASURER:	Ken Long	Ph; 0418 180 329 (W)	(07) 4773 7404 (H)

I, the undersigned hereby apply to become a member of the above mentioned association. In the event of my admission as a member, I agree to be bound by the rules of the association for the time being in force.

Name:
 Address:
 Telephone: () (Work) () (Home)
 Occupation: Make of competitive car:
 Any qualifications held (eg. First Aid etc):

Signature of applicant: Date / /1999

I, the undersigned, a member of the association, nominate the applicant, who is personally known to me for membership of the association.

Name: Signature of Nominator: Date / /1999

I, the undersigned, a member of the association, second the nomination of the applicant, who is personally known to me for membership of the association.

Name: Signature of Secunder: Date / /1999

FEES (1999):-

Social membership	\$10.00 / single
	\$20.00 / family

Competitive	\$30.00 / single
	\$35.00 / family
plus CAMS fees applicable	\$10.00 CAMS membership, + \$34 (Level 2 Licence)

NB: 'CAMS Manual of Motorsport' available from CAMS for \$35 + \$5 postage

CAMS	Ph; (07) 3368 2911
PO Box 1859	Fax; (07) 3368 2378
Milton BC QLD 4064	