



AOMC News

February 2021 - Issue 150

www.aomc.asn.au

REMINDER TO CLUBS
AOMC 2021 Membership
Renewals are now due.

Association of Motoring Clubs Inc



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CONTACTING THE AOMC:

The AOMC office and phone is attended 2 days per week, all other times there is an answering machine operating which is accessed remotely, so your call will be attended to within 24 hours. When leaving a message, please ensure you leave your contact number and a brief outline of your query.

AOMC OFFICE & Postal Address:

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Springvale, VICTORIA 3171

Tel.: (03) 9558 4829

Website: www.aomc.asn.au

Email: secretary@aomc.asn.au

And visit our facebook site:

www.facebook.com/infoAOMC

Important note re paying renewals by Direct Deposit.

Clubs are requested that when paying their subscription renewal by direct deposit please reference the club's name and invoice number so we can identify who is actually paying.

Front Cover Photo: .The ultimate classic enthusiast, Queen Elizabeth at the wheel of her beloved Land Rover.

In this issue we have a history of Land Rover that has been sourced from the Shannons website and written by Mark Ostler.

ASSOCIATION OF MOTORING CLUBS ISSUES & ACTIONS

- Support the Development and Retention of the permit scheme for historic vehicles
- Lobby against the introduction of annual roadworthy inspections
- Lobby against any legislation that introduces compulsory removal of older vehicles from the road.
- Support Retention of the left hand drive registration scheme for classic, historic vehicles
- Lobby for the introduction of Australian standards for fuels suitable for the historic fleet.
- Carry out a watching brief for any State or Federal legislation that may affect the ability of the historic vehicle movement to continue to use their vehicles on the roads and highways.
- Continue to monitor the historic vehicle movement to ensure that it operates in a manner that is not considered anti social by the wider community and that attention is paid to changing community environmental standards.
- Provide relevant advice to clubs on matters that have state wide ramifications.
- Provide forums for discussions and training for club officials on matters of common interest.
- Assist with the recording of information relating to the part played in the history of the State by the historical vehicle fleet.
- Assist clubs with promotion of the member clubs and of the historic vehicle movement.
- Provide assistance or support with the establishment and promotion of events of state wide significance that showcase the historic vehicle movement.
- Liaise with other state wide organisations that service the historic vehicle movement.
- Alert state clubs of prospective Victorian local Government rules impacting on local clubs relating to the storage of vehicles on private property.

COVID Update

Latest information from the Victorian Department of Health and Human Services From 11:59pm Friday 12 February restrictions across Victoria have changed.

New changes have been introduced to slow the spread of COVID-19 by reducing the number of people leaving their homes and moving around Victoria.

This means that you cannot leave your home unless you are doing it for one of the following four reasons: shopping for necessary goods and services; care and caregiving; exercise; and permitted work.

You must stay within [5km of your home](#). This limit does not apply to work or when giving or receiving care.

You can leave your home in an emergency or if there is family violence.

Face masks will need to be worn indoors and outdoors whenever you leave your home.

These actions will protect our loved ones, friends, colleagues, health care workers and the community.

If you need to leave home, you must wear a face mask, unless you have a lawful reason for not doing so. Always wash your hands before you leave, and when you return home. Keep at least 1.5 metres between yourself and others.

Never, ever go out if you are unwell unless it is to get tested. After you get tested, you must go straight home. Remember that the most important thing you can do is get tested, even if you have the mildest of symptoms.

For advice for the community service sector visit the [Community services - all sector - coronavirus](#) (COVID-19) page.

For advice for the disability services sector visit the [Disability services sector - coronavirus](#) (COVID-19) page.

AOMC February Delegates meeting by Zoom

Monday 22nd February 2021 at 7.30 pm.

Delegates are invited to our first meeting for the year, which will give your club the opportunity to raise any current issues, report on any activities that might be of interest to the wider movement and hear an interesting presentation on Shannon's latest initiative Roadside Assistance.

If your club will be represented, it will be appreciated if you could register with our office by emailing **Howard** on secretary@aomc.asn.au or by telephone **03 9558 4829**.

We will email the meeting link to be used to registered attendees on the morning of the meeting.

Minutes for the previous Country and two Metro meetings are available on the AOMC website.

If you have any enquiry about this meeting **other than registering** do not hesitate to contact me.

Iain Ross (AOMC President)

0409 027 392

From the President's Desk

Welcome to the February edition of our newsletter.

A new year with some relief to the situation that we find ourselves in. However, it is pretty obvious that we have some time to go until it will be business as usual.

Some of our clubs have been using zoom and other electronic means of communication very successfully, other have struggled to keep in touch with their membership. No doubt there will be a proliferation of outdoor events, but we must all be aware of the need to register our attendance at these events, and our clubs need to have suitable reporting systems in place.

On a recent Saturday evening whilst on a club event I happened upon a huge cruise event at one of our inner western suburbs. Now this was a very well attended meet but what was very obvious, was the number of vehicles on the permit scheme with modifications that clearly were not in the spirit of what is required by the scheme. Modified plated vehicles were certainly in the minority probably able to be counted on one hand. All our clubs need to ensure that vehicles entering the scheme comply with the requirements if we are to protect the permit scheme into the future. The scheme is to be reviewed this year.

Our next delegates meeting will again be on zoom. As we in the past attracted up to one hundred representatives at our regular meetings, we believe that in the interests of the safety of delegates that we will use zoom until social distancing rules are relaxed. The positive to this is it enables representatives from some of our member clubs from the regions to attend and take part in our meetings.

Now I believe the movement is really entering interesting times. And it will be imperative that an effective and fully representative body is in existence. We need our member clubs to keep in touch with us and advise us of any issues of concern.

Finally let us keep showing the public how great our movement is, in a COVID safe manner of course. See you on the road somewhere.

Iain Ross

From Your Editor

What a difference a day makes!!!

I have found myself having to reword my column and the latest Covid information several times since starting to draft this issue of the AOMC News with the rapidly changing situation in Victoria.

The latest outbreak from quarantine has put us into another lockdown, which is intended to be short term (5 days) but may be longer if the authorities cannot track down and shut down this latest wave.

Even when the latest lockdown restrictions are eased, they will probably be a stepped process, like our previous return to almost normal. Needless to say, this has put a spanner in the works of many plans to get club activities and events rolling again, and highlights that until this virus is quashed world wide (as all our recent outbreaks have resulted from overseas transmissions) life will not return to complete normality as we knew it.

There are several events and rallies advertised in this issue, it would be advisable to contact the organisers closer to the date to confirm details.

The AOMC has cancelled the planned British and European Motoring Show that was in early planning stages, and all other AOMC events such as the restoration seminars have been put on hold. Delegates meetings will continue to be held via zoom until we can gather in large numbers in an enclosed space again.

On the VicRoads front, they are considering changes to a variety of Vehicle Standards Information Sheets (VSI's), and have published draft versions for consideration and feedback. We have included one of these, VSI-33, in this newsletter as it relates to Modifications on CPS vehicles. There is also a feedback form included.

AOMC are considering this document, and would appreciate feedback from clubs on the draft document.

Daryl McMahon
Editor

The following information has been received in the AOMC office from VicRoads regarding updates to a range of Vehicle Standards Information Sheets (VSI's). The one that is relevant to our membership is VSI-33 which deals with modifications to vehicles operating under the Club Permit Scheme. Several Clubs may have received this information directly, but we are ensuring that every club is aware and has the opportunity to provide feedback.

The full 4 page draft has been included here in the following pages, and also a feedback form to submit issues or proposed amendments..

To Whom It May Concern

Vehicle Standards Information (VSIs) sheets for review and feedback

All vehicles in Victoria need to comply with specific standards to ensure that drivers and passengers are provided with a minimum level of safety. A modified vehicle must not be used on a road or road related area unless the modification has been approved by VicRoads or carried out in accordance with guidelines published by VicRoads. The Vehicle Standards Information (VSI) sheets provide this guidance by outlining vehicle standards and modification requirements for light vehicles.

The Department of Transport (DoT) has made updates to several VSIs. The updates directly support DoTs continued focus on safety and will ensure road users in Victoria are safer than ever before.

There are six VSIs open for consultation:

- VSI 1 Bull Bars
- VSI 5 Conversion of Vehicles to Motor Homes
- VSI 6 Requirements for A – Frame Towing of Vehicles
- VSI 8 Guide to Modifications for Motor Vehicles
- VSI 26 Roadworthiness Requirements
- VSI 33 Guidelines for Modifications to Vehicles Operated Under Victoria's Club Permit Scheme

There are six VSI feedback forms, one for each VSI, please use the feedback form for each VSI if you would like to provide feedback and send back via return email by **COB Friday 5 March 2021**.

Please note that the attached VSIs are draft only and may change as a result of stakeholder feedback. All feedback received as part of the consultation process will be considered in the development of the final VSIs.

If you have any queries please do not hesitate to contact the Safer Vehicles team via vehicle.policy@roads.vic.gov.au

Thank you
Safer Vehicles and Future Vehicle Technology

Vehicle Standards Information 33

December 2020 | This information sheet supersedes all previous copies of VSI 33.

Requirements for modifications to vehicles operated under Victoria's Club Permit Scheme

This Vehicle Standards Information sheet provides guidelines to ensure the safety and compliance of modified vehicles operated under Victoria's Club Permit Scheme (CPS).

These guidelines describe modifications that are permitted without VASS certification.

Scope

These guidelines apply to all motor vehicles (other than street rods) operated under, or applying to be operated under, the CPS as established by Chapter 3, Part 3.4 of the *Road Safety (Vehicles) Interim Regulations 2020*.

Only the more common modifications are addressed. Where indicated, and in the case of modifications not included in these guidelines, the requirements of Vehicle Standards Information (VSI) 8 – *Guide to Modifications for Motor Vehicles*, will apply to club permit vehicles.

A street rod means a vehicle that has been modified for safe road use and that:

- has a body and frame that were built before 1949; or
- is a replica of a vehicle the body and frame of which were built before 1949.

- A street rod can be distinguished from other pre-1949 modified vehicles by virtue of it:
- looking like a traditional Hot Rod style of vehicle
- been built and certified in accordance with the *National Guidelines for the Construction and Modification of Street Rods in Australia* as published on the Department of Infrastructure, Regional Development and Cities' website
- having been authorised by the Australian Street Rod Federation.
- evidence, in the form of an Australian compliance plate, previous registration history or a Vehicle Assessment Signatory Scheme (VASS) Approval Certificate, of the vehicle's compliance with any applicable Australian Design Rules (ADRs) has been supplied
- any modification carried out on the vehicle does not affect, or have the potential to affect, compliance with any applicable ADR
- the vehicle was manufactured before 1973.

Vehicle age categories

General

For the purposes of these guidelines club permit vehicles are divided into three categories based on their date of manufacture:

- built before 1949
- built after 1948 and before 1969
- built after 1968.

Carry-over provisions

For the purposes of these modified vehicle guidelines, a vehicle model that is first released for public sale before 1949 that continues in production essentially unchanged beyond 1948 may be treated as if it were a pre-1949 model until completion of the model run by the original vehicle manufacturer.

However, a vehicle model first released before 1969 that continues essentially unchanged beyond 1968 may only be treated as if it were a pre-1969 model if all of the following criteria are met:

Requirements

General

For a modification to be acceptable the vehicle must continue to comply with the applicable standards for registration. Victoria's Standards for Registration are set out in Schedule 2 of the *Road Safety (Vehicles) Interim Regulations 2020*.

Further, the modification must not adversely affect the vehicle's structural integrity, its handling characteristics for safe use on the road, exhaust emissions or evaporative emissions.

The modifications set out below may be considered approved modifications provided they have been carried out in accordance with the specified guidelines. Modifications not mentioned, or not otherwise addressed by VSI 8 *Guide to Modifications for Motor Vehicles*, or that exceed any stipulated limits are deemed assessable modifications and will require certification by a VASS Signatory. In particular, it

should be noted that the *Approved Modifications* listed in VSI 8 apply to all vehicles.

Where a modification involves fabrication or welding, all such work must be carried out in a professional manner. Any structural welding must be carried out by a competent person and be carried out with correct joint design with proper consideration given to parent metal type and gauge, and to the selection of the welding process.

Terminology

VASS Approval Certificate

A VASS Approval Certificate is a certificate issued by a VASS Signatory accepted as evidence that a vehicle meets the standards for registration, that any modifications comply with relevant published guidelines and have not adversely affected the vehicle's structural integrity, handling characteristics, exhaust emissions or evaporative emissions. As such a VASS Approval Certificate forms part of the documentation required to unconditionally register a modified vehicle.

VASS Club Permit Approval Certificate

A VASS Club Permit Approval Certificate is a certificate issued by a VASS Signatory accepted as evidence that a modified vehicle meets VicRoads requirements for an M-Plate Club Permit vehicle.

Era

The term "of the era" in relation to equipment such as engines, transmissions, drive axles etc means:

- for a vehicle built before 1949 – any such equipment typically fitted to vehicles designed and manufactured before 1949 but includes essentially identical equipment manufactured after 1948 that utilises technology and materials that were in general use before 1949
- for a vehicle built before 1969 – any such equipment typically fitted to vehicles designed and manufactured before 1969 but includes essentially identical equipment manufactured after 1968 that utilises technology and materials that were in general use before 1969.

Significant power increase

The term "significant power increase" in relation to replacement engines is based upon a comparison of manufacturer's published maximum net power figures and means the greater of a 30kW power increase and:

- for engines up to 2000 cc – a 40% increase in power
- for engines from 2001 cc to 3500 cc – a 30% increase in power
- for engines over 3500 cc – a 20% increase in power.

In the case of modified engines, the above figures can only be applied when the modified engine's maximum net power is known or can be estimated. The fitting of alternative carburettor(s), extractors or an alternative ignition system may result in some power increase, but an increase resulting from these modifications on their own would usually not be considered significant.

However, when combined with higher compression ratio, a modified cylinder head, larger valves, performance camshaft etc, they would be very likely to result in a significant power increase. Similarly, fitting forced air induction to a V8 engine would be considered to result in a significant power increase. If in any doubt, a VASS Signatory should be consulted.

Previous modifications

An existing CPS vehicle that has, at some time in the past, undergone a modification that is an assessable modification according to these guidelines, does not have to be re-certified to retain its permit provided:

- evidence of Australian registration history in its current modified condition can be supplied; or
- evidence in the form of a VASS Approval Certificate (or interstate equivalent or an engineering assessment report issued under Victoria's earlier Recognised Engineering Signatory Scheme) relating to the modification, can be supplied; and
- the vehicle has not been subjected to further assessable modification.

Imported vehicles

An imported vehicle, for which admission to CPS is being sought, must have Australian registration history or a copy of the Vehicle Import Approval issued by the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications (DITRDC).

An imported vehicle without registration history that was built after 1968 requires a VASS Approval Certificate demonstrating compliance with any applicable ADRs.

An imported vehicle without registration history that was imported under the Specialist and Enthusiast Vehicle Scheme (SEVS) requires RAWS import certification.

An imported vehicle that has undergone an assessable modification that has not been previously registered in its modified condition in Australia must be issued with a VASS Approval Certificate. Refer to VSI 3 *Conditions for Registration of Imported Vehicles in Victoria* for further information.

Left hand drive vehicles

For left hand drive vehicles, refer to the requirements outlined in VSI 18 *Left Hand Drive Vehicles & Vehicles Converted to Right Hand Drive*

Engines

Note

Fitting a replacement engine can increase axle loads. It is the owner's responsibility to ensure that the load capacity of an axle is not exceeded. If the load capacity of an axle cannot be determined any increase in the mass supported by that axle must be limited to 10%.

Replacement engines

Vehicles built before 1949

Any unmodified engine of the era may be fitted provided that:

- it can be accommodated in the space originally provided for the engine without structural modification
- the mass supported by an axle of the vehicle does not exceed its rated load carrying capacity

- if the mass supported by an axle is increased by more than ten percent, it can be demonstrated that brake balance and effectiveness has not been adversely affected
- the engine fits up directly into the existing engine mounts without modification of the structure.

Vehicles built after 1948 and before 1969

Any unmodified engine offered as an option by the vehicle manufacturer for that model may be fitted. Any additional equipment fitted to the vehicle as standard equipment by the manufacturer with that engine option must also be fitted.

Any unmodified engine of the era that is of the same configuration and that does not result in a significant power increase over that of the original (or of that of any optional engine offered by the vehicle manufacturer for that model) may be fitted provided:

- it can be accommodated in the space originally provided for the engine without structural modification
- the mass supported by an axle of the vehicle does not exceed its rated capacity
- where the mass supported by an axle is increased by more than 10% it can be demonstrated that brake balance and effectiveness has not been adversely affected
- the engine fits up directly to the existing engine mounts without modification of the structure.

Vehicles built after 1968

VSI 8 requirements apply.

Modified engines

Vehicles built before 1949

Minor modifications such as fitting alternative carburettor(s) or ignition systems etc. are permitted. Generally, modifications typical of the era are permitted. However, modifications resulting in a significant power increase and that involve the use of more modern (i.e. after 1948) components or technology will require VASS certification.

Vehicles built after 1948 and before 1969

Modifications such as fitting extractors, alternative inlet manifolds, alternative carburettor(s) or ignition systems etc are permitted. Generally, modifications typical of the era are permitted. However, modifications resulting in a significant power increase will require certification.

Vehicles built after 1968
VSI 8 requirements apply.

Transmission and final drive

Vehicles built before 1969 (including pre-1949 vehicles)

Any transmission or differential of the era may be fitted provided that:

- there are no structural alterations to the vehicle
- the item is adequate for the mass and power of the vehicle

For the purposes of these requirements the fabrication of a tailored transmission cross-member is not considered a structural alteration so long as it bolts up to the same location as the factory crossmember.

Replacement live axles that were not offered as an option for the vehicle must not be fitted unless approved by a VASS Signatory.

Vehicles built after 1968
VSI 8 requirements apply.

Bodywork changes

Vehicles built before 1969 (including pre-1949 vehicles)

For vehicles based upon a separate chassis, bodywork changes typical of the era are permitted without certification, so long as the vehicle's general appearance is in accord with vehicles of that type with a similar date of manufacture, and that any replacement bodywork meets the VSI 29 *Drivers Field of View Requirements* for vision, and does not present any additional hazard to pedestrians or other road users. Different materials may be used.

Vehicles built after 1968
VSI 8 requirements apply.

Brakes

Vehicles built before 1949

Modifications may be made to mechanical drum braking systems to improve efficiency such as:

- changing the method of operation
- changing the coupling of actuation controls
- the use of alternative materials
- the fitting of proprietary brake kits or components from other vehicles of similar or greater mass.

All components must be of a design and materials of the era and that the applicable braking performance standards required by the standards for registration can be met.

It is strongly recommended that you seek advice from a VASS Signatory prior to commencing work on your vehicle's braking system.

Vehicles built after 1948 and before 1969

Any braking system offered as an option by the vehicle manufacturer may be fitted provided it is fitted in its entirety. Similarly, a braking system offered by the same manufacturer for a later model vehicle of equal or greater mass may be fitted provided it is fitted in its entirety and provided its fitment does not involve any cutting, drilling or welding of any brake, hub, suspension or steering component.

Vehicles built after 1968
VSI 8 requirements apply.

Fuel systems

Relocation of fuel tank

Vehicles built before 1949

An original equipment or replacement fuel tank may be relocated on the vehicle provided:

- the tank is securely mounted
- the filler is located on the outside of the vehicle
- the tank is located so that it cannot be contacted by the road surface in the event of a flat tyre
- that if the tank is within 75 mm of an exhaust pipe, suitable heat shielding is provided

- any apertures created to allow for the installation of the fuel tank are suitably sealed to prevent the entry of exhaust or petrol fumes into the cabin of the vehicle
- any replaced or extended fuel lines comply with the relevant provisions of VSI 8
- that fuel tank venting is considered to ensure that the tank does not pressurise due to replacement items such as fuel filler caps, which are not designed to be vented.

For any other fuel system modification, VSI 8 requirements apply.

Vehicles built after 1948
VSI 8 requirements apply.

Wheels and tyres

Vehicles built before 1949

Having regard to the fact that not all original equipment tyre sizes are currently available, alternative rims may be fitted provided:

- they are of a form of construction and made of material(s) typical of rims fitted to vehicles of the era
- any reduction in rim diameter is limited to the next smallest size for which suitable tyres may be obtained
- the rims provide adequate clearance around suspension, steering and brake components.

Tyre section width may be increased by up to 30% above that of the original equipment tyre or the most narrow available tyre width where no option exists within 30% width of OEM fitment. Tyre aspect ratio must be at least 70%. Rim width may be increased to any of the rim widths listed in the Tyre and Rim Association of Australia Manual as suitable for the chosen tyre size provided the tyre and rim combination does not foul any part of the body suspension, steering or brake components at any position of suspension travel or steering movement, and, when in the straight ahead position, the guard or bodywork of the vehicle covers the full section width of the tyre.

Adequate ground clearance must be maintained.

Vehicles manufactured after 1948
VSI 8 requirements apply.

Steering

Vehicles built before 1969 (includes pre 1949 vehicles)

A change to steering mechanism type (e.g. a change from worm and sector to rack and pinion) must be VASS certified. However, alternative similar steering components sourced from, or intended for, a vehicle of equal or greater mass than that of the subject vehicle may be used, provided the original equipment manufacturer's (OEM) pick-up points are utilised,

and that any tie-rod or drag link end tapered joint has a taper that matches that of the component to which it is attached. Original steering geometry must be preserved (linkage lengths, pitman arm lengths, steering arm lengths etc).

Conversions from left hand drive to right hand drive will require VASS certification.

Vehicles built after 1968
VSI 8 requirements apply.

Roll bars and roll cages

A vehicle for which admission to the CPS is being sought that is fitted with a roll bar or roll cage, will require (unless evidence of prior certification can be provided) either:

- VASS Approval and Motoring Organisation approval
- VASS Approval complying with VSI 8 requirements.

The above requirements also apply to an existing CPS vehicle that is to be modified by fitting a roll bar or roll cage.

For further information

Further information is available on the VicRoads website: vicroads.vic.gov.au or by calling VicRoads on **13 11 71** (TTY **13 36 77**, Speak and Listen **1300 555 727**).

A New Name - Stellantis

Stellantis will be the new name of the fourth biggest car company in the world after conglomerates Fiat-Chrysler Automobiles (FCA) and Peugeot Group (PSA) merge to form one giant car manufacturing group.

Fiat-Chrysler Automobiles is the umbrella group name for Fiat, Chrysler, Jeep, Ram, Dodge, Alfa Romeo, Lancia and Maserati. The Peugeot Group is the owner of Peugeot, Citroen, DS, Opel and Vauxhall.

The US\$50 billion (Aus\$71.5billion) merger of the two groups will create the fourth largest car company in the world.

The new name, Stellantis, will only be used at a management level, referring to the umbrella corporation of the many car brands brought together in the FCA/PSA merger.

This article was published in 'Torque' magazine and was originally sourced from CaAdvice.com.au

Vehicle Information Standards (VSI) sheet - Feedback Form

Thank you for taking the time to provide feedback on the VSIs.

Registered business name:	
Contact person:	
Email address:	
Phone number:	

Do you have any feedback on VSI33 – Guidelines to modifications to vehicles operated under Victoria's Club Permit Scheme?

- Yes
- No

Please provide your feedback in the box below:

Specify issue	Proposed amendment

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RACV ALPINE TRIAL CENTENARY

20-27 NOVEMBER 2021

In 2021 RACV will celebrate the centenary of the RACV Alpine Trials, events that were significant milestones in Australian automotive history. To commemorate those milestones, RACV, along with the Vintage Drivers Club, will be organising an event recreating the original 1921 Alpine Trial. The RACV Alpine Trial Centenary will be held from Saturday 20 November to Saturday 27 November 2021.

HISTORY

RACV held a series of reliability trials between 1921-1926. The route of the inaugural 1921 trial ran from Melbourne to Lakes Entrance, Tallangatta, Mount Buffalo, Wangaratta and Healesville before returning to Melbourne via a final loop through Ballarat and Geelong.

The trial focused on Victoria's Alpine region, advocating for both tourism and the construction of better roads and services to expand the touring potential of north-east Victoria. They were both reliability and efficiency contests. Hill climbing contests and fuel consumption tests were also included with automobile companies using the associated publicity to promote their vehicles.

The RACV Alpine Trial Centenary event will follow, as close as practicable, the route of the 1921 RACV 1000 Mile Reliability Trial.

THE CENTENARY EVENT

A maximum of 100 vehicles will be permitted to enter, with preference given to vehicles that competed in the original events and to other vehicles manufactured during the period of the trials: 1921-1926.

Entries will be accepted in 3 Tiers. Preference for acceptance will be in the order of these tiers.

TIER 1: Vehicles that actually contested any of the four RACV events between 1921-1926.

TIER 2: Vehicles of the same make and model as the original contestants of the 1921-1926 trials.

TIER 3a: Other vehicles manufactured between 1921-1926.

TIER 3b: Vintage vehicles up to 1930.


EVENT PROGRAM

Day 1 - Saturday 20 November 2021	RACV Noble Park to Traralgon
Day 2 - Sunday 21 November 2021	Traralgon to Lakes Entrance
Day 3 - Monday 22 November 2021	Lakes Entrance to Wodonga
Day 4 - Tuesday 23 November 2021	Wodonga to Bright
Day 5 - Wednesday 24 November 2021	Bright to Mt Buffalo, Harrietville & return to Bright
Day 6 - Thursday 25 November 2021	Bright to Mansfield
Day 7 - Friday 26 November 2021	Mansfield to RACV Healesville Country Club
Day 8 - Saturday 27 November 2021	Healesville to Ballarat and finishing at RACV Goldfields Resort

Entry is now open for the RACV Alpine Centenary Trial [CLICK HERE](#)

Secretary RACV Alpine Trial Centenary
Glenda Chivers, 10 Beaufort Rise, Warrandyte 3113
Phone: 0431 709 248 Email: racvalpinetrialcentenary@vdc.org.au





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Skills Apprentice meets Vauxhall Viva!

This article has been lifted from the FBHVC November 2020 newsletter.

If you see a young man wearing a huge smile and driving a 1967 Vauxhall Viva in Oxfordshire - that may well be Jake Geraghty an apprentice at the Heritage Skills Academy (HSA).

Jake came from his home in Perth, Australia, last year to further his interest and career in the classic car world. He wasted no time! Back home he had grown up with uncles driving older cars such as Chevrolet and Dodge. Within months he had got a job with a car restorer and enrolled at the Heritage Skills Academy (HSA). Here he heard about the Classic Car Loan Project (CCLP) and applied to have the 1967 Vauxhall Viva on loan for the year.

Fred Dukes and Marcus Cooper of the Vauxhall Viva Owners Club (VVOC) recognised Jake's enthusiasm and skills. His HSA experience was very much in his favour as they were seeking a reliable and responsible carer for the Viva which had been donated to the VVOC by a lady retiring from driving. Not an immaculate, but a sound car, this seemed a good example for a CCLP recipient to use regularly without wrapping it in cotton wool.

Jake said, "I work with various classics such as E Types and Citroën DS and modern electric cars, at Electrogenic. So, looking after the Viva should be no problem. Of course I will be keeping in touch with the club through the year ... yes, a whole year!"

From day one, all the cars in the CCLP have been insured by Peter James Insurance through a dedicated arrangement which safeguards all involved. Since Jake is an apprentice at the HSA, the FBHVC has jointly sponsored his insurance premium.

CCLP manager, Bob Wilkinson said, "I am delighted to have ongoing support from Peter James Insurance and the FBHVC for supporting Jake. This is tangible support for the project designed to encourage new drivers into the classic car world. I hope more apprentices will apply for cars in the next phase. I have over 20 cars in the project covering a wide range of makes and styles and more promised for next year."

"Although still small in number, the CCLP is proving to be a model for clubs to follow when seeking to engage with new enthusiasts. Already a handful of previous car recipients have bought a classic ... even the father of one young driver has returned to classic ownership."

Karl Carter, FBHVC Skills Director commented, "It is important to try and get the apprentices the experience of driving and maintaining a classic vehicle, but insurance costs can often be prohibitive particularly for the younger apprentices. We have teamed up with Peter James Insurance to cover that cost for the year and allow at least one of the apprentices to have that experience. We all hope Jake enjoys the Viva."



Electrics Surge Boosts Jobs

This article appeared in Classic & Sports Car April 2020 and has been reproduced here.

Classic car electric conversion specialist Lunaz will double its workforce in 2020 to keep up with demand, the Silverstone based company has confirmed.

Lunaz currently employs 35 people across its various divisions, including design and engineering.

The announcement comes off the back of government plans to ban sales of new combustion engine cars from 2035, five years earlier than previously stated.

A Jaguar XK120 has recently been completed and is currently undergoing testing, which will be joined in the Lunaz portfolio by a 1961 eight seater Rolls Royce Cloud. Each custom restoration is part of a limited run and features fast charging and regenerative braking.

Founder David Lorenz said: "These are the ultimate everyday classic cars. I've driven 2000 miles over the past three weeks in our electric Jaguar to test the usability and reliability that our customers demand. It's a joy to know that these cars have a bright future."

Turnkey replica cars are now legal, but many replica carmakers aren't ready to make them just yet

By Daniel Strohl on Jan 25th, 2021

This article was published on Hemmings website and an edited version is reproduced here

For David Smith, the president of Factory Five and one of the members of the SEMA steering committee that advocated for the Low Volume Motor Vehicle Manufacturers Act (LVMVMA), last week's news that the replica car law passed its last regulatory hurdle before going into effect should have been cause for celebration. Instead, as he noted, he saw it as a mixed bag.

"We were prepared for this in 2015 and invested in vertical integration at the time," Smith said. "But with all the delays, in lieu of going forward with full production we used that space for another purpose - to do more with composites - and now it's booked. That's definitely going to slow down our ability to take advantage of this law."

Under the LVMVMA, replica carmakers must be low-volume carmakers (that is, they produce no more than 5,000 cars worldwide on an annual basis) who must certify that they have the rights to replicate the subject cars as part of the process of registering their plans with the Environmental Protection Agency and National Highway Traffic Safety Administration. The carmakers may build no more than 325 turnkey replicas in a year, replicas must be within 10 percent of the external dimensions of the originals, the cars have to replicate vehicles that were originally offered for consumer sale (i.e. no prototypes or concepts) at least 25 years ago, and the drivetrains have to be certified for emissions compliance by the EPA and the California Air Resource Board.

As Smith noted, the law will provide several benefits beyond allowing companies to sell turnkey replica cars. It'll help state legislators and DMVs better understand replica cars, kit cars, and homebuilt cars and potentially clear up the problems owners of those cars in Texas, Florida, and Wisconsin have faced in recent years. It'll provide a pathway to legality for kit car companies that have to date sold turnkey replica cars via loopholes or extralegal means; "It'll make sure everybody complies with the letter of the law as well as the spirit of the law," Smith said. And it'll entice more companies to consider building replicas and to innovate new ways of building those replicas.

While it's conceivable some replica car companies could move through the registration process and have their plans approved within months, Smith said it's going to take Factory Five one or two years to be up and running under the new law.

Nor is Smith the only replica carmaker who has found that the four years' worth of unanticipated delays from the EPA and the NHTSA have put a wrench into plans to build the turnkey replica cars that the law allows. Of the more than a dozen car companies that have lobbied for the law, invested resources into building legal turnkey replicas, or otherwise been involved in shaping this law, at least one - Craig Corbell's Cord revival - has dropped its plans entirely, and manufacture from one or two others in the as-announced form appears doubtful. Of the rest, only a couple appear able to submit their plans and start production right away, according to a Hemmings survey of those companies.

"Four years overdue with no clear idea of when (or if!) these regulations would ever be released did certainly keep us from putting too many eggs in that stainless steel basket, so to speak," James Espey, DeLorean's vice president, wrote in an email.

As Espey noted, those four years of inactivity have now made it difficult to line up suppliers, workers, and investment.

Some previous suppliers that we had lined up have gone out of business during the pandemic, others have been absorbed by larger companies that have made it clear low volume component production is not something they're interested in pursuing. In that regard there will be a fair amount of work to be re-done. Perhaps worse, some "champions" we had at various suppliers have retired or moved on. In some cases this has left a void, where before there was a DeLorean fan, who rallied for us within their company and management.



Factory Five Mk4 Roadster. Photo courtesy Factory Five.

Additionally, certain staffing candidates that were on our short-list have long since moved on in and while unemployment has increased during 2020, many of the specialized roles that we require are still hard to fill. Most critically, financial markets have changed, and will change even more as the world navigates the continuing COVID crisis... Will the financial support that we had lined up a few years ago to carry us through the final development and into production still be available?

He said DeLorean will continue to move ahead with its replica car plans, "but at our own pace."

One other factor that will slow down DeLorean's ability to build turnkey replicas is the engine availability. According to Espey, the company had originally planned to offer its replicas starting in 2017 with an engine that had emissions compliance certification through 2022, thus giving the company three to four years to arrange for a new powertrain. "Now... it doesn't seem like a good idea to plan around an engine so near its end of life," he wrote.

Engine certification will ultimately come down to CARB, according to those who've pushed for the law. "That was a compromise that was necessary to get the law passed," Smith said.

Jonathan Ward of ICON, who has expressed interest in building new first-generation Ford Broncos under the law, said that he simply can't move forward with his plans "until California defines process and policy. Certification... takes so long that the timeline is impossible, not to mention the economics."

Lack of available engines has also caused Tom Scarpello of Revology to delay his plans to introduce a turnkey replica Mustang. "I wouldn't say we're starting from scratch," he said. "But all that work we initially did - we even had a running prototype - that work was wasted because all the powertrains have since then gone to the next generation and with the delays, it didn't make any sense to invest in the next generation of engines."

Revology will likely not announce its plans to move forward for another few months.

Smith was similarly "not real optimistic" about the availability of EPA- and CARB-certified engines for replica carmakers. "The volume's just not there," he said. "To the major carmakers, the prospect of selling 325 engines a year - that's not a tremendous influence on their business." That said, he does see "even odds" that Ford will eventually offer an engine package just as GM has with its LS3 E-Rod package.

While many replica car companies have felt these various pinches, at least a couple others should indeed be able to start selling replica cars before the year is out. "This is a huge boon to companies that are already tooled up and ready to go," Smith said.

Lance Stander of Superformance said his company's overseas turnkey sales means selling turnkey replicas here in the United States is just a matter of paperwork. "At the earliest, and this is without any more delays, we'll be able to start selling cars in about six months' time," he said.

Which is not to say that neither of those companies faced setbacks over the last five years. Allard said the delays cost him six figures plus the loss of three employees. In addition, he said, he's seen the erosion of the supply chain, starting with raw steel and aluminum, in the intervening years, thus making it tougher for him to tool up now.

Stander said he "invested a ton" to take advantage of the replica car law and though he has recouped that investment, "we would have been far ahead with our plans" were it not for the delays.

While the law allows up to 325 replicas per year, none of the above companies said they envisioned reaching that number right away. "Very few companies will have the ability to meet the 325 per year mark," Smith said. "Maybe we will in four or five years."

That said, Smith argues that the demand and the market are definitely there for fun, relatively well priced replicas. "Altogether, the turnkey replica car market will be maybe one percent of the Harley-Davidson market," he said. "But we'll find out what happens when the dust settles in a year or two. One thing I have learned, though, is don't invest in government programs until they're done."



Superformance Corvette Grand Sport.



Revology Shelby G.T. 500.



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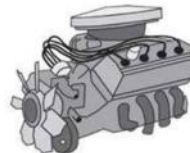
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Land Rover: the world's most versatile vehicle

Super Models By Mark Oastler-21 December 2020

This article was first published on Shannons website and has been reproduced here.

If necessity is the mother of invention, Land Rover owes its proud heritage to the economic devastation of early post-war Britain. Crippling material shortages combined with government incentives inspired car maker Rover to invent a new category of vehicle which, although intended only as a stopgap, became a global phenomenon.

The original Land Rover was launched in 1948 (the same year GM unveiled Australia's first Holden) and remained in continuous production until 2016, with more than two million produced and sold in more than 140 countries. And during those 68 years, under numerous owners, it evolved through several generations from the original Series to the definitive Defender.

Through it all the Land Rover was resolute in adhering to its core principles of a rugged ladder-frame chassis, live axles front and rear, a lightweight and rust-free aluminium body (although some steel panels were used in later model Defenders) and an upright driving position offering a commanding view of the toughest terrain.

Although Rover was known for producing dignified cars for a respectable clientele, such indulgences were not a priority in the immediate post-war period. Scant raw materials were prioritised for production of commercial vehicles, which could not only assist in the nation's rebuilding but also earn crucial foreign exchange through exports.

Given a global shortage of modern agricultural machinery, Rover's managing director Spencer Wilks and his brother, chief designer Maurice, envisaged something similar in design to the ubiquitous war-time Willys Jeep but with a farming focus. A cross between a light truck and a tractor. A Rover for the man on the land, which probably inspired the name.

The Jeep certainly planted the seed (excuse the pun) given Wilks' hands-on experience with his own war surplus Jeep on his farm in North Wales. Rover forecast production of only two to three years for the Land Rover, primarily to generate enough export earnings to restart car production. Ironically, within two years this stopgap vehicle would be the company's mainstay!

The first prototype, built from an amalgam of Jeep and Rover parts, showed its farming focus with the steering wheel located in the centre just like a tractor and with PTO (power take-off) drives to operate a capstan-style winch and a variety of farm machinery like circular saws, posthole diggers etc.

It was also tested towing ploughs, slashers, feeders, heavily-loaded trailers and other implements and proved capable and versatile. As the project moved rapidly towards production, the central steering wheel proved impractical and was mounted to one side and the bodywork simplified.

Although sharing the same 80-inch wheelbase and similar external dimensions with the Jeep, the Land Rover's defining and successful features grew from a need to simplify production tooling and use a minimum of raw materials during manufacture.

For example, the fully-boxed chassis rails were fabricated from four strips of the most readily available flat steel, braced in a simple jig and seam-welded together. This design not only avoided the complexities of manufacturing conventional U-section beams but the box-section design resulted in a chassis with immense strength and durability.

Aluminium-alloy sheet, stockpiled from military aircraft production during the war, prompted Wilks to construct the body panels using this material which had several benefits; it was much lighter than steel, corrosion-resistant and easier to work with using basic tooling.

The initial limited choice of body colours was also dictated by war surplus supplies of aircraft cockpit paint, which is why early production Land Rovers were only available in various shades of green. Necessity really was the mother of this wonderful invention!

Series I (1948-1958): The Land Rover was launched at the 1948 Amsterdam Motor Show and marketed as an all-terrain light truck designed for farming and light industrial use. It was not only capable of climbing gradients of up to 45 degrees but also driving across them at the same angle without capsizing.



The first pre-production Land Rover with famous HUE-166 British rego

Less than 3.5 metres in length and with a kerb weight of just under 1200kg, the production version built in the company's large factory at Solihull near Birmingham was pure Rover; its 1.6-litre four-cylinder petrol engine with a meagre 50bhp (37kW), four-speed gearbox with non-synchro first and second gears and live front and rear axles were all shared with the P3 sedan.

The 4x4 transfer case with 2.52:1 low-range reduction was designed and manufactured in-house and initially utilised Rover's free-wheel unit which allowed a form of semi-permanent AWD. Brakes were drums all-round, there was a two-piece windscreen and the instrument panel was located in the centre of the dash.

To peg the UK price at £450 (about \$25,000 today) the Land Rover buyer had to pay more for a canvas roof, door top sections with sliding-glass panes and a heater; even a spare wheel/tyre (which could be carried on the bonnet to optimise load space), crank-handle and passenger seat cushion were optional extras! However, it was also categorised as a commercial vehicle, so was exempt from punitive UK sales tax.

Rover anticipated demand for a more comfortable version and in 1949 launched a station wagon variant, with a three-door body built by upmarket coachbuilder Tickford. It could seat up to seven on leather seats but its high price combined with 'private car' status (which attracted UK sales tax) resulted in poor sales and a premature demise.

By 1950 the semi-permanent free-wheel 4x4 system had been replaced by a conventional part-time, dual-range design, with front axle engagement controlled by a floor-mounted lever. The headlights were moved from behind the mesh grille to new positions that protruded through it.

Customer requests for more power and load space saw the 1.6 litre petrol engine replaced with a larger 2.0 litre unit in 1952 and two years later the stumpy 80-inch (2030mm) wheelbase was stretched to 86 inches (2180mm). A new 107-inch (2720mm) extended wheelbase pick-up was also launched.

Land Rover's first five-door station wagon arrived the following year, built on the 107-inch wheelbase. With seating for up to 10, it was designed primarily as a commercial vehicle for transporting crews to remote locations but also proved popular with private buyers.

The new wagon also introduced Land Rover's famous 'safari roof' which consisted of a second roof skin. This simple but effective design exploited the insulative air space between the two skins to keep the interior cooler in hot weather and reduce condensation in cold weather.

In 1956 the wheelbases were extended again, this time by 2.0 inches to 88 inches (2240mm) and 109 inches (2770mm). These remained unchanged for 25 years and resulted in them being referred to as SWB and LWB models from then on.

Land Rover's first diesel engine was added to the line-up in 1957. Although this new 2.0 litre four-cylinder oil-burner shared a similar displacement to the overhead inlet/side exhaust valve petrol engine, it was a more modern full OHV design developed for more efficient road use.

Series II (1958-1961): The Series II had a relatively short production life but was significant in being the first Land Rover to receive input from Rover's car styling department, as it was gaining popularity with a broad spectrum of private buyers.

The SII's wider track dimensions resulted in a wider body to cover it, with a waistline defined by a neat 90-degree curve that ran the full length of the vehicle. There were also new sill panels under the doors to hide the chassis rails, a revised grille, new manually-operated ventilation flaps under the windscreen and the pick-up's truck-cab had a more rounded roof and curved side windows.

The SII was also the first Land Rover to be fitted with Rover's latest 2.3 litre (2286cc) OHV four-cylinder petrol engine. It was closely related to the 2.0 litre diesel unit and assembled on the same production lines, becoming Land Rover's standard engine from the late 1950s until the mid-1980s when diesels started to dominate.

The 109-inch station wagon introduced a new 12-seat option to again exploit UK tax laws, which classed any vehicle with 12 seats or more as a bus. This not only earned generous sales tax exemptions but also allowed the use of bus lanes in busy London! It remained popular for decades, being retained on later Series and Defender variants until production ceased in 2002.

Series IIA (1961-1971): The SII and SIIA were hard to distinguish, visually at least, as the most significant change was an increase in diesel engine displacement from 2052cc to the same 2286cc as its petrol sibling.

However, there was no mistaking the all-new Forward Control launched in 1962. Based on the 109-inch chassis, it featured a short-nose version of the pick-up cab positioned over the 2.3 litre petrol engine, resulting in unprecedented load space and a hefty 30cwt (1.5-tonne) payload rating.

Although equipped with heavy-duty axles and larger 9.00 x 16 tyres on deep-dish rims, its four-cylinder engine felt under-powered when subjected to such heavy loads and most of the small number produced suffered hard working lives.

The improved SIIB version released in 1966 added the torquey new 2.3 litre diesel engine as an option and in 1967 export models were first to receive a new 2.6 litre petrol inline six, both of which later became available in regular models.

The Forward Control's wheelbase was extended from 109 to 110 inches (2794mm) which with wider-track axles, a front anti-roll bar and rear springs mounted above rather than below the axle improved stability. Production ended in 1974 but many of its heavy-duty components lived on in the One-Ton pick-up (see SIII).

In 1968 Land Rover celebrated its 20th birthday having produced almost 600,000 units, of which more than 70 per cent had been exported. It dominated many world markets during the 1960s, at one stage commanding more than 90 per cent of Australian 4x4 sales with similar percentages in Africa and the Middle East.

Land Rover was one of the British motor industry's greatest success stories, yet under considerable political pressure at that time the Rover Company merged with several other famous British marques into a new conglomerate called British Leyland. This would have a debilitating effect on Land Rover's fortunes, particular in those valuable export markets.

A significant styling change came in 1969 when the headlights were moved to the outer panels to comply with new lighting rules. The sill panels were also slightly trimmed to provide extra underbody clearance.

Series III (1971-1985): The SIII was the final Series model and the most popular with 440,000 units sold. It was also during SIII production that the one millionth Land Rover rolled off the production line in 1976. The SIII saw numerous updates as British Leyland tried to respond to formidable competition from Japan, particularly in export markets where powerful six-cylinder rivals like the **Toyota Land Cruiser** and **Nissan Patrol** were rapidly eating into Land Rover's market share.

Limited supplies of new Land Rovers, which had to be shipped in CKD form and locally assembled, created long waiting lists for commercial fleet and private buyers alike, who increasingly opted for Japanese rivals that could be supplied quickly and in large numbers. By the mid-1970s the Land Rover was also considered slow and under-powered with questionable build quality compared to Japanese rivals.

Even so, among many SIII upgrades were replacement of the traditional metal grille with a lighter plastic design, stronger engines and axles, full-synchro gearbox with optional Fairy overdrive unit, redesigned dashboard with full-width plastic moulding and driver's side instrument cluster, plus new interior trim options.

In 1978 Land Rover became a stand-alone BL division and in response to criticisms of being under-powered, Land Rover launched the Stage One V8 in 1979, which referred to the first stage of direct investment by the British government in assisting the company to increase export sales.

The Stage One V8 shared the Range Rover's permanent AWD system and 3.5 litre aluminium petrol V8 but detuned in deference to the contemporary Rangie. Although it retained its traditional leaf springs, the Stage One V8 was a considerable advance on previous offerings and in retrospect a transitional vehicle on the way to the coil-spring models that followed.



Australian Land Rovers at this time also offered a globally unique engine in the form of Isuzu's rugged 4BD1 3.9 litre four-cylinder diesel, which from 1981 to 1990 was the only diesel engine available.

Another variant produced during the 1960s and '70s was the One Ton, which as the name suggests could carry a one-ton-plus payload. Although aimed at commercial fleets, total production was less than 1000 units making the One Ton one of rarest Series variants.

1982 saw introduction of the County station wagon option, available in either SWB or LWB with numerous luxury options aimed at the recreational user. By contrast, Land Rover also launched the High Capacity Pick-Up (HCPU) based on the LWB chassis with heavy-duty suspension and an enlarged load tub that offered 25 per cent more load volume than the standard pick-up.

It should be noted that the Series I, II, IIA and III Land Rovers were also widely used in a variety of specialised military configurations, not only in the UK but also Australia, New Zealand and South Africa. They were also built under licence by Minerva in Belgium and Santana in Spain.

Land Rover Ninety, One Ten and 127 (1983-1990): The first of the coil-spring models launched in 1983 was called the One Ten in reference to its new 110-inch (2800mm) wheelbase which was one inch (25mm) longer than the previous LWB model.

1983 also saw the launch of an even longer model with a definitive 127-inch (3226mm) wheelbase. This four-door six-seater was effectively the front half of a 110 station wagon mated to the rear half of a 110 High Capacity Pick-Up, built on a special production line which cut the chassis in two and added 17 inches (432mm) of chassis length.

The 127, with its big one-tonne-plus payload rating, was designed primarily for military and utility companies but also proved a popular starting point for numerous conversions into ambulances, fire engines, mobile workshops, adventurer motorhomes and more.

In 1984 came the SWB Ninety, which like its LWB stablemate had seen an increase in wheelbase; stretched to 93 inches (2362mm) but for ease of description rounded down to 90 inches. Interestingly, the new wheelbase dimensions were spelled out in full (Ninety and One Ten) in all advertising and service literature, but the vehicles were badged numerically as 90 and 110.

These new models were distinguished by a number of firsts including a flush-fitting grille with matching full-length bonnet, prominent wheel arch flares to shroud wider-track axles, a one-piece windscreen, wind-up windows (from 1984) and revised interior design.

The new Range Rover-inspired coil-spring suspension provided improved axle articulation and a more supple and comfortable ride, which was becoming increasingly important in appealing to recreational buyers.

The new models also adopted a permanent AWD system derived from the Range Rover, as previously trialled in the SIII Stage One V8, featuring a dual-range transfer case and centre diff that could be manually locked for serious off-roading.

The engine line-up carried over from the Series III but in 1984 a new generation 2.5 litre four-cylinder diesel was introduced. The following year the four-cylinder and V8 petrol engines were also upgraded, with for the first time a V8 option available in a SWB model. The V8 was backed by a new five-speed manual gearbox.

The 1986 collapse of British Leyland and subsequent sell-off/privatisation of its embattled divisions saw Land Rover become part of the Rover Group under British Aerospace ownership.

The same year, again in response to relentless Japanese competition, Land Rover launched its first forced-induction engine. The Diesel Turbo was a lightly turbocharged version of the existing 2.5 litre four-cylinder diesel with a 13 per cent power increase and substantial 32 per cent boost in torque. Although early versions gained a reputation for poor reliability, within two years Land Rover's extensive revisions had largely solved these teething troubles. The petrol V8 was also upgraded with more power.

Land Rover continued to service commercial fleets (including military) and private recreational buyers who wanted many different versions of the same models. The 90, 110 and 127 were available in basic workhorse specification, but for those wanting a better-equipped lifestyle choice the County (90 and 110 only) continued to appeal, even more so with the switch to coil-spring suspension.

In 1987 the Australian Army introduced a locally-developed military version of the 110 called the Perentie, named after Australia's largest goanna. 4x4 models were powered by Isuzu's well-proven 3.9 litre 4BD1 diesel while 6x6 variants used the more powerful 4BD1-T turbocharged version.

Defender (1990-2016): The 1989 launch of the all-new Discovery, which filled a niche between Land Rover and Range Rover, had the potential to cause confusion over traditional model names. So, from 1990 the Ninety was renamed Defender 90, the One Ten became Defender 110 and the Land Rover 127 was rounded-up to Defender 130, even though its wheelbase remained unchanged.

Significant engineering and mechanical changes continued, with the Defender 130 moving to its own dedicated chassis in preference to the previous cut-and-stretch method performed on a production line. The Defender also shared the Discovery's new turbo-diesel engine called the 200TDi, which was a greatly improved version of the original 2.5 litre Diesel Turbo. Defender buyers could still choose from existing diesel and petrol options, but the new 200TDi's unique blend of performance and economy claimed the majority of sales.

In 1994, when the Rover Group was amalgamated with BMW, came the 300TDi which was an all-new engine compared to the 200TDi which had been an upgrade of the original Diesel Turbo. Even so, the new 300 TDi had the same 2.5 litre displacement and both the Defender and Discovery shared the same state of tune.

Throughout the 1990s the Defender remained true to its workhorse roots yet continued to entice more upmarket lifestyle/recreational buyers, epitomised by the release of numerous limited-edition models with special equipment. Land Rover also released a new variant of the Defender 110 dual cab with an open pick-up body.

In 1998 the Defender was fitted with an all-new 2.5 litre five-cylinder inline turbodiesel engine badged Td5, which replaced the 300TDi as it could not meet tougher Euro 3 emissions rules. It also became the only engine available, as the others had been dropped.

With its advanced electronic control systems and refinement, the Td5 produced significant gains in power and torque. Even so, traditionalists were critical of the growing use of electronic systems, should they fail in remote locations where Defenders often ventured. During this period, Land Rover South Africa produced a unique Defender for its domestic market powered by BMW's M52 2.8 litre 24-valve petrol inline six. This silky smooth and powerful engine shared with numerous BMW sedans reportedly performed better than the discontinued V8 it replaced.

In 2000 Land Rover again had a new owner, this time Ford's Premier Automotive Group. Two years later the Td5 engine was further refined to meet increasingly stringent European emissions rules and Defender upgrades included a centre console, improved instrumentation, power windows and a new one-piece rear door with improved weather sealing.

In catering for booming demand from recreational buyers, a new XS premium model grade was launched with many luxury appointments and the popular County option was also now available in every model in the Defender line-up. A significant change under Ford's PAG ownership in 2007 was replacement of the Td5 with the Transit van's Duratorq 2.4 litre four-cylinder turbo-diesel, ensuring the Td5 was the last Land Rover engine designed and built in-house. Specially adapted for harsh climates and extreme angles experienced in off-road use, the Duratorq's power levels remained the same but torque increased due to the latest variable-vane turbocharger technology.

The Defender's bonnet was reshaped to provide extra clearance for the taller Duratorq engine and there was also a new six-speed manual gearbox with an extra-long top gear that reduced noise and fuel consumption at highway speeds. Inside was a new dashboard fascia, instrumentation and heating/ventilation system; the latter requiring removal of the crude but effective pair of air-vent flaps under the windscreen that had been a design feature since the late 1950s.

Tougher European passenger safety rules for 2007 also outlawed the inward-facing crew seats which had been in use since the Land Rover's inception. This switch to forward-facing seats brought Defender in line with its competitors in both seating design and capacity. The same year saw a new Defender body style introduced on the 110 chassis called the Utility, which was a five-door wagon body with the third row of seats and rear side windows removed, resulting in a five-seater with a van-style load space.

2008 brought yet another ownership change, this time from Ford to the newly created Jaguar Land Rover division formed under India's giant Tata Group. Even so, Ford continued to supply its 2.4 litre Duratorq turbo-diesel engine until 2012, when it was replaced by a slightly smaller but equally powerful 2.2 litre derivative to meet the latest Euro 5 emissions. Customer demand also saw the nostalgic return of a soft-top roof option.

However, by then the Defender was living on borrowed time. It had long since been withdrawn from North American sales in 1997 as it could no longer meet US safety standards. And impending 2015 European legislation covering pedestrian safety and compulsory fitment of airbags in commercial vehicles led Land Rover to conclude that an all-new design was needed.

So, on January 29, 2016, production ceased after more than two million Series and Defenders had been built. The last Defender, a soft-top 90, rolled off the line with UK registration plate H166-HUE in a tribute to the HUE-166 plate displayed by the first production Land Rover. Both vehicles are owned by JLR and effectively book-end the 1948-2016 era.

Defender (2020): The reimagined Defender is designed with the need to meet increasingly tough emissions, safety standards and customer demands many years into the future. However, achieving that goal has required a total redesign of the classic Land Rover.

There are still the signature 90 and 110 model designations, but the new generation's much longer wheelbases have no correlation with these numbers. Gone too is the rugged steel ladder-frame chassis, replaced by a unitary body-chassis unit made from high-strength aluminium claimed to be tougher yet lighter.

The front and rear live axles have been replaced by independent suspension, along with advanced mild hybrid-electric diesel and petrol engines, eight-speed automatic transmissions and more electronics than a NASA control centre.

Only time will tell if it meets the lofty expectations of Land Rover traditionalists (many protest that it should never have been called Defender) along with those new to the model. Either way, it will at least ensure that one of the most famous and revered names in automotive history will survive and hopefully thrive in the new millennium.

Celebrating Australia's HOLDEN Heritage



The history of HOLDEN is very much the history of Australian manufacturing and the Australian people!



TRAFALGAR HOLDEN MUSEUM INC.

74 Waterloo Road
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TRAFALGAR HOLDEN MUSEUM
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Celebrating Australia's HOLDEN Heritage...



Trafalgar, West Gippsland, Victoria, Australia

Celebrating Australia's HOLDEN Heritage

Come and learn the complete Holden story in Trafalgar, Victoria.

Long before Australians drove the famous **HOLDEN** cars this iconic brand had its name on saddles & buggies, golf clubs and pedal cars... trams and aero engines.

From humble beginnings as a saddlery in Adelaide the **HOLDEN** name quickly became synonymous with engineering innovation, industrial pride and Australian ingenuity.

The **Trafalgar Holden Museum** in Gippsland Victoria helps tell that remarkable story and celebrates Australia's **HOLDEN** Heritage.



See display items from Holden's distant past, motor vehicles bodied by craftsmen and later designed here in Australia.



Housed in a quaintly preserved dairy factory in Trafalgar, the museum is run by a team of enthusiasts eager to preserve our national heritage.

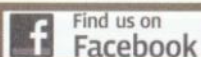
Visit the cafe, browse the gift shop and watch **HOLDEN** history on screen in the community bank theatre.

Opened in 2014, the museum has grown every year and has new and exciting exhibits rotated every 3 months.

Original HOLDEN made items on display include:



- Fine range of original HOLDEN made and bodied cars
- Gypsy Major Aero Engine
- HOLDEN made Melbourne tram
- Military Equipment
- Pedal Car
- Saddles
- Golf Clubs
- Badges
- HOLDEN built patrol boat
- GMH Household display
- Utes
- Engines
- Memorabilia
- Special displays
- Motorsport Tribute



Follow updates on the **Trafalgar Holden Museum** facebook site and join us every October for the Route 69 Cruise, celebrating 69 years of **HOLDEN** automotive manufacturing in Australia.

Main Shed feature
Marshall Steam Engine
Nicknamed 'Auntie Jack'



Sunbeam Motor Cycle early 1950's
Used in the movie Romulus, My Father



A local showcase of machinery that worked the land, the township of Maldon and has pioneered the way we live today.



Maldon - Victoria - Australia
Australia's First Notable Town

Maldon is a very attractive little country town about half way between the large regional cities of Ballarat and Bendigo and about 110 km north-west of Melbourne. The Vintage Machinery Museum has a very mixed collection of all kinds of machinery from a Merryweather & Sons hand-pumped fire appliance to an operating Linotype machine which was used in the printing industry, the only known Cornelius Pettet Steam Pump in the world and lots of engines of various kinds.

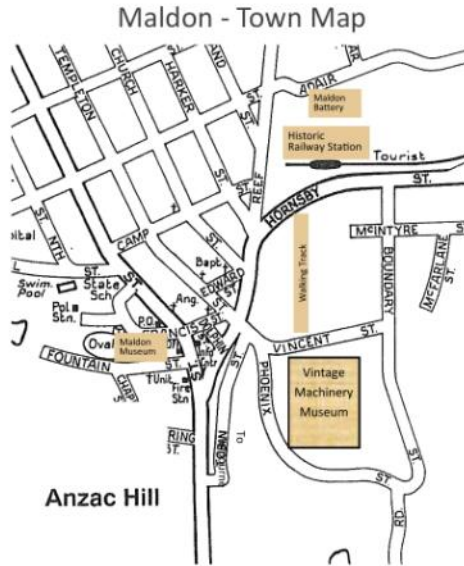
The museum has a strong emphasis on the products of Thompson & Co of Castlemaine, one of the largest machinery manufacturers in our country in the early days. Thompsons are now gone, taken over by an American company with no interest in Australian history. The museum has acquired a large collection of engineering drawings from Thompsons when the new owners were "cleaning up."

The museum collection includes several steam engines. The most interesting is a rather cumbersome-looking vertical inverted single cylinder pumping engine which raised water from a nearby creek to the cisterns for boiler feed and other domestic uses at the Thompson foundry at Castlemaine.

There are several Thompson totally enclosed high-speed engines. Thompsons built lots of these around the time of the Second World War and many were used to drive generators in ships



The Power of Steam
The Steam Generating Plant that ran Thompsons Foundry, Castlemaine
In the late 1800's and into the early 1900's



Anzac Hill

Maldon Vintage Machinery Museum is available for private Bookings by request and may be booked by contacting:
Peter Thompson
peter@maldonmachinery.com.au

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Old Driveshaft from the Castlemaine Woolen Mill. Used to drive many spinning and weaving machines



The Old Otley Printing Press
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The
Blacksmith
Shop



The Wooden
Tarrangower
Times Truck



The Flat
Belt Drive
Line of
Industrial
Machinery

Maldon's
1st Fire Truck
1899

Merryweather
horse drawn
hand pump



HISTORICAL ENGINE RALLY
Held over the Easter weekend every year

Book Review

“Brick by Brick – the biography of the man who really made the Mini – Leonard Lord”

by Martyn Nutland.

311 pages, few black and white pictures.

Price £12.40 including p and p from Amazon

ISBN 978-1-4772-0318-7

Reviewed by Michael E Ware

Before reading Martyn Nutland's book I knew nothing in depth about Sir Leonard Lord other than having the impression he was not a very nice man. Nutland on the other hand is obviously a great fan of the man having studied his career from an early age. He tells us "Somewhere in my late teens..I fell upon the quote "We're not in business to make bloody motor cars; we're in business to make money." It was attributed to a man whose name I had only seen in ancient back numbers of the Austin Magazine, and then only vaguely noted- Leonard Lord".

Why someone has not written his biography before I cannot imagine, as he was an influence in the motor industry for so many years. After the First World War he worked for Daimler and in 1923 moved over to Morris Motors. By 1927 he was trusted enough to be moved over to Wolseley when they were bought by Morris. He went there to modernise the factory and its production methods. This led to him becoming general manager of Morris. Some say Lord and Morris did not get on which is why he left Morris for rivals Austin. Martyn Nutland gives a page of quotes from people around at the time who had a view on the matter.

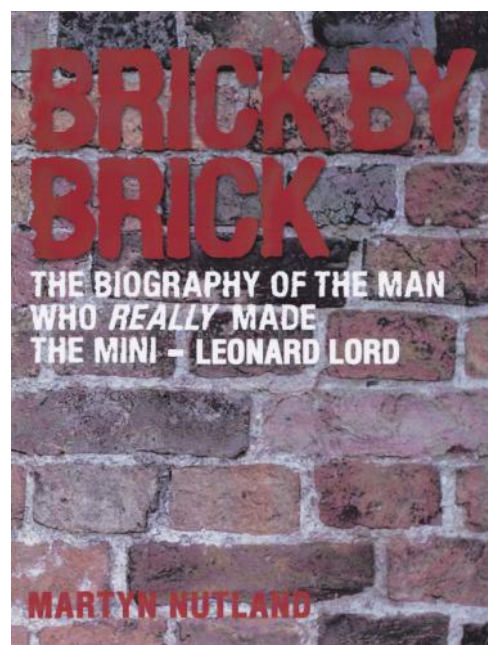
Later Lord became a senior manager at Austins, later its Chairman. He oversaw all the difficulties and pressure of war time production, and was able to get Austin back into car production very quickly after the war. In 1962 he became president of British Motor Corporation.

I like the way Martyn Nutland puts the whole scene into context, The way so many outside happenings influenced the motor industry and the decisions taken, political, social, unions, weather, supply shortages, and many more.

I had not heard the story that Lord wanted a new image for his post war new models. He asked designer Dick Burzi to rework the handsome winged B motif designed by Gordon Crosby for Bentley. So came about the "flying A". "A new overseas-oriented insignia "Austin of England" complimented the bonnet ornament." I had not realised that Leonard Lord was the man who was responsible for setting up the factory to build the J 40 and Pathfinder pedal cars. This factory also was involved in making parts for the production Austins "...stamping tappet galleries and timing chain covers, rocker boxes and making lorry seats".

It was Lord that brought Alec Issigonis to Austin from Alvis and encouraged him to design the Mini. "However if we credit Lord with being the natural parent of the Mini and it is right we should, we must hold him responsible, to an extent, for its growth into delinquency in the society that was BMC"

Martyn Nutland's last sentence reads "I leave you with the thought that, after 1945, there would have soon been no British motor industry at all if there had been no Leonard Lord." Do get the book and draw your own conclusions.





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