LOW VOLUME VEHICLE TECHNICAL ASSOCIATION Inc

Introduction of 'Sub-categories' for Scratch-built Low Volume Vehicles

The purpose of this LVV Information Sheet is to communicate to LVV Certifiers a new addition to the LVV system, which provides a distinction between different types of scratch-built low volume vehicles. This change will result in a fairer and more appropriate application of the LVV certification process to certain types of scratch-built low volume vehicles.

Background:

This introduction of scratch-built 'sub-categories' has been developed to enable certain types of vehicles, principally those constructed by a small sector of The Vintage Car Cub of New Zealand's (VCC) membership, to be able to be certified to the Low Volume Vehicle Code (LVV Code), without technical requirements being imposed on them that are inappropriate for scratch-built vehicles constructed as authentic replicas of veteran and vintage vehicles.

As a result of a lack of a voice from the VCC membership within LVVTA during the establishment and early development of the low volume vehicle system, there has been no distinction between the way in which the technical requirements of the LVV Code are applied to, say, a scratch-built fibreglass reproduction 1934 Ford Coupe hot rod fitted with a late-model high-powered drive-train, and an authentically replicated scratch-built 1925 Bentley 3-litre using all original materials and period components. This has led to significant LVV certification problems for authentic-replica style vehicles, to the extent where some simply cannot be put on the road.

An example of the problem is the LVV requirement (under Low Volume Vehicle Standard 155-20 [Door Retention Systems]) for a burst-proof door retention system capable of withstanding approximately 11 kN of load to be incorporated within all scratch-built LVVs with doors fitted.

Because of the lack of distinction between differing types of scratch-built vehicles, this requirement applies equally to an authentically-replicated 1920s Bentley built from the original canvass-clad timber-framed body materials, as it does to a fibreglass replica-bodied hot rod. Clearly, a vehicle such as the canvass-clad timber-framed Bentley replica cannot comply, and short of reconstructing the entire body from modern materials - which would defeat the purpose of building such a vehicle - such a vehicle cannot be made to comply.

This problem was initially identified (and agreement made in principle between Land Transport NZ and LVVTA to resolve it) in 1998, and it has taken until now to develop a workable solution, and have it agreed by Land Transport New Zealand.

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Implementing the solution:

How the sub-category concept will be put into practice:

The LVVTA, through the sign-off process with Land Transport New Zealand during the development of LVV standards, can vary the technical requirements within the LVV standards for certain vehicle types by excluding specified vehicles from certain technical requirements within Section 4 of the LVV standards. For example, a door fitted toward the rear of a motor caravan body can be excluded from the requirement of being fitted with a burst-proof door retention system, provided that there are no seating positions adjacent to the door.

Therefore, through the introduction of three different scratch-built sub-categories, provision for certain sub-categories of scratch-built low volume vehicles can be built in on a standard-by-standard basis, to resolve the long-standing problems that have been experienced by a small number of vehicle enthusiasts.

Defining the sub-categories, and vehicles within them:

To solve the current problem of all scratch-built vehicles having the same tough requirements applied, we have established sub-categories of 'scratch-built' low volume vehicles which clearly define these 'at-risk' vehicles which need 'special treatment' due to the nature of their design and construction, and have set out how these vehicles will be treated. The sub-categories are: scratch-built 'Historic Replica', scratch-built 'Reproduction', and scratch-built 'Unique'.

To follow is a table that defines the various LVV scratch-built sub-categories, together with the assessment methods used for establishing the appropriate scratch-built sub-category, and the applicable certification requirements for each sub-category.

Sub-category	***Examples***	***Definition***	***Assessment method***	***LVV Certification requirements***
scratch-built '*Historic Replica*'	**Constructed 1925 Bentley 3-litre replica; constructed alloy-bodied AC Cobra replica; constructed Type-35 Bugatti replica**	A scratch-built 'Historic Replica' vehicle is a vehicle which is an authentic replica of a specific make and model of production motor vehicle that was manufactured before 1960, which uses components, systems, materials, and engineering processes throughout its construction that are appropriate to the period in which the vehicle is styled, and either: 1. is an accurate historical representation of a vehicle built from a period of motoring history before 1960; or 2. is not readily distinguishable from an original example of the vehicle being replicated. *(See Note 1)*	A low volume vehicle must, in order to be categorised as 'Scratch-built Historic Replica', be issued with a valid Identity Card of The Vintage Car Club of New Zealand, which specifies the vehicle's classification as either B5, C4, or C5. *(See Note 2)*	A 'Scratch-built Historic Replica' vehicle must comply with specified technical requirements contained in all LVVTA Low Volume Vehicle Standards.

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scratch-built '*Repro-duction*'	**Fibreglass reproduction 1934 Ford Coupe hot rod; fibreglass reproduction AC Cobra; fibreglass reproduction MGTF**	A scratch-built 'Reproduction' vehicle is a vehicle which is clearly recognisable as a reproduction of a specific make and model of production motor vehicle, and maintains an actual or approximate silhouette of the vehicle being reproduced, and uses an amalgamation of period and modern components, systems, materials, and engineering processes throughout its construction.	Visual identification and assessment by a Category 1D-authorised Low Volume Vehicle Certifier, endorsed by a LVVTA-member association.	A 'Scratch-built Reproduction' vehicle must comply with specified technical requirements contained in all LVVTA Low Volume Vehicle Standards. *(See Note 3)*
scratch-built '*Unique*'	**Uniquely-styled sports car (eg Saker); futuristic concept car (eg Hulme)**	A scratch-built 'Unique' vehicle is a vehicle that is not recognisable as a reproduction of any specific make and model of production motor vehicle, but is the result of the builder's individual and unique ideas.	Visual identification and assessment by a Category 1D-authorised Low Volume Vehicle Certifier, endorsed by a LVVTA-member association.	A 'Scratch-built Unique' vehicle must comply with all technical requirements contained in all LVVTA Low Volume Vehicle Standards.

Note 1: A vehicle, for the purpose of this process that was manufactured before 1960, includes those vehicles whose production commenced prior to 1960 but continued past 1960.

Note 2: In assessing whether or not a vehicle fits within option 1 under the scratch-built 'Historic Replica' definition – that is, 'is the vehicle an accurate historical representation of a vehicle built from a period of motoring history before 1960?' - The Vintage Car Club of NZ will consider whether or not the vehicle presented could have been built during the period in which it is styled. This involves determining whether or not all of the key components of the vehicle were in fact available at that time.

Note 3: Scratch-built 'Reproduction' vehicles will be required to comply with significantly more technical requirements within the LVV standards than 'Scratch-built Historic Replica' vehicles.

Which technical requirements a 'Historic Replica' scratch-built will be excluded from:

In past discussions, Land Transport New Zealand have specified that through Section 4 (Exclusions) of the LVV standards, LVVTA can soften the technical requirements as we deem appropriate for 'authentic replica' scratch-built vehicles.

However, it has been agreed between LVVTA and Land Transport New Zealand that a number of critical safety items are 'non-negotiable'. This means that in the case of all scratch-built vehicles, including 'Historic Replicas', the items in the following table must be complied with. From an engineering point of view, all of these items are quite achievable, even for the most authentically-built 'Historic Replicas'.

The table below shows those safety items that are non-negotiable:

System	***Minimum requirements***
Glazing:	must have approved laminated front windscreen (if fitted), and approved toughened or laminated side and rear window (if fitted).
Lighting:	must meet all LVV lighting performance requirements, but no requirement for approved standards compliance.
Brakes:	must meet LVV braking performance requirements.
Seatbelts:	must have minimum of a lap seatbelt for all seating positions.
Steering Impact:	must meet LVV steering system collapsibility requirements.

Where the sub-category concept will 'live' within the LVV system:

The details of the scratch-built sub-categories, and correct application of the LVV standards to the sub-categories, are incorporated within the latest version of the LVV Operating Requirements Schedule (5th Amendment). Category 1D-authorised LVV Certifiers should study this section of the Operating Requirements Schedule.

There is no need to detail this within the Low Volume Vehicle Code itself, as the definition of a scratch-built low volume vehicle is not changing; but rather just the way in which the LVVTA's technical requirements are applied to scratch-built vehicles.

Finally:

If you have any queries or require any further clarification relating to this Information Sheet, please feel free to contact myself at the Auckland LVVTA office on (09) 299-2990.

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