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THE NEWSLETTER OF THE NZ FEDERATION OF MOTORING CLUBS

WHEEL TORQUE

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FOMC 14th Annual General Meeting

The NZ Federation of Motoring Club held its 14th Annual General Meeting on May 3, attended by over 30 delegates representing 23 car, motorcycle, military vehicle and vintage machinery clubs from throughout New Zealand. Hosted at the Taupo branch clubrooms of the Vintage Car Club, the AGM featured guest speakers in the morning, followed by the usual AGM elections in the afternoon, and reports from the executive committee.

Tony Johnson, CEO of the Volume Vehicle Technical Association, gave an overview of the work the LVVTA does to mediate between enthusiasts and regulators. It's objective is to enable enthusiasts to continue to modify or build vehicles in a safe way. The LVVTA has developed its own code for modified and constructed vehicles, which sets out the legal framework of their system including relevant standards.

There are over 60 LVV certifiers around the country who are appointed by the NZ Transport Agency, and the Association is funded by the certification plates it issues to all 'modified' cars, which include not only one-off builds but more straightforward conversions like campervans.

Tony also explained the scratch-built sub-categories the LVVTA has developed for vehicles that shouldn't have to comply with the full criteria of the scratch-built definition. They include: 'historic replica'; 'reproduction'; and 'unique'. A 'unique' scratch-built must comply with *all* the requirements. A 'reproduction' must comply with *most* requirements, while a 'historic replica' must have a VCC Identity Card and meet *specified* requirements.

Phil Horne, Vehicle Inspection NZ, touched on WoF and compliance issues for classic and enthusiast vehicles. VINZ is a smaller national WoF tester and compliance agent, formed in the 1990s by vehicle dealers.

Phil spoke about the compliance rules for various vehicle categories such as repaired vehicles, modified vehicles, lapsed registrations, and vehicles entering the fleet. He noted owners of new imports or vehicles registered after 1991 can apply for a 'trim exemption' to avoid invasive inspections including stripping the interior as part of the compliance process, e.g. campervans or vehicles with multiple airbags.

NZ Federation of FOMC Motoring Clubs Inc

AGM – election of officers

There has been a slight change to the committee line-up, with the retirement of the President Jack Hindess, Past President Malcolm Lumsden, and Ron Tuck. The AGM elected the following officer holders for the coming year:

President: Ross Hopkins
Vice-President: Jeff Tobin
Past President: Jack Hindess
Treasurer: Paul Billing
Secretary & Editor: Mark Stockdale
Committee: Roy Hughes, Tom Ireland, Ivan McCutcheon, Andrew McClintock, Terry Pidduck, Stan Richardson
Advisor: Norman Pointon

As a result of a remit proposed by the Auckland Mustang Owners Club, the AGM unanimously approved a change to the FOMC constitution to create an additional executive position of Submissions Secretary, which is currently undertaken by committee member Andrew McClintock. The change will come into effect at the next AGM.

- *A copy of the minutes of the 14th AGM has been included with this newsletter, and copies of all papers including accounts can be downloaded from www.fomc.org.nz*

Executive Committee report – 2 May 2009

A good portion of the last committee meeting was spent updating the committee on a series of meetings the FOMC had in March this year with the NZ Transport Agency to discuss our Vehicle Identity Card proposal, and re-registration issues.

Norman Pointon, who has been leading the development of the VIC for the FOMC, summarised the meeting he, the FOMC Secretary, and Rod Brayshaw from the Vintage Car Club held with Anne Logan and staff from the Driver & Vehicle Certification Unit, to whom we presented our final proposal. There were a number of outcomes from that meeting which were discussed in full at the May committee meeting, and the FOMC sub-committee has been asked to undertake further development work on the VIC.

The FOMC Secretary also took part in a joint meeting along with the VCC and Low Volume Vehicle Technical Association to discuss re-registration issues with the NZTA. The meeting concluded that some compliance agents may be interpreting the procedures too rigidly, although the Agency itself is able to exempt vehicles on a case-by-case basis. As a result of that meeting, the Secretary was able to report to the committee that the three organisations will be jointly working on draft proposals to exempt restored cars with insufficient ownership history from the relevant sections of the Transport Act and associated Vehicle Inspection Requirements Manual. This is expected to take several months, and the thinking at this stage is to focus on vehicles over 20 years of age.

- *copies of meeting minutes are published in the newsletter section of our website: www.fomc.org.nz*

President's Report

Following the recent AGM, I have been elected as President of the NZ Federation of Motoring Clubs (FOMC), so I thought it would be useful in this issue to introduce myself to Member clubs.

I've been involved with the FOMC since its inception in 1994, and was Vice-President for the last 3 years. I've always had a great interest in what is going on in NZ about the rules and regulations of the motor vehicle industry, and I'm also an A-grade motor engineer and have a Traction Engine drivers licence. Over the years I've rebuilt 30 plus heritage vehicles.

My vehicle interests include military and farm machinery, and I've been involved with the NZ Military Vehicle Collectors Club for the last 30 years, including holding the position of President and Area Rep. I am also a member of the Waikato Vintage Tractor and Machinery Club and have sat on their committee.

Like many enthusiasts, I'm grateful for the support of my very understanding wife, Leonie, and together we have two adult children, who with their own children are quietly following in my footsteps.

Ross with his 1993 military-spec Hummer. Ross owns a similar 1989 model which is unable to be registered in NZ because its fitted with bullet-proof glazing that does not meet NZ safety standards...

The FOMC represents a wide variety of vehicle clubs, and inevitably a large focus tends to be on the most common type – cars. From my interest, I'm aware of a number of specific issues relating to military and heavy heritage vehicles, in many cases the rules around complying these are even more difficult than for classic cars or 'bikes. During my tenure as President I am keen to see the FOMC work to address these particular issues as well as continue to represent the interests of the majority of our Member clubs.

On behalf of the FOMC I'd like to thank the two previous Presidents, namely Malcolm Lumsden and Jack Hindess, for their untiring services during the formative years of the Federation.

Ross Hopkins, FOMC President

High compression engines and low octane fuel

*A recurring topic raised at the AGM by the Association of Rover Car Clubs was the non-availability of 98 octane petrol in some regions, and what the FOMC can do to help owners of classic cars with high-compression engines. We asked **Roy Hughes** – himself the owner of a number of V8 Rovers – to investigate…*

Since the loss of leaded petrol back in the mid-1990s, all the legitimately available fuels have been even less adequate for use in the high compression engines of classic models initially designed to run on petrol with a RON of 100 or higher.

Two octane measurements are used to determine the specifications of petrol. The usually quoted Research Octane Number (RON) measures the resistance of a fuel to knock at lower engine speeds and under acceleration, and the Motor Octane Number (MON) is its resistance to knock at high speeds and high engine temperatures.

The octane quality for Premium Unleaded is 96 RON and 86 MON, although the legal minimum is 95/85, while the octane quality for old Leaded Super was 96/87. As the compression ratio of an engine increases so does the required octane number of the petrol if engine knocking or pinking is to be avoided.

The four major oil companies (BP, Caltex, Mobil and Shell) supply around 95% of the vehicle fuels distributed in New Zealand and more than 65% of the petrol sold comes from the Marsden Point Refinery, so the octane ratings are the same no matter what brand name is on the pump. Some owners of high compression classic cars have complained that fully imported alternative grades such as BP Ultimate 98 and Mobil Synergy 8000 are not available in their districts.

As it is refined overseas, BP Ultimate 98 is not shipped from Whangarei, but delivered by large tankers directly to deep water New Zealand ports, predominantly Mount Maunganui, Wellington and Lyttelton. BP says the cost of delivery and establishing separate storage facilities in other centres would make Ultimate 98 prohibitively more expensive than normal 95 octane.

But owners of classics with high compression engines who have tried both have found little difference in the performance of their cars on either fuel. Even the HE version of the Jaguar V12 used in the XJS during the 1980's can be retuned to run on the standard 95 Premium Unleaded though it has a compression ratio of 11.5:1.

Detonation or pinking can occur when the ignition timing is over advanced as well as when the compression of the engine requires a higher octane fuel. Excessive engine temperatures can also cause pinking, or pre-ignition which can be even more damaging. The octane requirements of an engine will also increase over time due to the build-up of carbon deposits in the combustion chambers.

Before attempting any adjustments to the timing, it is important to ensure that all components of the timing system, especially the distributor and dynamic advance mechanisms have been checked for faults, wear and possible modifications. First, check distributor points and spark plug electrode gaps as these can affect spark timing. Then check the static ignition timing setting against that recommended by the manufacturer and reset if the engine is currently over advanced.

If pinking is still occurring, retard the ignition timing by 2° to 6° in accordance with the engine manufacturer's guidelines. If this does not fix the problem do not retard further. Over retarding can cause engine overheating around the exhaust ports and ultimately cause exhaust valve burnout.

Cars with electronic ignition can present special problems. Some earlier types allow for manual adjustment of distributor pickup but those with the timing sensor on the flywheel have no manual adjustment. A few types allow adjustments to be made through switching devices.

If pinking mainly occurs in hot weather or under hot running conditions, the cause could be high engine temperatures due to excessive carbon deposits in the combustion chamber, faults in the cooling system, or even a blocked muffler.

If a car is usually driven at low throttle, a moderately hard long distance drive can help to burn off excess carbon and return the engine to normal working order. Older engines, especially those with cast iron heads, could benefit from a decarb and valve grind. Head removal provides the opportunity for fitting hardened valve seat inserts. Before re-assembly, inspect the head and new gasket for rough spots and protrusions. These can act as hot spots which promote pre-ignition.

In more extreme cases of detonation which cannot be cured by adjusting the timing, machining the combustion chamber, or fitting a replacement head or thicker gasket, or replacing or dishing the pistons may be the only solutions. As a rule of thumb, a reduction in the compression ratio by one, e.g. 9.5 to 8.5 will reduce the octane requirement of the engine by five octane units.

Other options to reduce pinking are the various octane booster and lead substitute additives, and fuel catalysts available such as Valvemaster, Flashlube, Bardahl, Nulon, STP, Wynns, and the Broquet Fuel Catalyst. But while they do work on some cars, on others the benefits may be only marginal. Some may also cause side effects such as plug fouling or accelerated engine wear. Never exceed the recommended doses, and they should only used if they provide a significant discernable benefit.

Legislation Update

The following is a summary of some recent submissions we have completed on Member clubs' behalf:

Tyres & Wheels Rule Amendment. The main proposals in this Rule included prohibiting the mixing of summer and winter tyres on the same vehicle, changes to the inspection requirements for visible cords of heavy vehicle tyres, and relaxing the requirements relating to the sum of the load ratings of tyres.

The NZ Transport Agency propose to make it a WoF requirement that any vehicle fitted with winter (or 'snow') tyres must have them fitted to all four wheels. This is in response to a number of fatal accidents in which snow tyres were a contributing factor, and testing which shows mixing such tyres with standard tyres (also know as 'summer' tyres) can compromise handling. Currently the WoF rule only requires tyres of the same size, tread pattern and construction (i.e. crossply vs. radial) to be fitted to the same axle (unless the vehicle is more than 30 years old in the latter's case). Snow tyres can be difficult to identify, although they usually have snow flake markings on the sidewall. Under the proposal, a vehicle will fail a WoF if, say, it has two snow tyres on the front axle, and standard tyres on the rear. The FOMC supported this proposal on safety grounds.

We also supported the proposal to allow tyre fleet service agents to provide advice on the safety of heavy vehicle tyres which have exposed cords. NZTA say it is common for heavy vehicle tyres to have exposed outer cords, and under the current Rule this is currently grounds for rejection, yet the tyre may still be safe and this is something tyre specialists can determine.

Dangerous Goods Rule Amendment. This complex Rule proposes to further align NZ standards with United Nation regulations. The present Rule already imposes restrictions on the quantity of petroleum products that can be carried in containers (5 litres), and our submission noted that "any rule that the public are not aware of or are tempted to ignore is a silly rule." We suggested that as 20 litre containers are in common use, and the 2 gallon tins mounted to the running boards of many vintage cars hold approximately 9 litres, this existing requirement should be reconsidered.

Further, the amendment Rule proposes that the UN dangerous goods number in a diamond shaped border must be included on all such containers from December 2010. This would apply to the aforementioned running board containers and army jeep jerry cans (which often have the oil company logo or Big Tree Motor Spirit etc. stamped into the metal). In response, the FOMC's submission noted this would be unpopular with heritage vehicle collectors, and we strongly recommended an exemption in this situation for historic vehicles or indeed for any of the containers currently in use.

- *Copies of submissions are available on our website: www.fomc.co.nz/current.html*

Road User Charges review

Diesel vehicle owners may be interested to learn that an independent review into the Road User Charges (RUC) system was recently released. The review looked at whether the current distance charging method should be changed, and was prompted after the nationwide truck protest against RUC increases last July.

For those not in the know, diesel has no excise on it, whereas petrol has 53 cents per litre excise (not including GST, as of 1 July 2009). Of that, 42.5c goes into the national roading fund, 9.9c is for ACC, and the remainder miscellaneous levies like fuel quality monitoring. By comparison, diesel users pay their road tax via RUC, plus a higher annual re-licence fee to recover the ACC costs.

The FOMC did not input into the review, instead leaving the commentary to the main industry groups – the AA on behalf of light diesel users, Road Transport Forum for truckies, and Federated Farmers for off-road diesel users. Both the AA and RTF supported replacing RUC with a diesel excise, supplemented by additional charges for heavy vehicles (which could run into the $10,000s) as fuel excise alone would not collect their fair share, while the Federated Farmers preferred the status quo as they did not want the hassle of applying for tax rebates for diesel used off-road.

The resulting review has a number of recommendations, chief of which is that the RUC system should be retained for diesel vehicles. This decision was made because of the costs a diesel tax would impose on non-road users, and claims by the IRD that it could not administer a rebate system, despite the fact that this is how all other countries do it. However the review did recommended moving towards an electronic RUC collection system (for all vehicles, which would also replace petrol excise) and making other administrative changes to reduce compliance costs.

More troubling, the review recommended changes to the charging methodology for heavy vehicles which could see the total amount they pay in RUC decrease. Given that RUC is not contributing its fair share into the road funding pool (petrol users pay about 18 cents/litre more), it is generally recognised that RUC will need to increase. But if the charges for heavy vehicles fall, then that suggests it is only light diesels who will be expected to pay even more.

The recommendations have not yet been adopted by the Government – and they may not be – and it is important to understand that the review was commissioned by the previous Labour government. In the meantime, the Ministry of Transport has been asked to investigate the reviews findings further and consult with stakeholders.

- *A copy of the report can be downloaded from: www.transport.govt.nz*

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