

Presidente

Tristan Roberts
E: bogkinnie@hotmail.com

Segretario

David Button
E: david_button@hotmail.com

Tesoriere

Allan Van Dullemen
E: avandull@hotmail.com

Club Capitano

Position vacant; a consortium of members is dividing the tasks between them.

Direttore/Editore

Philip Blake
Ph: 62652598
Mob: 0409803316
E: pblake@ozemail.com.au

Membership

Robert Madigan
Ph: 0402 628 652
E: robert.m.madigan@gmail.com

Commissione Membri

Graham Mitchell
Peter Lowe
Rob Madigan
Gary Lucas

Enquiries

For information on the club and general enquiries call any of the above members, or visit our Web Site: www.cmitas.org

Address general correspondence and enquiries to:
The Segretario
Club Motori Italia Inc
PO Box 514
North Hobart 7002
or email
clubmotoriitalia@gmail.com

Advertising rates

1/4 page \$7.50 per issue
1/3 page \$10.00 per issue
1/2 page \$15.00 per issue
Full page \$25.00 per issue

Full yearly Membership fees:

1 July 2017 to 30 June 2018
Social \$45
Motorsport/Competition \$65
Family \$90
(2 adults + kids under 18 - Family rate allows up to two competition members.)
Note: Applicants who wish to join part-way through the year will be charged a pro-rata membership fee based on the number of months left in the membership year. See the application form for details.

Meetings

Southern members meet on the final Tuesday of each month, January through to November, at the Civic Club, 134 Davey Street, Hobart.
The committee meeting is held between 6.30-8.00 pm. Drop in any night.

CMI's AGM is held at 6.30 pm on the last Tuesday of September at the Civic Club, Hobart.

All contributions to Veloce Nota are welcome and when published earn points towards the Clubman of the Year Award.

Please send all letters and contributions to The Editor: cmi.editorial@gmail.com

Disclaimer

While every effort is made to ensure the accuracy of the information, advice and responses in this newsletter, neither Club Motori Italia Inc nor its officers or members accept liability for any loss or damage arising.

CMI Life members:

Norman Henry
Graham Mitchell
David Mitchell
Steve Caplice
Rob Madigan
Tristan Roberts
Dave Button



THE BIG AND THE SMALL OF FIAT



The Fiat Professional range has the van you need to get the job done.

Whether it be the powerful and hard working Fiat Ducato or the dependable and nimble Doblo, Fiat Commercial vehicles make an impression



GET THE ITALIAN WEIGHT LIFTING TEAM ON YOUR SIDE

VINAKA ALFA FIAT



Sales Service and Spare Parts

Your Tasmanian Authorised Dealer for All of your Alfa Romeo, Fiat and Fiat commercial Vehicle needs

Vinaka Alfa Fiat

1 Amy Street Moonah 7009

Ph: 03 6273 0628 Email: vinaka@netspace.net.au



‘What was I supposed to do?’



That’s what Sebastian Vettel said when he learned of his 5-second penalty for an unsafe return to the track at the Canadian Grand Prix, and it’s a fair question.

Under pressure from Hamilton, Vettel had an oversteer moment into the right-hander of the turn 3-4 esses, and gathered it up, running off the track and back on again. He didn’t gain a position; he nearly lost one; and Hamilton was closer after the incident than before.

Hamilton was immediately on the radio asking if it was an unsafe return, and was assured by Mercedes that ‘We’re on it.’

On what?

An ‘unsafe return’ implies that the driver has a choice, and has chosen the less safe alternative; Vettel was going slightly sideways across the grass at high speed while leading a Grand Prix, and I don’t know what alternatives he had to choose from. If he did do the wrong thing, what was the right thing? Not have a moment? Not race? Check his mirrors while still struggling to stay alive and not hit the wall? Give me a break.

I’ve heard it suggested that he should then have let Hamilton past. I don’t think so. He hadn’t gained a position, so there was no redressing to do.

Hamilton of course had gone for the gap, and had to get out of it when the gap suddenly closed. It’s called racing. Vettel didn’t seem to have a lot of choice in closing the door on him.

These guys have nine world titles between them – which I think is nine more than the stewards that day—so I think they know what they’re doing.

The problem is that the stewards’ hands were tied by the wording of the rules. I wonder how they would have dealt with the amazing Villeneuve/Arnoux duel at Dijon in 1979. Now that was racing.

(Compare some Austrian GP dialogue:

Verstappen: *He turned in on me!*

Horner: *There was nothing wrong with that, mate.)*



Buongiorno

27 June marked the end of an era, with CMI Segretario & Life Member David Button retiring from JAWS Architects after more than 30 years. Congratulations David, here's to a rich time of cycling, camping, travel and motorsport!

Sunday 7 July is drawing ever closer, and will see the Baskerville Hillclimb, Round 3 of the Tasmanian Hillclimb Cup, take place. This year we'll use the 'long course', which starts at the regular start/finish line and finishes at the end of the main straight. This has been successfully used in some recent events

and may improve access to the pit area through the day.

Another event that's fast approaching is the Lufra Regularity Hillclimb at Eaglehawk Neck, scheduled for Saturday 17 August. It has what every hillclimb needs – a hotel at the start, a challenging climb, a magnificent backdrop, and a coffee van at the finish!

Some way off is the Domain, but we'll have all the approvals and permits completed in the next few weeks, following the successful campaign to

guarantee the event's future. Remember to make sure you block out Sunday 20 October in your diary right now, whether you intend to compete, help or simply cheer us on at the 17th CMI Domain Hillclimb.

If you're thinking of competing, or if you can help us run an event in any capacity, please head to our website or Facebook for further information.

Ciao
Tristan

Presidential Patter

Coming events

Baskerville Hillclimb 7 July
Baskerville 1000 13-14 July

CAMS Club Challenge

Once again CMI competed in the CAMS Club Challenge, with not one, not two but THREE teams:

CMI Italian

Pat Alessandrini—Fiat X19
Geoff Storr—Alfetta GTV
Philip Blake—Fiat-Abarth
Kim Morgan—Maserati Coupe

CMI non Italian

Nick Fabrizio—Honda S2000
Scott Wyman—Honda Integra
Jason Winter—Datsun 260Z
Luke Alessandrini—Celica
Rhys Filbee—BMW i3 electric

CMI

Omar Hasan—VW Golf R
Rob Van Der Niet—Evo
Liam Hooper—Subaru WRX
Allan Van Dullemen—Starion

So we had the numbers. But did we have the performance? The results are worked out on each competitor's performance as a percentage of the hill record for his or her class. CMI Italian came 6th (and last), CMI non-Italian came 5th, and CMI came second, winning \$1000 for the club.

Third and first respectively were the Northwest Car Club and the Porsche Club Dream Team (who averaged under the hill record for their classes!). The Porsche performance was despite one of them spinning off on a run—without damage—and the same car having to be push started every time.





Tassie/CMI presence: George Taylor's Austin 7, John Caire's Ausford, John's Coopen, a Victorian Austin 7, the Gypsy Special owned by Ian Wilcox and driven by Graeme Soden, John Bowe's Martini and Graham Sharley's Lycoming Special

There is a tradition of various Tasmanians taking a house in Benalla for the Winton Historics, and this year John King and I joined John Caire, Dave Dungey, Graeme Soden and George Taylor on the pilgrimage.

There was a very full program and an enormous entry of cars and bikes, with races and regularity events all weekend long. The spectator carpark was almost as interesting as the race paddock—but not quite.

I had a wander through the pits and found a few Italian cars among all the other exotica.



Now for something technical

When my son Paul and I built our motorkhana special, a minimalist motorsport vehicle based mainly on Fiat 127 components, weight and volumes were important considerations. As all motorkhana tests are over in less than 60 seconds (of extreme concentration), there is not much point in carrying more than enough fuel for several tests, for up to three drivers. Therefore, the vehicle was built with a turbocharged engine and a four-litre fuel tank, enough to do six or eight tests before needing to refuel it, with care.

Most events we do start around mid-morning, when the air is usually cool. Not wishing to use up lots of the four litres of 98ULP to get the engine warmed up, we (read Paul) developed a rapid warm-up technique. The engine in this special has always been run with an electric water pump, but initially it was without a controller. On warm-up, we just disconnected the pump, so the water in the engine would not be circulating. Then we would reconnect the pump briefly, just to push some water around with the thermostat shut. This was very labour-intensive, when we are also very busy preparing the car(s) for action. When the water temperature was sufficiently above ambient it could be driven to scrutineering and the day could begin. Unless it was a warm to hot day, we would have to tape the radiator, up to three quarters covered, because the water pump was pumping water too fast around the system totally uncontrolled.

Eventually a controller was in-

stalled and it has been a vast improvement for our warm-up technique, as well as during competition. Paul has programmed the controller to cycle the pump on for 10 seconds, off for about 30 seconds, until 60 deg C is reached, at the water outlet on the head. There isn't any need for a thermostat, the controller maintaining our running temperature of 80 deg C, whether at idle or on full boost. The controller has a digital display, showing the temperature at wherever you are measuring it on the engine water circuit. Now we no longer need to tape up the radiator to control the water temperature and photos of the car in action look far better without a taped-up radiator. The controller will control the temperature to whatever it is set to and the fan on the radiator rarely runs, except for briefly when the car is stationary in the finish garage, at the completion of a test.

To assist the rapid engine warm-up our 127 engine has a Subaru water/oil heat exchanger and Subaru oil filter installed. The block has the same thread pitch and diameter as the Subaru engines use, so easily replaces the normal 127 filter and mounts in the standard location. The (normally for car heating) water circulates from the 127 cylinder head, through the Subaru heat exchanger and then on to pass through the water-cooled (Charade) turbocharger before eventually reaching the radiator top tank. Meanwhile the (fast) idling cold engine oil is being heated by the water during the warm-up process, then later can be cooled back to the water temperature during the demands of competition. We don't measure oil temperature in the sump, as the engine is only under stress during the tests, with plenty of off time between the tests to cool off. All the water flows from the bottom of the



radiator, through the electric water pump and into the engine in the normal location. The majority of the water exits the rear of the cylinder head from the usual location and back to the top tank of the radiator, passing the temperature sensor for the controller to read. The bypass circuit that would normally be plumbed to the heater is connected to the water/ oil heat exchanger and then the turbo on the way to the radiator; this smaller coolant circuit temperature is unmeasured.

So what are the advantages of using a controller and electric water pump? Eliminating the belt driven water pump has improved the wraparound of the belt on the alternator pulley from about 100 degrees to almost 180 degrees which must reduce belt slip and reduce the possibility of throwing the belt. We have also eliminated the thermostat, so no chance of having one jam shut or stick open. We have a controlled warm-up which is adjustable to our needs. We circulate the water through the engine and radiator to cool it without the engine running after a fast run, reducing the possibility of overheating.

This feature of circulating water with the engine off has been very sensibly exploited by the ProDrive prepared Ferraris at Le Mans during the annual 24-hour race in recent years. The rules insist that the engine is off during refueling, a happening that is required for them about 20 times in the 24 hours. The ProDrive-prepared Ferraris used the Australian made Davies Craig

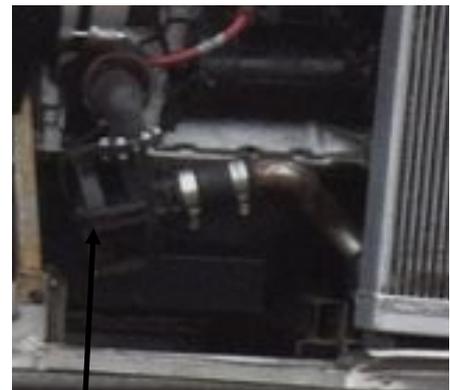
pumps and controllers to keep the water circulating through the engine during the race and whenever the cars were stationary in pit lane. It's hard to comprehend the level of heat soak in the engine bay when stationary in pit lane, after exceeding 250kph on the Mulsanne Straight. From massive air flow to nil air flow through the radiator(s), how quickly can the engine be cooled if the water isn't circulating? Just the radiant heat from the exhaust manifolds would be enough to boil the water in the heads, unless the water was being circulated by an electric pump. ProDrive would have the opportunity to use any brand of electric water pump, as reliability would far outweigh cost. ProDrive chose Davies Craig and were rewarded with class wins at Le Mans.

Our motorkhana special also uses a Davies Craig water pump and controller. For us reliability and cost are about equal billing; both are important considerations at our

level of (very limited) funding. As with many other aspects of our special, Phil Buggee at BOI Performance has been of tremendous assistance with development, sourcing of components and advice for all of our competition Fiats.

Below: the 127 special in action. Look closely at black space next to radiator for water pump.

Controller is under the cover on the side, next to our right knee, so can be seen when leaning forward in the seat or outside from the left-hand side.



Disasters do happen!

From time to time I am confronted with engine bits that were purchased off the internet and asked for my opinion on their suitability for building into a performance engine. Firstly, I admit that I am honoured to have my opinion sought. Secondly, I hate seeing people spending their 'hard earned' on junk, or parts that are just barely better than standard parts. The internet can certainly provide bargains and it can also just as easily deplete our built-up funds. I also get to see parts from the engine failures, again for my opinion on 'How did this happen?' Often the reason for the failure is not obvious, hence the searching out of causes and possible prevention of future disasters. Sometimes there have already been several engine failures before help is sought from further afield, from people like me. Also sometimes they are expecting my confirmation that they have made a good purchase, not expecting that they have bought junk. Then I find I need to be very diplomatic with my advice.

Forged pistons are stronger than any cast pistons, because of the excellent grain flow of the aluminium and generous internal radius' when it is forged. Most cast pistons are considered a bit brittle and will not bend very far before breaking. Casting strength can be improved by increasing the content of Silicon and other elements, as well as very careful control of the heat treatment. Forged pistons will bend a very long way and suffer much more abuse before failure. However, if you are killing quality cast pistons with detonation, then forged ones will only last a little

bit longer.

The only answer to solve this situation is to find a cure for the detonation; you must prevent it from happening.

That may require a reduction of compression ratio and removing all sharp corners and edges on the piston crown and the combustion chamber, changing to a cooler heat range spark plug and/or using a higher octane fuel or fuel additives and also changing the advance curve of the ignition system. Also, consider installing a larger oil cooler to pull more heat out of the oil and using 'Water Wetter' from Redline to improve the transfer of heat from the cylinders and head into the cooling system. When there are one or more related issues as described above, failure of the pistons or head gasket is the result. Higher strength pistons will delay the failure, but not solve the reliability problems and at considerable ongoing costs to someone who is paying the bills.

Just as discussed above, aftermarket 'Performance Connecting Rods' are often purchased to improve the reliability of an engine for racing. Compared to the original rods, they are machined all over and are usually a bit lighter, supplied with special bolts and usually bushed for a floating piston pin.



Regretfully, they are often machined with minimal radius tooling at the root of the shank recesses, regardless of the shank construction of either 'H' or 'I' profile. Often all the external edges have bare minimal break edge chamfers, instead relying on shot blasting to toughen the skin (and disguise any mismatched machining marks). Compared to the original rods, often they are not all that much stronger, just lighter, and they look good. When using longer rods or a stroked crank, or both, the rod may be able to strike the bottom of the bore unless the bore is notched or the rod is machined to clear the bore.

Unless a rod bolt breaks or comes loose, both with disaster happening fairly instantly, usually a broken rod will occur on the shank just below the pin boss. Excessive revs beyond what is realistic for that style of engine will cause this grief, but the problem is at the other end of the rod, the big end. Very high revs, especially with very little gas loading on a closed throttle, will allow the piston and rod weight to pull against the cap half of the rod. This can allow the big end to go out of round, narrowing at the parting faces and despite the bearing shells

having a relief machined at their parting faces, they will start to grab the crank journal. With the rotation of the crank continuing, the rod is restrained in the piston, in the bore; however, the loading at the big end is continually reversing, backwards and forwards because of journal rotation. Just as with a nail in a vice, being bent back and forth, eventually the nail will break off.

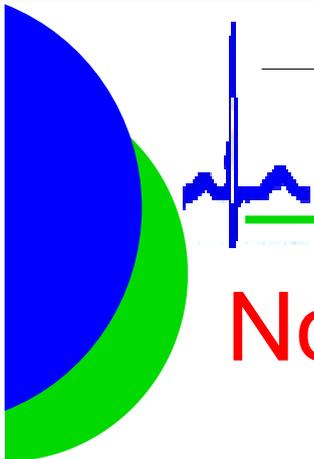
Similarly, this is what happens to cause the con-rod to fail, usually just below the little end. With small bearing clearances in modern engines, one solution is to increase the relief on the bearing shells, just at the parting faces, very carefully. Also, it may be possible to have a good machine shop install larger ARP diameter bolts, so the big-end bolt tension can be increased, to slow down the ovality at extreme revs, but that's a 'suck

it and see' solution, usually in desperation. Unfortunately, bigger bolts will reduce the area at the parting faces and these clamping forces must be able to keep the big end round, at huge revs. Regretfully, when a big-end bearing is squeezed out of round, the oil film we rely on will also diminish until it is excluded at the tight places and we then have metal on metal seizures. Inspection of the bearing shells surface, especially near the parting faces, is absolutely necessary when dismantled.

As mentioned earlier, forged pistons are stronger than cast pistons. For many years Mahle forged pistons have been installed in race minis, for racing. However, (in my opinion) they really were only a high performance street piston, regretfully with insufficient

land clearance and a small cam profile on the skirt, for quiet running. In a race engine they can tend to seize at the pin axis, first, on the lands and skirt in line with the pin because the heat generated during racing eliminates the minimal clearances. If caught before too much damage has happened, the pistons can be recovered by being machined to a smaller oversize; however anywhere that has scuffed will usually have annealed (softened). I frequently downsized +40" pistons (1310cc) to +20" with deepened grooves, more land clearance and an increase in cam. Reducing them back to +20" brings the engine back to a legal 1293cc, for any under 1300cc competition class.

(To be continued)



Ambulance Private

Non-Urgent Ambulance

Bookings: 1300 363

Ambulance Private Pty

“NO ONE KNOWS YOUR
PASSION LIKE SHANNONS.”



The passion, the pride of ownership, the sheer emotional attachment – no one understands it better than Shannons. So when it comes to insurance for your special car, daily drive, bike or even your home, there's only one person you should talk to – a fellow enthusiast at Shannons. And remember, you can pay your premium by the month at no extra cost.

So call Shannons for a    quote on **13 46 46**.

SHARE THE PASSION

INSURANCE FOR MOTORING ENTHUSIASTS | CALL 13 46 46 FOR A QUOTE | SHANNONS.COM.AU

Shannons Pty Limited ABN 91 099 692 636 is an authorised representative of AAI Limited ABN 48 005 297 807, the product issuer. Read the Product Disclosure Statement before buying this insurance. Contact us for a copy.

The sort of rig you would expect at Winton: Armstron Siddeley towing a racing mini



FOGARTY AUTOMOTIVE SERVICES

General repairs on all Makes & Models

Specialists in Fiat, Lancia, BMW Alfa Romeo
including spare parts supply

Steve Caplice

0418 148 608

357A Argyle Street

North Hobart 7000 Ph: (03) 6234 8868

drive your motorsport further with **stuart benson**



I'm really
excited to offer you a
\$500 sponsorship
of your motorsport
activity for each and
every property listing
that you refer to me,
that results
in a sale.

stuart benson
PROPERTY CONSULTANT
0412 868 979
sbenson@petrusma.com.au

15 Shoreline Drive, Howrah 6247 7877

