LOW VOLUME VEHICLE TECHNICAL ASSOCIATION (INC)

LVVTA NEWSLETTER

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TOP STORY:

PILLARLESS RETROFIT LAP AND DIAGONAL SEATBELT SYSTEM. DON'T DIE IN A SURVIVABLE ACCIDENT.

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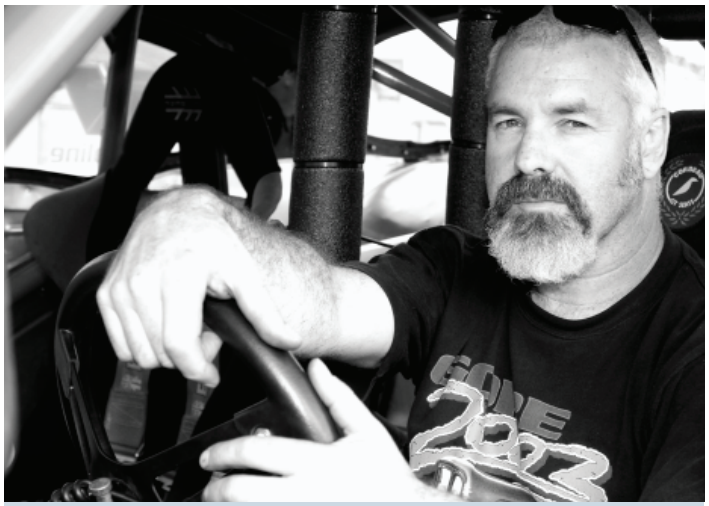

From the CEO

It's no secret that over the past two years, the Transport Agency has identified a lot of concerns with the way in which many Repair certifications and Heavy Vehicle certifications have been carried out. These concerns have given the Agency no option but to 'review' literally hundreds of Repair certification files and hundreds of Heavy Vehicle files. As a result of what they learnt during the file reviews, a number of Repair Certifiers and Heavy Vehicle Certifiers have had their authorities suspended or revoked. How many LVV Certifiers' files have been reviewed by the Transport Agency? None. That's because the Transport Agency has a very high level of confidence in the competence and inspection quality of the LVV Certifiers - because they know that LVVTA has a number of measures in place to ensure that the problems that have been bubbling away beneath the surface in other areas don't exist in the LVV certification space.

LVVTA provides the LVV Certifiers with technical support, training, LVV Standards, Information Sheets, and Safety Alerts. The desk-top auditing system that LVVTA applies to LVV certification files on an everyday basis is something that can frustrate the LVV Certifiers and the vehicle owners alike – but it's probably the single biggest reason that the Agency has such high confidence in the LVV certification system.

I guess the message here is that there's a really big upside to the desk-top auditing system – it's keeping the LVV certification system in good health, and LVV Certifiers safe, just as the LVV Certifiers are keeping the public safe by doing their LVV certification work so well.

Tony Johnson
CEO

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NEWS

Pillarless Retrofit Lap and Diagonal Seatbelt System

Don't die unnecessarily in a survivable accident.

LVVTA is proud to announce an innovative new pillarless lap and diagonal seatbelt system, aimed at old pillarless vehicles. Prototype 1 has been completed and was on display at the 2020 Big Boys Toys show.

While assisting the NZ Police Serious Crash Unit to inspect old cars involved in fatal crashes over recent years, LVVTA has thought about ways of improving the safety of old cars when they're involved in an accident. During recent years, some people have lost their lives in 1950s and 1960s cars during a crash - but the real tragedy has been that these people died in what should have been entirely survivable low-speed accidents. The difference between life and death in these sad events has been, quite simply, the type of seatbelt worn. Drivers have died because they were wearing lap-only seatbelts and sustained fatal chest and lung injuries from pivoting forward and impacting the steering wheel. LVVTA has seen a number of cases where, had the driver been wearing a lap and diagonal seatbelt with a good seatbelt anchorage system, he or she would have walked away.

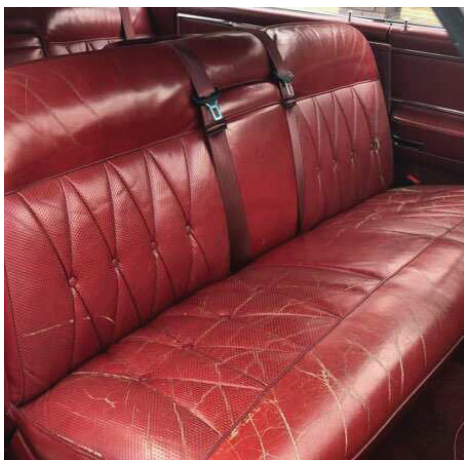
Lap and diagonal seatbelts can often be retro-fitted to old cars, but in some cases, an upper seatbelt anchorage can't be engineered into the B-pillar because there isn't the room to fit the anchorage, or because the B-pillar isn't strong enough. In the case of pillarless cars, there's nothing there to attach the anchorage to, so that's not an option, and in some cases, the roof isn't strong enough to have the upper anchorage fitted into the cant rail. Even if the roof was up to it, often the owners aren't. A lot of classic car enthusiasts love the smooth and elegant lines of a pillarless design, and can't bring themselves to compromise the visual appeal of the car's body style by having a seatbelt hanging down from the roof and visible through the side window opening. In the case of a convertible, there is nowhere to fit an upper anchorage even if you wanted to.

Pillarless seatbelt frame bolted to driveshaft tunnel.

In response to the situation, LVVTA has developed a retrofit solution that will provide a lap and diagonal seatbelt option for pillarless vehicles and convertibles alike, which mounts to the driveshaft tunnel and floor, immediately behind the front seats. ▶▶

The seatbelt anchorage frame will provide the driver and front seat passenger with modern inertia reel lap and diagonal seatbelts, which are comfortable, safe, and mounted out of sight. The seatbelt anchorage system has been tested to simulate a crash situation, and it meets LVVTA's stringent safety requirements - so the likelihood of front seat occupants surviving an accident will be hugely increased. LVVTA has designed the system so that any competent car modifier or builder can build the system in their home garage, by following a set of specifications which will be made available by LVVTA free of charge.

This is an exciting project, and one that we are confident will save lives over the coming years. By mid 2021, LVVTA will have finalised the design, and developed the build and installation specification, which the public will be able to download from the LVVTA website. ■



Above: *Pillarless seatbelt frame protection cover.*
Below: *Pillarless seatbelt front seat.*

LVV Certification Costs to Increase by $50.02 on 1 February 2021

Smell of an Oily Rag

One of LVVTA's big challenges for the past three decades is that it has been constantly doing more, but without more resources. The Government, the LVV Certifiers, and the LVV certification system users all have ever-increasing needs and expectations of LVVTA, so the LVVTA's obligations and responsibilities sits on a constant slightly-upward trajectory, while its income line (based entirely on a fee applied to each LVV certification) stays static. That regulated LVV certification plate fee (collected by the LVV Certifier from the customer) has, because LVVTA is an independent incorporated society rather than a Government Agency, always been LVVTA's only major income source, and so increasing this fee has been the only way to keep up.

'Running on the smell of an oily rag' has been the LVVTA mantra for nearly three decades, but that modus operandi has its shortcomings.

Waka Kotahi NZ Transport Agency (Waka Kotahi) has been working with the LVVTA over the past year to identify what LVVTA needs in order to operate in a properly-resourced and properly-sustainable manner. It was agreed early in 2020 that LVVTA needed to achieve a significant increase in income.

The certification plate fee is currently set at $165.10 (plus GST), or $189.86 (inc GST), and the last increase to the certification plate fee took place on 1 August 2018, at which time the fee was $142.60 (plus GST) or $164.00 (inc GST). On 1 February 2021, the new certification plate fee, with the addition of the $50.02 increase, will be $215.12 (plus GST) or $247.39 (inc GST).

Improving LVV Certification Services

Waka Kotahi has recognised the need for LVVTA to continue doing a good job of looking after the LVV certification system, including keeping modified and individually-constructed vehicles safe, supporting the LVV Certifiers, and helping the LVV Certifiers to continue operating at a consistently high level. Waka Kotahi also recognises the value in LVVTA increasing the range of services that it provides within the LVV space on its behalf. Which, of course, all takes resources, which costs money – even for an organisation very familiar with operating efficiently on the smell of an oily rag.

Being in a position to continue to deliver these initiatives is going to result in a significant increase in overall operating costs for LVVTA, which would mean, using LVVTA's traditional funding model, a substantial increase in the LVV certification plate fee.

Contribution from Waka Kotahi NZ Transport Agency

The good news however for the modification sector is that Waka Kotahi is now making an annual contribution toward the LVVTA's operating costs, in order to reduce the amount by which the certification plate fee would have otherwise had to be increased, so the plate fee increase isn't going to cost the consumer as much as was originally thought. Whereas the certification plate fee could have increased by over $150 as a result of the review of LVVTA's operating costs, the increase has been kept down to $50.02 (plus GST) as a result of the annual contribution.

This is great news for the vehicle modification and construction sector, as the support from Waka Kotahi will ensure that the cost of the LVV certification system remains affordable. ▶▶

An additional $50.02 per certification is a small price to pay for a sustainable system where New Zealanders can confidently continue to build and modify cars into the future. Kane Patena (General Manager Regulatory Services, Waka Kotahi) has worked closely with the LVVTA since his appointment and said, *"We're pleased to have supported LVVTA this year with some additional funding as they've developed a more sustainable funding model. This support, along with the increase in plate fees, will contribute to their continued good work in the vehicle certification sector."*

Waka Kotahi is focused on ensuring the transport system is safe for everyone in New Zealand. It's important to recognise that a high-quality, safe, and sustainable LVV certification system isn't just for the benefit of the modified vehicle owners themselves, but also for other members of the public who share the roads with these modified vehicles - who would rightly expect that those modified vehicles are safe.

Above: *The Electronic Data Plate.*

Other System Improvements in February

The increase to the LVV certification plate fee on 1 February 2021 will coincide with the introduction of the new 'Electronic Data Plate' system, which will replace the traditional engraved aluminium certification plate. This Data Plate actually provides a cost-saving of what will likely be more than the LVV certification plate fee increase, because the LVV Certifier will fit the Data Plate at the time of inspection, and the need for further involvement by the LVV Certifier (for the certification plate fitment as happens currently) will be eliminated.

Additionally, the online NZ Car Construction Manual will become free of charge in February, which provides a substantial cost-saving to the public, and reduces impediments to the public from understanding the technical requirements which must be met when modifying or building a car.

Another benefit to the modified vehicle sector occurring in February is that Upper Seatbelt Anchorage Declarations (for older vehicles which can't be retro-fitted with upper seatbelt anchorages) will become absorbed into the normal LVV certification process, so there will be no separate charge for this service (except in the case where the Declaration is being issued to a vehicle which has no modifications and is therefore not being LVV certified).

2021 will be quite a milestone for LVVTA, as, for the first time in its 28 years of operation, it will be able to shift away from that oily rag means of operation, and function in a fully-sustainable manner. ■

New Stainless-Steel Brake Pipe Manufacturer - Classic Tube USA

The Technical Advisory Committee (TAC) has recently assessed and approved 'Classic Tube USA' as a recognised manufacturer of stainless-steel brake lines.

The company specialises in manufacturing brake lines, and produces the stainless-steel hard lines used on Art Morrison Tri-Five Chevy frames. Classic Tube USA has provided the LVVTA Technical Advisory Committee (TAC) with details including their quality assurance manual, an SAE document, a sample inspection form, and a training manual they use to train staff members. The TAC were satisfied with the level of detail provided, and are confident that Classic Tube USA are proficient in brake pipe manufacturing and flaring processes. As a result, Classic Tube USA has been added to the list of LVVTA recognised manufacturers, and their products can be LVV certified, provided that:

- all flares must be as supplied by Classic Tube USA, and remain unmodified; and
- proof of purchase is provided to the LVV Certifier in each case; and
- all braking components that have these lines attached have compatible fittings (flare type and angle), and the LVV Certifier has ensured that this is the case; and
- the LVV Certifier has carefully inspected and ensured that no leaks are present in any fittings.

A full list of recognised manufacturers can be found on LVVTA's website under the Approvals tab - scroll down to Stainless-Steel Brake Pipe Manufacturers. ■

TECHNICAL

'Next-generation' LVVTA Technical Documents

A major re-configuration of LVVTA's technical document system; principally the LVV Standards and the NZ Car Construction Manual Chapters, is underway with the first changes to take effect on 1 February 2021.

Looking Back

The LVV Standards have been progressively developed since the 1990s. This was the document methodology chosen back in the early days from which to provide all the necessary technical requirements for low volume vehicles, and from which to provide the legal platform for the LVV certification inspection system. The LVV Standards could be developed one at a time, so the development of them was a 'bite-size' process. Regardless of what came in addition to the LVV Standards, they provided a good legal and technical starting point for the system we have today.

While the LVV Standards provided the legal platform and the necessary technical requirements, the big drawback is they are not user-friendly for our target audience; namely the modifiers and builders who simply require the technical requirements captured in a single document, in a straight-forward manner, and with no extra jargon.

To meet this need, LVVTA expanded its documentation. The initial NZHRA Code of Construction Manual (COCM) was developed in 1990, and then some years later was replaced by the NZ Hobby Car Technical Manual (HCTM). The HCTM then became the NZ Car Construction Manual (NZCCM). The HCTM/NZCCM incorporated more detailed requirements for the more complex modifications and scratch-built construction processes than that which is contained within the LVV Standards.

However, this solution was not without its issues as the LVV Standards typically only cover basic modifications (e.g., a bolt-in adjustable platform suspension system), and then refers a modifier or builder to the NZCCM for more detailed requirements (e.g., a complex custom-built independent front suspension). This means juggling between two sets of documentation.

Merging Documentation

To streamline things, the decision was made to incorporate the 'basic' technical requirements from the LVV Standards into the NZCCM so modifiers and builders did not have to be working between two sets of documentation.

This allowed a focus on technical requirements within the NZCCM, and avoided 'cluttering' the NZCCM with all the LVV Standards' peripheral 'legalese'. In short, this approach provided modifiers and builders with everything they needed in a single comprehensive and convenient document, with no distracting legal guff.

Downside of the Current System

So, LVVTA successfully met two needs; it provided the users with the technical requirements they wanted, and maintained the important legal framework, by running the two documents (LVV Standards and NZCCM) in parallel. This system has worked well over the years. ▶▶

However, with the growth of the LVVTA system, this has proven very inefficient when managing the amendment and improvement process for the two document systems in parallel.

This current system runs a constant risk of conflict as one document is progressed ahead of the other, and the duplication that currently exists adds a lot of time to every amendment process, because an amendment to an LVV Standard requires the same amendment made to the NZCCM, and in some cases vice-versa. These issues would continue exponentially into the future if the status quo remained.

Resolving the Shortcomings

During 2020, LVVTA has given a lot of thought to the best way of streamlining and simplifying the system further, and how best to future-proof the system. The result of that thinking is what is now referred to as the 'Next-generation' technical document system.

LVVTA engaged with the NZ Transport Agency (Waka Kotahi) to see if they supported the 'Next-generation' thinking, and Waka Kotahi agreed that this will represent a big step forward for the LVV system.

The NZCCM style of document is what most LVV systems users want and need, and this needs to be LVVTA's core focus. The NZCCM will remain largely as it has, insofar that it is a purely technical document, free of the distractions contained in the LVV Standards. It will be developed in such a way that modifiers and builders will not need to revert to the LVV Standards.

The existence of the LVV Standard however, is critical from a legal perspective, and for the reference of the LVV Certifiers. Each LVV Standard will be stripped of technical detail, and will become a 'shell' document, which will contain only a small number of over-arching technical requirements, and the things that do not change regularly. The LVV Standards will be nothing more than 'legal framework' documents. Should an amendment be required, it will not affect the NZCCM content, and vice-versa.

Advantages of the 'Next-generation' System

There are many advantages for LVVTA, the LVV Certifiers, Waka Kotahi, and users of the LVV certification system, including:

- information will be found more easily by users of the LVV certification system; and
- the system will all become more straight-forward, and make better sense to users, and
- there will be less potential for confusion as a result of conflicting requirements between the LVV Standards and the NZCCM Chapters; and
- the development of all of the existing documents, and creation of new documents, will all be able to be done more efficiently into the future as a result of reduction of duplication; and
- the concept is directly aligned to the 'single source of truth' philosophy that Waka Kotahi likes to apply within the regulatory environment; and
- the concept is directly aligned to the 'incorporation by reference' philosophy, which has traditionally reflected how the LVV certification system is integrated within the Land Transport regulatory framework.

The first documents that the 'Next-generation' philosophy has been applied to are the LVV Standard 85-40 (Engine & Drive-train), and the corresponding NZCCM Chapter 9 (Engine & Drive-train), both of which take effect on 1 February 2021.

If you require further information about the 'Next-generation' technical document system, a new LVVTA Information Sheet will become available in January. ■

BIG BOYS TOYS LVVTA SHOW SPECIAL

THE WINNER OF THE LVVTA NZCCM HARD COPY IS...

LVVTA's Justin Hansen (left) and NZ Transport Agency's Stephen Brown (right).

Welding C-notches and Extensions in Late-model Vehicle Chassis

As the use of ultra-high strength steel (UHSS) in chassis construction becomes more popular, vehicle modifiers and LVV Certifiers need to be sure of the chassis construction material before any welding is carried out and LVV certified. The concern with the UHSS used in some late-model vehicles is that an incorrect process for welding could alter the material's structural properties, and as a result, create brittleness and a significant reduction in strength.

During 2019, when a 2011 Toyota Hilux was presented for LVV certification with a C-notched chassis, the LVV Certifier correctly informed the owner that he needed to confirm the material of the chassis before certification could proceed. The research found the chassis was constructed from 440MPA high strength steel (HSS) and not UHSS. Additionally, documentation from vehicle collision repair training organisation iCar and Toyota NZ for Toyota Hilux's produced between 2005-2015 was provided. These documents showed that common welding methods such as MIG and TIG were approved for this type of chassis material.

After investigation into chassis materials and welding suitability, LVVTA has agreed that any chassis made from 440MPA or less strength material (regardless of the manufacturer) can be welded for the purpose of C-notching or extending the rear of the chassis. However, any chassis made from an unknown, or higher strength material must be researched further, and LVVTA must be consulted before any welding commences. Material details, the proposed welding process, and supporting documents must be provided to LVVTA prior to any cutting or welding taking place. If modifiers are unsure of the type of steel used, LVVTA suggests they contact the vehicle manufacturer or an NZTA-appointed Repair Certifier, and ask for any documentation they may have available relating to the specific vehicle year, make, and model.

Please note that this is only for rear C-notches and rear chassis extensions, and all other applicable technical requirements must also be met. Further consideration may be needed for other chassis modifications and welding, and the LVVTA technical staff should be consulted in this instance. ■

Vehicles such as this 2011 Toyota Hilux which has a chassis produced of 440MPA high strength steel (HSS) can have a rear C-notch or chassis extension, providing certain criteria are met. However, any chassis made from material rated over 440MPA requires a specific welding process to be developed and specific modifications approved before any cutting or welding can take place.

Brake Booster Vacuum Hose Requirements

Vehicle modifiers and LVV Certifiers are reminded that brake booster vacuum hoses, used between a booster and vacuum source (usually the intake manifold), must meet an approved standard as listed in Table 8.4 of the NZ Car Construction Manual (NZCCM). While LVVTA staff and LVV Certifiers cop a bit of flack for what is seen as a bit of an over-the-top demand, this is actually a legal requirement that comes directly from the NZTA Land Transport Rules - and as such, LVVTA and LVV Certifiers cannot simply 'opt-out' of applying it. Nor is it something that has been recently dreamed up to make things tough on people! LVVTA staff have commonly heard vehicle owners state that 'nobody sells it'; however, LVVTA can confirm that many LVV Certifiers and nationwide parts suppliers hold the compliant hose in stock. Vehicle owners may contact their local LVV Certifier, or the LVVTA office for a list of suppliers if required.

NZCCM chapter 8 (Braking Systems) states that a vacuum brake hose fitted to a low volume vehicle must:

a. be of a type purposely designed for automotive applications; and
b. incorporate a one-way check valve to prevent unintended loss of vacuum whilst the engine is not running; and
c. in the case of a hose that is not sourced from a high-volume vehicle, meet one or more approved standards specified in Table 8.4 (Figure 1).

A common mistake that LVV Certifiers often spot, is that a hose meeting the **SAE J1402** standard is being selected for use in a vacuum brake hose application, which is a pressure hose standard and not rated for use in vacuum situations. ▶▶

This pressure hose is known to collapse and block when under vacuum pressure, so ensuring the correct hose standard is important. Some vehicle modifiers have also presented hoses which have been tested to a specific vacuum level, but are not marked with the appropriate standard, and as such, these cannot be accepted, as the NZTA Land Transport Rule specifically states the hose must be marked to show its compliance.

SAE J1403, which is rated for use in automotive vacuum situations, is readily available from a wide range of local suppliers and is one of the options detailed in Figure 1, which is copied from the NZCCM.

While some vehicle owners may believe a hose simply marked as 'DOT Approved' can be accepted, this is also not the case. While DOT Approved sounds like a benchmark, it is not an approved standard, and therefore can't be accepted. Only those approved standards (or abbreviations thereof) listed in the table below can be accepted. ■

Figure 1.

TABLE 8.4 - VACUUM BRAKE HOSE APPROVED STANDARDS TABLE	
APPROVED STANDARD	ABBREVIATION
■ Society of Automotive Engineers, SAE 40 R3L (light duty)	SAE 40 R3L
■ Society of Automotive Engineers, SAE 40 R3H (heavy duty)	SAE 40 R3H
■ Society of Automotive Engineers, SAE 40 M (heavy duty oil resistant)	SAE 40 M
■ Society of Automotive Engineers, SAE J1403 (vacuum brake hose)	SAE J1403
■ British Standard BSAU 109	BSAU 109
■ Federal Motor Vehicle Safety Standard No. 106 (Brake hoses)	FMVSS 106
■ Japan Industrial Standard D2607	JIS D2607

Electric Power Assist Steering (EPAS) - Welded Steering Components

Many aftermarket electrically power-assisted steering columns feature internal welding, which cannot be accepted for LVV certification. LVVTA recommends that vehicle modifiers confirm their preferred system does not feature internal welding before purchasing.

The LVVTA technical staff are fielding an increasing number of enquiries about electrically power-assisted steering (EPAS) conversions. These conversions place an electric motor within the steering column to decrease the effort a driver must apply when turning. While the technology is great, LVVTA and LVV Certifiers are finding that some readily-available aftermarket electric power-assisted steering kits do not meet LVV requirements. These non-compliant kits feature welding of the internal shafts, or methods of shaft attachment which are precluded by the New Zealand Car Construction Manual (NZCCM), and the modifications are often within the housing, so cannot easily be seen without first dismantling the unit.

The exception to the no-welding rule is unmodified welds on a vehicle manufacturer's original equipment steering, that is being used in the same application for which it was originally designed. In short, an original equipment (OE) electric power-assisted steering system from a mass-produced vehicle that includes welding may be used in its unmodified form in a different vehicle. ▶▶

LVVTA urges prospective purchasers of EPAS systems to confirm that the kit they are investing in does not include welded components or non-compliant shaft attachment methods before making a purchase.

Currently, all aftermarket or 'kit'-style EPAS units are required to be disassembled to allow for inspection by a category 1D LVV Certifier for LVV certification to take place. An OE EPAS unit does not require disassembly if an LVV Certifier confirms that he has compared it to another identical unit to verify that both input and output shafts are unmodified, and meet all technical requirements. Vehicle modifiers are also reminded that due to the significant rotational and torsional loads produced by EPAS motors, they should be mounted in such a way that replicates an OE installation. Most commonly, this would include fitting an under-dash support bar that spans between the vehicle's A-pillars, with the factory mounting tabs on the EPAS unit mounted to the bar. If a modifier is unsure if the proposed mounting method is satisfactory, an LVV Certifier, or an LVVTA technical staff member should be consulted prior to commencing installation. ■

When installing an EPAS system, great care must be taken to ensure that the mounting is adequate for the significant rotational and torsional loads produced by EPAS motors. A dash bar that spans between the A-pillars, such as that shown here, is the recommended mounting method.

LVV CERTIFIERS

New Hamilton-based LVV Certifier

Introducing Tim Charman...

New LVV Certifier Tim Charman was appointed for the Hamilton area earlier this year. Tim owns TTT Engineering, which is a vehicle fabrication and engineering business, and has built many vehicles. With a reputation of being a 'Toyota Guru', he is an Authorised Vehicle Inspector (AVI), approved Motorsport NZ roll cage builder, and an avid mountain biker in his spare time. Tim is another young 'new generation' LVV Certifier who has found his feet quickly, and is doing a great job. ■

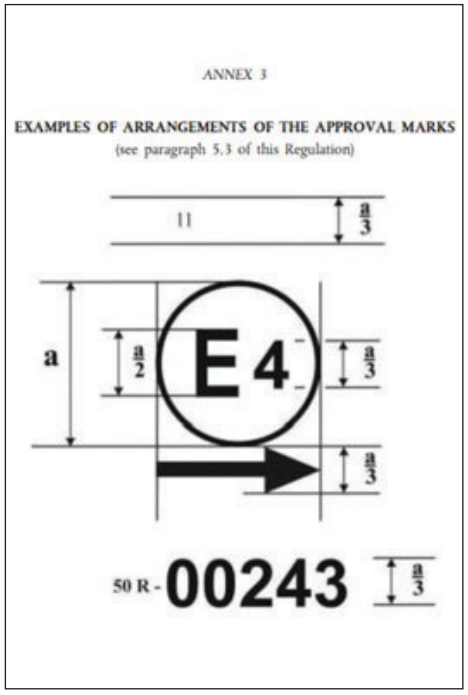
AFTERMARKET ALERT

Non-compliant Aftermarket Headlights

LVVTA has been made aware of aftermarket 6-inch round headlamps that claim to have met the required Euro standard, however upon closer inspection, they do not.

The lights (shown here) feature the internationally-accepted E4 standard marking, but an extract from the Euro regulation shows the E marking stamped on the headlight lens is too small. The E marking should be half the height of the circle, and the 4 should be a third of the circle height.

Although lighting is generally an entry compliance item that does not require LVV certification (unless the vehicle is a scratch-built), LVVTA advises LVV Certifiers and vehicle modifiers to be vigilant if they suspect that a vehicle's lighting does not appear to be a genuine component from a reputable aftermarket manufacturer. While WoF Inspectors and LVV Certifiers are not required to inspect standards/compliance markings on lamps as part of a WoF or LVV modified production vehicle certification inspection, if they do identify a lamp they believe could be non-compliant, it is suggested that they notify the customer of their concerns. Where LVV Certifiers are inspecting a scratch-built vehicle, they are required to reject any non-compliant lamps. ■



Above Top Left: *A locally produced Hella light showing the correct and acceptable standards marking.*

Above Top Right: *Lights that comply with Euro regulations are required to have the standards marking as shown here.*

Bottom: *While this headlight claims to have met Euro regulations, as indicated by the E4 marking, it doesn't. Upon closer inspection the marking does not meet the specific requirements for E markings, indicating that it is in fact a non-compliant counterfeit, despite what at first glance appears to be genuine paperwork being supplied with it.*

FEEDBACK

***** *Low Volume Vehicle Technical Association Inc good to know, thank you for fast reply, keep up your good work.* ☺

BVL Seatbelt Recall Update

In the LVVTA Newsletter (Issue #56), we provided notification that a specific model of three-point seatbelt supplied by BVL and manufactured by Changzhou BWD had been recalled due to failures. It was stated at the time that the recall did not apply to any other model of seatbelt being supplied by BVL. Following that article, NZ Transport Agency (Waka Kotahi) announced that another seatbelt had been found that did not match their type-approval documentation, and must also be failed at inspection.

The seatbelts are manufactured by Jiang Su Jiu Jiu, and are stamped with Approval # 06 9766. They have a large number of differences from their type-approval documentation, as has been confirmed by the Société Nationale de Certification et d'Homologation (SNCH) that administers homologation of vehicle parts.

Affected vehicle owners are being advised to return the belts to where they were purchased from, or contact BVL directly at info@bvl.co.nz, or phone 09 574 6724.

For further information, members of the public should read Waka Kotahi's Safety Alert which can be found at the Waka Kotahi Website: www.nzta.govt. nz. ■

@ ***FEEDBACK*** *"...You were able to tell me straight up what was going on and where we were at; you've been there a lot for me on this project, when it came to what I had to do, I've rung you a few times and you've always been able to give me the answers. Have a good Christmas and New Year" -* ***Steve.***

SAFETY ALERT REMINDER

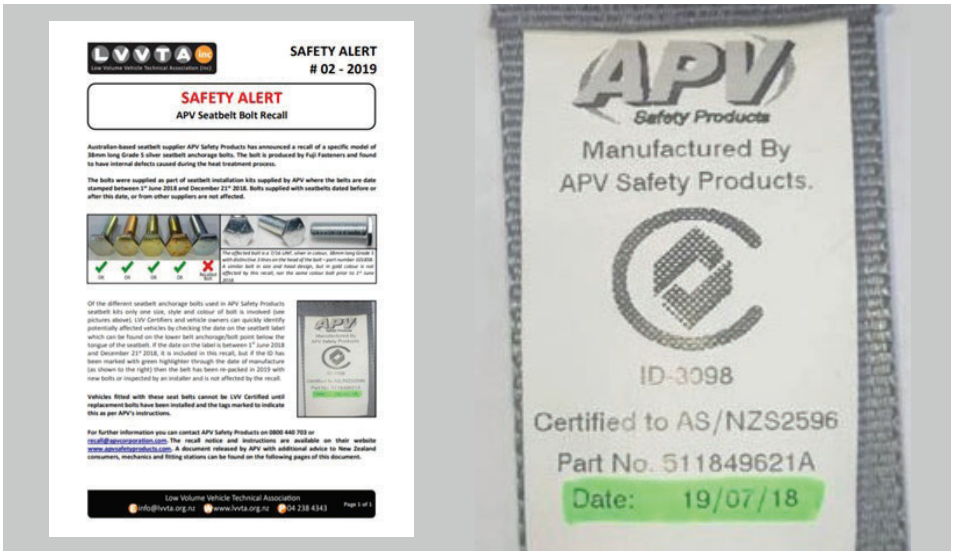
APV Seatbelt Bolt Safety #02-2019

During 2019, LVVTA released a Safety Alert regarding a recall of seatbelt bolts produced by Australian-based seatbelt supplier APV Safety Products.

The recall is for a specific model of 38 mm long Grade-5 silver seatbelt anchorage bolt. The bolts were produced by Fuji Fasteners and found to have internal defects which occurred during the heat-treatment process. The bolts were supplied as part of seatbelt installation kits provided by APV where the belts are date-stamped between 1 June 2018 and 21 December 2018.

Vehicles fitted with these seatbelts cannot be LVV certified until replacement bolts have been installed, and the tags marked to indicate this, as per APV's instructions.

Please see Safety Alert #02-2019 - APV Seatbelt Bolt Recall for further information and remedial instructions. ■



The recalled bolt is 7/16" UNF, silver in colour, 38 mm long Grade-5 with distinctive three lines on the head of the bolt – part number 10185B. A similar bolt in size and head design, but gold in colour is not affected.

Incorrectly Labelled EPMAN-brand Harnesses #01-2020

LVVTA has become aware of EPMAN-brand harness seatbelt sets being sold with incorrect labels attached.

A vehicle fitted with two sets of these harnesses was presented for LVV certification, and during the inspection it was discovered the standard markings on the label did not match the harnesses they were attached to. Without valid labelling there can be no certainty that the seatbelts comply with an approved standard, and therefore their performance in the event of an accident is unknown. In this case, the EPMAN-brand harnesses were replaced prior to the LVV certification being completed.

Any seatbelt which has an invalid or incorrect label cannot be LVV certified.

For further information on these harnesses, please see LVV Safety Alert #01-2020 – EPMAN-brand Harness Seatbelts. ■

SAFETY ALERTS
Recently Issued

#10-2020 (December 2020)
Faulty Threads on Aftermarket Suspension Arms

#09-2020 (December 2020)
'Heidts'-brand Suspension Arm Issue

#08-2020 (December 2020)
Rear Suspension Failure - AC Cobra Replica

#07-2020 (December 2020)
Steering Rack Spacers

#06-2020 (December 2020)
Multi-piece HICAS Lock-bars

#05-2020 (December 2020)
Y32 and Y33 Nissan Strut Warning

#04-2020 (September 2020)
Sub-standard Suspension Arms

#03-2020 (September 2020)
MBM-brand Disc Brake Kits

#02-2020 (September 2020)
Machined-down Brake Calipers (for wheel clearance)

#01-2020 (September 2020)
EPMAN-brand Harness Seatbelts *(Article this page)*

#06-2019 (September 2020)
CPP-brand Welded Aftermarket Pitman Arm Failures

#05-2019 (September 2020)
Aftermarket Cast I-beam Axle Failures

For all LVVTA Safety Alerts, visit:
www.lvvta.org.nz/safetyalerts.html

INFORMATION SHEET REMINDER

Removal of Seats Fitted with Side-impact Airbags #01-2020

LVVTA recently issued an Information Sheet clarifying the requirements for the replacement of seats fitted with side-impact airbags. This Information Sheet supersedes Information Sheet #07-2009

In summary, when a seat originally equipped with side-impact airbags is replaced with a seat not equipped with an airbag, LVV certification is required to ensure the remaining components in the SRS system remain functional. Many vehicles fitted with side-impact airbag equipped seats also have a seatbelt pre-tensioner device incorporated within the seat. Removal of the seatbelt pre-tensioner would alter the functionality of the frontal impact protection system, so it must be retained on vehicles less than 14 years old.

Once a vehicle is 14 years old, components of the frontal impact protection system can be removed, provided the seatbelts for any affected seating positions are replaced with brand new (approved) seatbelts. The vehicle must be LVV certified for this modification, and the relevant requirements are provided within LVV Standard 155-30 (Frontal Impact).

For further information refer to: LVV Information Sheet #01-2020 Removal of Seats Fitted with Side-impact Airbags. ■

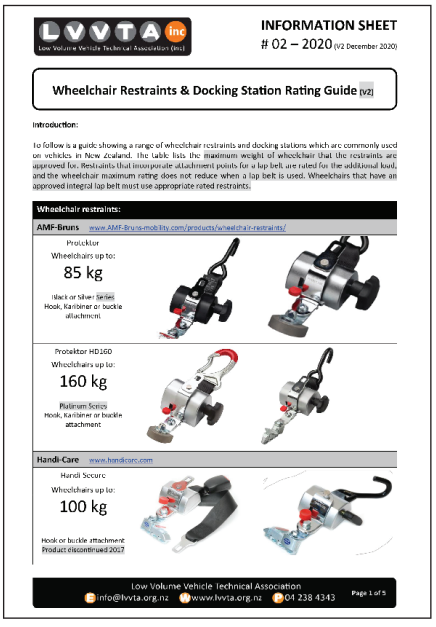
@ ***FEEDBACK*** *"...Hi, in this case I wish make a big, no a massive shout for Ken and his calm and kind approach to solving my issues I had with my certifier. His manner help me get back my motivation to complete the last hurdle in the certification process. Thank you very much Ken".*

Wheelchair Restraints & Docking Station Rating Guide #02-2020

LVVTA released an Information Sheet earlier this year showing a range of wheelchair restraints and docking stations commonly used on vehicles in New Zealand. The Information Sheet contains a table which lists weight ratings of the restraints to help ensure that they are appropriate for the wheelchair overload in an accident.

Please note: The ratings given to the restraints refers to the maximum mass of the wheelchair, and does not include the occupant, even when the restraints incorporate provision for the attachment of a lap belt.

For further information, refer to LVV Information Sheet #02-2020 Wheelchair Restraints & Docking Station Rating Guide. ■


LVVTA inc
Low Volume Vehicle Technical Association (Inc)

INFORMATION SHEET
02 – 2020 (V2 December 2020)

Wheelchair Restraints & Docking Station Rating Guide (V2)

Introduction:

To follow is a guide showing a range of wheelchair restraints and docking stations which are commonly used on vehicles in New Zealand. The table lists the maximum weight of wheelchair that the restraints are approved for. Restraints that incorporate attachment points for a lap belt are rated for the additional load, and the wheelchair maximum rating does not reduce when a lap belt is used. Wheelchairs that have an approved integral lap belt must use appropriate rated restraints.

Wheelchair restraints:

AMF-Bruns www.AMF-Bruns-mobility.com/products/wheelchair-restraints/

Proclktor
Wheelchairs up to:
85 kg
Black or Silver Series
Hook, Karibiner or buckle attachment

Proselktor HD160
Wheelchairs up to:
160 kg
Platinum Series
Hook, Karibiner or buckle attachment

Handi-Care www.handicare.com

Handi Securc
Wheelchairs up to:
100 kg
Hook or buckle attachment
Product discontinued 2017

Low Volume Vehicle Technical Association
info@lvvta.org.nz www.lvvta.org.nz 04 238 4343
Page 1 of 5

INFORMATION SHEETS
Recently Issued

#05-2020 (December 2020)
Tyre Track and Protrusion of Tyres Beyond Mudguards

#04-2020 (December 2020)
Spherical Bearing Rod End Conversion for Steering Tie-rod Ends and Unloaded Suspension Ball-joints

#03-2020 (September 2020)
Re-issue of Amended Lighting Equipment LVV Standard

#02-2020 (V2 December 2020)
Wheelchair Restraints & Docking Station Rating Guide
Detailed on page 14.

#01-2020 (September 2020)
Removal of Seats Fitted with Side-impact Airbags (revised)
Detailed on page 14.

For all LVVTA Information Sheets, visit:
www.lvvta.org.nz/documents.html#infosheets

FEEDBACK *"Wonderful – thanks Chris. We are impressed with your assistance. We are making good progress. You have filled in a gap on the brake line issue which is great. We are looking to make the change. Justin has sent guidance on the spindle which I have forwarded to the car builder. It was a welcomed response. Again, many thanks for your ongoing help. Cheers."*

STAFF

Electrifying Changes

Back in Newsletter 54 (July-December 2017), LVVTA Management Committee Member Graeme Banks informed LVVTA CEO Tony Johnson that he had gone electric and purchased a Nissan Leaf. While Tony's reply in the newsletter was humorous, it was also a lot tamer than the thoughts he expressed to Graeme in person. However since then, the daily driven fleet at LVVTA's office has also begun to change to electric, much to Tony's despair.

A lone hybrid Toyota Prius in the car park has now been joined by a fully-electric Nissan Leaf, a hybrid Mitsubishi Outlander, and a second Toyota Prius. Thankfully for Tony's sanity, the rest of the fleet remains internal combustion powered. Now… about that charging port… ■

FEEDBACK

Response to Dick Reynolds Tribute

Hello Tony

I am writing to you following your down-to-earth and humbling tribute to Dick Reynolds of the Ministry of Transport and then LTSA in an LVVTA Newsletter a while back after he passed away.

There is probably no one who is more aware of the situation back in 1989 that existed for the future of hot rods construction, or the possible non-construction, than you. Also there is no one who was more associated with the then regulator of the day, than you. What is possibly not appreciated by many in your own present day fraternity is the rocky/risky path that you yourself trod, to work between the regulator (Dick Reynolds) and your own members - to work away tirelessly and persistently, to achieve the vision that both you and Dick shared over time, than those of us who remain.

I am sure that if Dick could only read the LVVTA Newsletters of today he would be immensely proud of what has been achieved. I am sure he would be satisfied that all is well with low volume vehicles. I read them and I marvel at the responsible attitude and the technical capacity and knowledge, of a very dedicated profession, profession YES - because that is what it is! I marvel at the depth and fortitude that your organisation will travel and explore to ensure safety is at the forefront of every aspect of what your members do – of the monitoring of aftermarket fabricated components. Sure there are those that push the limits, I think possibly a lot due to a lack of knowledge of materials behaviour and so on, but how your staff keep things in check and apply resolve and decisiveness when required. What is possibly not appreciated and understood by many of the public is that here in New Zealand the technical abilities of our technicians, enthusiasts, and others are the equal of anywhere in the world. And the vision born way back in the 80's and 90's and shared by both you and Dick has successfully harnessed that capability.

As for your comments concerning Dick - I feel quite humbled because they were so appropriate, they had to be said otherwise he would have passed on unnoticed. I admire you for your portrayal of the real Dick Reynolds, of telling the story of how it really was, and I hope that your members will from time to time re-read and absorb this record of someone who as you stated that; *"… Dick was the right man for the time …".*

They were not halcyon days! There was so much happening and so much had been neglected, policy to research and write on all aspects of both light and heavy vehicle construction and modification. Dick was strictly honest and one of his favourite sayings apart from *"… sod off Noddy …"*, was *"… there is no such thing as a free lunch …"*, and I can say I learnt a lot of life skills from Dick.

As you have stated Dick certainly was *"… the right man for the time …"!*

Thank you again Tony for a lovely tribute to Dick.

All the best.

BJ (John) Long
NZ Transport Agency (now retired). ■

Just So You Know

To Tony and Linda

I have officially resigned from the Agency.

During a career there are many highlights and lowlights – I can honestly say working with you both and your fantastic team and the LVV certifiers has been my main highlight. I have thoroughly enjoyed the relationship/friendship we have formed over the years and I appreciate the honesty, integrity, professionalism, and of course the laughs we have shared.

You guys rock!

Thank you so much.

Jim McDonald
Chief Advisor, Project Implementation.
NZ Transport Agency (now retired). ■

FEEDBACK *"Good page thanks guys good to see u can answer questions even if they are silly or good and have of sense of humour to go with it. Seems to make peoples lives a bit easier to understand things with their cars."*

From Low Volume Vehicle Technical Association Inc *- "Thanks. We do what we can to be a bit human about it. There's a juggling act between it being an office packed full of car guys & girls, who eat sleep and breathe playing with cars, and also being a legally appointed regulatory body, who need to have a big set of rules."*

THE GOOD, THE BAD, & THE UGLY...