

## ENGINEERING: WELDING OF FORGINGS & CASTINGS

One of the engineering-related challenges that LVVTA has had to deal with on and off for many years is to address that old debate of whether or not it's acceptable for people to weld forgings and castings, remembering that this is within the context of a home builder or small workshop, on work that is primarily not production-based. As forgings and castings are becoming offered by the after-market to the hobby and industry more commonly, this problem is going to come up even more frequently. Some of the more popular components include radius rod brackets, diff mounts, and ladder bar ends. There's no denying that some of it is really attractive stuff, and we can see why people would like to use it. In many respects, these components can be a whole lot better than people cobbling up their own components at home - however, the issue obviously is the principle of welding these forgings and castings.

One of the arguments we often encounter from people is that the high-volume vehicle manufacturers have been welding forgings and castings quite successfully for a century, so what's the problem?

The problem is that there is a difference between it being done by manufacturers and on a one-off basis. The manufacturer knows the intended purpose of the component, he has assessed the on-going cyclic fatigue loads involved through the life of the vehicle, he specifies the exact composition of the materials from which the forged or cast component is manufactured to suit his needs, then he has a welding process developed that will ensure that a successful connection is made. Then he has quality control systems in place to ensure that the welding that is carried out follows the specified process, and lastly, he has a testing regime to ensure that each welded component passes specified tests. Within that context, welding a forging or a casting is fine. But that's not our LVV world.



As Fred Robinson of South Auckland Forgings & Engineering (SAFE) in Drury, South Auckland (who died some years ago) explained to the LVVTA Technical Advisory Committee some 20 years back (and nothing has changed in this regard), when we are presented with the situation of a forged or cast component having been welded, or about to be welded - ('we' means the guy doing the welding, the LVVTA, and the LVV Certifier) we don't have a clue what the molecular composition of the forged or cast component is, and therefore we can't possibly have a clue whether the welding process that has been applied, or is about to be applied, is appropriate. And the process of finding all of this out for a one-off application is cost-prohibitive because the process of having a material analysis carried out on the component by a testing laboratory, and an appropriate welding procedure is developed, is generally beyond the scope of the one-off or LVV builder from both financial and time reasons.

Obviously, this is an important issue, because if the welding process is inappropriate, a potential failure can occur, and LVVTA has observed many such instances of this over the years. Obviously, LVVTA cannot endorse or approve a process that is in direct conflict with basic sound engineering principles.

Old Fred Robinson's son Barry Robinson, who still runs SAFE today, has recently re-affirmed this issue in more recent years. The last time we discussed the subject with Barry a couple of years ago, he gave us a simple rule of thumb (that's relevant to our practically-oriented LVV system) to apply, which is: "If it didn't come in a 6 metre length, don't f\*\*\*ing weld it!" Unless of course the material analysis etc is done and the right welding process is prescribed and followed.

We'd love to learn that this information is all completely wrong, because it would open up the ability for us all to use these neat new products.

Despite having confidence in our long-held tried-and-true position that the welding of forgings and castings is taboo within the LVV system, LVVTA has scheduled a thorough review of this matter as one its jobs for 2014, and will engage many industry experts and organisations to assist us, to ensure that our engineering philosophy on this matter is current and correct.

Led by LVVTA's Engineer Dan Myers, LVVTA will establish exactly what is involved (both in terms of cost and process) in having a material composition analysis done, and an associated welding process agreed, to see if there is any way of making this cost-effective, and to see if such a process is realistic given the practical nature of the LVV system. We will also look into whether a one-off analysis of the material that recognised manufacturers use for their components could be undertaken, and form the basis (cont'd page 2)

## AFTERMARKET ALERT

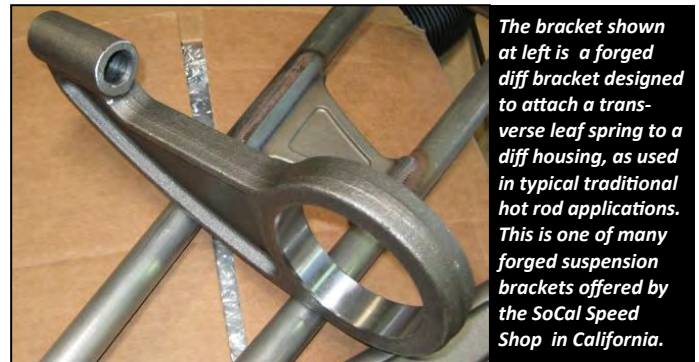
### Engineering: Welding of Forgings & Castings (cont'd)

(cont'd from page 1) of some sort of Type Approval for those components, subject to certain conditions being met. One of the challenges with any Type Approval system is having a reasonable degree of confidence that the manufacturer doesn't change their systems or processes (which could be as simple as changing a supplier or subcontractor) thereby making the approval invalid.

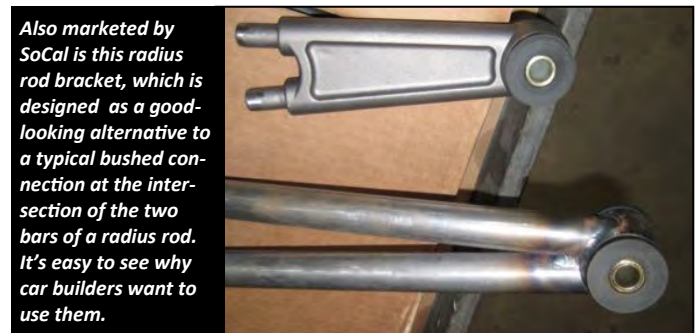
It's a tricky balance between allowing the use of attractive and functional components that are readily-available, and ensuring that safety isn't compromised, especially on critical components.

The thing that everyone has to remember is that the LVV system must remain practically-oriented. There is no point in specifying processes or requirements that we know people can't or won't follow, or that we have no way of enforcing, or that we have no idea whether things beyond our control are changing or not.

Whatever happens regarding the on-going discussion of whether or not the LVV system in New Zealand should allow the welding of forgings or castings, we must be mindful that many of the components to which such an allowance will apply are suspension components, upon which a vehicle's directional control is dependent, so there cannot be any risk of getting it wrong. And this is why status quo is such a good position, and has lasted for over 20 years...



*The bracket shown at left is a forged diff bracket designed to attach a transverse leaf spring to a diff housing, as used in typical traditional hot rod applications. This is one of many forged suspension brackets offered by the SoCal Speed Shop in California.*



*Also marketed by SoCal is this radius rod bracket, which is designed as a good-looking alternative to a typical bushed connection at the intersection of the two bars of a radius rod. It's easy to see why car builders want to use them.*

### Aftermarket Cast I-beam Axle Update

The unsafe aftermarket I-beam axle situation has continued to consume a lot of time throughout 2013, as it did last year, however it's at a point where we can say the project is virtually completed. The initial concern was over a faulty batch of 'Magnum' brand axles, and as a result of our initial investigations into the matter, *LVVTA Information Sheet # 01-2013 - 'Magnum'-brand I-beam Axle Safety Warning* was published and released in June of 2012.

As LVVTA technical staff have worked their way through understanding the situation, gaining knowledge on the general subject of castings, undertaking a lot of testing, and setting up the equipment and processes to enable cast I-beam axles to be inspected and assessed for quality (and ultimately given an approval certificate if found to be fit for purpose), a new problem of a different kind was inadvertently discovered with another aftermarket brand of cast iron I-beam axles along the way. Whilst the axles made by the other brand was (in basic terms) 'ductile iron' rather than the problematic 'grey iron', the quality of the 'ductile iron' was found to be below world manufacturing standards, and - while the axle brand in question has no known history of failures as the 'Magnum' brand had, there was no way that LVVTA could 'approve' axles made from a material that did not meet minimum internationally-accepted values for nodularity (or ductility).

LVVTA approached the manufacturer in question in the USA, and (unlike some other manufacturer's we've dealt with recently!) the manufacturer has worked co-operatively with us to find a good outcome for everyone, the details of which will be provided in a new LVVTA Information Sheet shortly.

### Aftermarket Wheel Failure

Motoring journalist Greg Stokes sent us this photograph, taken at the Antique Nationals at Irwindale Dragstrip in California recently.

The car (which, incidentally, features a New Zealand-built Pete Osborne Productions replica '32 Ford Cabriolet body) features steel-rimmed and alloy-centred aftermarket wheels, one of which collapsed without warning under braking past the finish-line (at an estimated 80-90 mph), resulting in a loss of control and a light rearward brush against the Armco barriers.

Unfortunately we don't know what the wheel brand is, but the wheel design is similar to the 'Astro Supreme'-brand wheels (which are banned in New Zealand after multiple failures) using pressed-steel centres welded into a steel rim.

LVV Certifiers should inspect any wheels that look like this carefully, particular at the back of the wheel where the centre and rim attach.



*Wheels appear to be of modern design, and large diameter, in the 19-20" range.*



## AFTERMARKET ALERT

### Bump-steer Bum-steer

Hamilton-based LVV Certifier Neal Miller recently bought a new aftermarket industry-related problem to LVVTA's attention. Neal was carrying out an LVV certification inspection on a 1969 Dodge Charger for a customer, and found that the aftermarket steering rack conversion kit that had been fitted to replace the OE steering box had introduced a significant amount of toe-change bump-steer to the vehicle's steering system - as so many of these aftermarket kits do. The owner had looked on the internet and had discovered that other purchasers of the same rack and pinion system had the same problem, and he contacted the kit manufacturer. The manufacturer provided him with the 'solution', which consisted of a new pair of tie rod ends with 'extenders' fitted to them (see the photograph below, which shows a standard tie-rod end at the top, and below it, a replacement tie-rod end with an 'extender' fitted to it).



The owner brought the vehicle back to Neal some time later for another bump-steer swing-check, after having carried out what he thought was a cure to the problem. Neal immediately noticed that something was loose. Upon examination, Neal learnt that the aftermarket company's 'fix' was to take a standard tie-rod end, cut off some of the threaded section, and screw a machined section over the remaining thread of the tie-rod end.

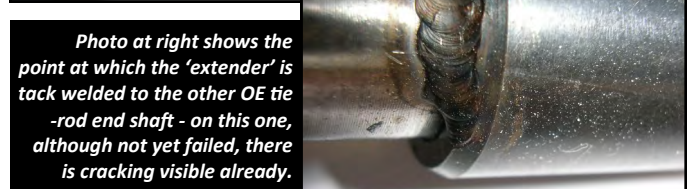
The machined section replicates the OE tie-rod end's threaded section at the top, and to secure the 'extender' to the tie-rod end, the company tack-welded the extender to it. What Neal found was that the tack weld had broken, and the extender was unwinding itself - and rocking on the tie-rod end. And this was after only 50 kilometres of use!



*Photo at left shows the 'extender', and at left edge of photo the original threaded section of the OE tie-rod end is visible, with threaded section shortened.*



*Photo at left shows the remaining portion of the failed tack-weld (where the 'extender' was welded to the OE tie-rod end shaft) still attached.*



*Photo at right shows the point at which the 'extender' is tack welded to the other OE tie-rod end shaft - on this one, although not yet failed, there is cracking visible already.*

The aftermarket kit went into the rubbish skip, and Neal worked with the customer to completely re-engineer the system to make it safe and durable. Although these extenders might have provided a fix for the factory bump-steer problem, they certainly added a new and much more serious problem. We don't need to spell out what could have happened had the vehicle been driven much further. Although these parts could never have been LVV Certified (the HCTM doesn't allow welding of any steering components unless special criteria is met), it does show that there's still stuff that's considered to be OK and readily available in other parts of the world, that is clearly poorly-designed rubbish, and carries with it some very real, very serious safety risks.

### Aftermarket Steering Column Update

More work has been going on behind the scenes in relation to the unsafe aftermarket steering column subject that has featured prominently in LVVTA's work during this year. Press releases and LVVTA Information Sheet # 01-2013 - *Unsafe Aftermarket Steering Columns* were issued earlier this year warning vehicle builders and modifiers of the potential dangers that had been identified with some aftermarket steering columns.

Currently, a detailed analysis is being carried out by LVVTA technical staff Justin Hansen and Dan Myers comparing the key elements of OEM steering columns to the aftermarket columns that are copying OEM columns, as we believe that while some aftermarket manufacturers claim to be replicating OEM columns - and use this as justification for any design flaws that might exist within their columns - the aftermarket columns actually differ from the OEM columns in many small but important ways.

The findings of this analysis work will be released soon within another LVVTA Information Sheet that is nearing completion.



### Made in China

What a world we live in! Everything you can think of is getting copied, knocked off, counterfeited - call it what you will. It's a growing and serious problem within the aftermarket automotive industry - and most other industries too. It's becoming a huge concern.

With the lack of business ethics that blatantly exist within some parts of the world, trying to combat unscrupulous manufacturers that make counterfeit copies of the products of reputable companies seems like a battle that can't be won.

LVTVA has been identifying many poorly-made and unsafe parts in the aftermarket automotive industry in recent times, and the prevalence of this stuff is rising at an alarming rate. We've seen products that are actual counterfeit parts of recognised manufacturers, along with 'no-name' unbranded products, and named brands that don't purport to be made by another company but which have major safety issues arising from poor design and manufacturing, and an obvious lack of quality control within their production processes.

LVTVA has considered introducing some sort of inspection or testing regime for aftermarket parts entering the New Zealand market to ensure they are compliant and safe, but the logistics and costs, and concerns of this being perceived negatively - an added layer of 'bureaucracy' and cost to the consumer - have prevented the ideas from gaining any real traction.

However, it seems that we might have under-estimated the maturity of the New Zealand vehicle modification hobby. Two experiences this year have suggested to us that perhaps there would be less resistance to some form of approval system or regulation of the aftermarket parts industry than we thought. The first was at the CRC Speedshow where a group of young guys - clearly performance import enthusiasts (*not* 'boy racers') - said that they think we should be doing something, and if the cost of doing so increased the LVV certification price then so be it - they'd rather continue to enjoy their hobby even at a higher cost, than suffer the possible alternatives if we all sit back and do nothing.

Then, interestingly, support for the idea of a testing or approval process came (as a complete surprise - we've never talked to them about the subject) from an interesting corner of the industry. In a recent NZ Performance Car Magazine, Assistant Editor Marcus Gibson devoted his editorial to the subject - here's what he had to say:

### TIMES HAVE CHANGED

When I was in my teens, in the early 2000s, simply having a car with a set of 17s, some lowering springs, a sound install and the most basic of performance upgrades would mean you ruled the street. But as the scene progresses I feel that today's up and coming youth have much bigger shoes to fill.

Those 17s are now 19s, those springs are coilovers and those simple engine mods have become forged 400kW race engines. Building a car of this calibre is near impossible on an apprentice's wages, and the only way to do it is by using the cheap parts which flood into the country from importers purchasing from websites such as Alibaba.com, and selling on the likes of Trade Me.

While I can understand the appeal of a small price tag, many of these parts fail to meet basic safety standards or pass LVTVA certification. The LVTVA list of banned products grows by the day, and now includes some coilover brands and many adjustable arms. This leaves many owners back at square one needing to replace parts using reputable brands.

If there is one thing I would like to see happen within the industry, it is regulation of aftermarket parts sold here, and forcing parts to undergo testing before they go on the market, or at least demonstrate they have undergone testing at the factory to a satisfactory standard.

As for those young guys buying this stuff, make sure you do your research before handing any of your hard-earned cash over, as it could come back to bite you in more ways than one.

ASSISTANT EDITOR *Marcus Gibson*  
marcus@performancecar.co.nz

### Watch Out for Fake Drive-shaft Loops!

Here's something that all LVV Certifiers will need to keep a wary eye out for in future - a shocking example of the 'skulduggery' going on out there in 'boy racer' land, and a sorry indictment on some of the retarded thinking amongst this fraternity.

It's a 'temporary' driveshaft safety loop which is deliberately intended to deceive an LVV Certifier. LVTVA has taken the necessary steps to have the product removed from Trade Me, but it's still possible that these loops will end up finding homes.

The seller is quite the salesman: *"It's held in by two 6 mm studs so no need to ruin your car by drilling large holes in your floor. It has four bolt-heads welded in so it looks the part but is actually held in by F\*%k all. Chuck this in with a single piece driveshaft, get ya cert then rip it out and put your 2 piece driveshaft back in!! It has got 3 TE71's through cert so far"*.

This also serves as a timely reminder that all LVV Certifiers should be inspecting the attachment of the driveshaft safety loop to the floor-pan of the vehicle, to ensure that it's correctly attached, even if this requires the lifting of carpets etc. All of the applicable driveshaft safety loop requirements can be found in chapter 5, section 5.22 of the Hobby Car Technical Manual.

### Counterfeit Reporting Website

Elsewhere on this page, we've talked about the general problem of cheaply and poorly-made knock off parts.

There is an interesting website dedicated to the reporting of counterfeit parts. It's a tool for the legitimate side of the industry to warn others about counterfeit copies of their product, and it's ideal for people on our side of the fence to be able to view the website and see what is being knocked-off and how to visually differentiate between the knock-off part and the real thing. Any of us can also report counterfeit parts if we find them.

The website is: [thecounterfeitreport.com](http://thecounterfeitreport.com)

As an example of a typical automotive part that has been counterfeited, have a look at this link for a knock-off copy of a MSD 6AL ignition system:

<http://thecounterfeitreport.com/product/244/>

Of interest to the automotive industry are posts from a raft of household names in the automotive sector, including Specialty Fasteners ('AeroCatch' brand latches), SKF (bearings), Kubota (oil), Function 7 (suspension control arms), MSD (6AL ignition units), Skunk 2 (suspension control arms), NGK (spark plugs), Tein (springs), and Turbosmart (fuel pressure regulators).

### Chinese Bearings in American Stub Axles

Someone known to us at LVTVA recently purchased a set of aftermarket CPP (Classic Performance Products) stub axles for a '57 Chevy, and during a pull apart and inspection, the owner found stamped on the bearings - not SKF or Timken, but... 'Made in China'. There were no part numbers on them. In the bin they went...



## LVVTA TRAINING

### Trike Technical Workshop Held August 22 & 23 2013

LVV Certifiers holding the appropriate certification category to certify Trikes attended a two-day Trike workshop on August 22 and 23, at the LVVTA's Wellington offices. Present were Kerry Buchanan and some other technical experts from the Kiwi Trikers Club, who, together with LVVTA's Dan Myers, co-ordinated a very successful and interesting workshop. Excellent feedback and input from LVV Certifiers attending has given LVVTA all of the raw information needed from which to commence the development of a new LVV Standard for Trike design and construction. This was an excellent first step toward sound formalised Trike technical requirements for New Zealand.



### LVVTA Training for NZ Police Officers

LVVTA presentations are made on a regular basis to members of the NZ Police Force. Front-line Police Officers attend presentations at the LVVTA premises in Porirua (just over the motorway from the NZ Police College), which consist primarily of assisting the Officers to understand the modification thresholds; - which modifications are required to be LVV Certified. Pictured below are a Police group, having a presentation made by LVVTA's Dan Myers, during August.



### LVV Certifier Training Dates November 2013

A reminder for LVV Certifiers; the second series of regional LVV Certifier training sessions for 2013 are set, as follows:

- Wednesday November 13 Dunedin
- Thursday November 14 Christchurch
- Monday November 18 Wellington
- Tuesday November 19 Wanganui
- Wednesday November 20 Rotorua
- Thursday November 21 Auckland

In regard to venues, please note that the Dunedin and Auckland sessions are to be held at private residences, the details of which will be notified directly to attendees.

Rotorua is at Braeside Resort, 4 Barnard Rd (usual venue now), Wanganui and Wellington remain as per normal, and Christchurch is at a new venue, the City Park Motel, 22 Riccarton Road.

If anyone has any queries in relation to the LVV Certifier training venues or times, please contact Linda on [linda@lvvta.org.nz](mailto:linda@lvvta.org.nz).

### 4WD Technical Workshop Postponed

The one-day 4WD technical workshop proposed for November 2013 at the Wellington LVVTA offices has been postponed until mid-2014, due to existing workloads, including a number of other projects which have to be completed by the end of this current year. LVVTA is committed to the 4WD technical workshop however and

regard it as a high priority, already locking it in for 2014's work schedule.



### Bonnet (Engine Hood) Removal

The question is often asked as to whether or not a bonnet can be removed and then be LVV certified to make the removal legal. While there's no specific rule anywhere that says 'every vehicle must be fitted with a bonnet', there is a relevant 'general safety requirement' (GSR) contained within NZTA's External Projection Rule (the rule that tries to minimise extra damage inflicted on a pedestrian by sharp pokey bits on the front of a vehicle), and this basically requires that a vehicle shouldn't be modified in such a way as to increase the likelihood or risk of injury to any person who might come into contact with the vehicle.

The intention of the Rule - in this regard - is to prevent a pedestrian being hit at low speed (which might cause only a minor leg injury) but as a result of the pedestrian's contact with exposed solid engine components or moving parts like an alternator belt or cam-belt positioned in an easily-contactable area, the pedestrian receives additional, or worse injuries.

While some will view this kind of thinking as a bit over-the-top, it's surprising the proportion of total road accident injuries and deaths pedestrian hits make up.

LVVTA has discussed this matter further with NZTA this year, and have agreed that bonnets should not be removed on any vehicle, particularly one which was manufactured to comply with any safety standards. There is an intention for the removal of bonnets and side-panels to be permitted under the existing LVV Authority Card system, which will incorporate conditions and limitations in much the same way as applies to mudguard exemptions.

In summary, no vehicles should have any major factory panels such as bonnets or mudguards, or other components removed, or if the risk of injury to a pedestrian is increased as a result of the removal of the components. Until this matter is fully clarified, if an LVV Certifier is presented with a vehicle with a removed bonnet, they should contact LVVTA technical staff for advice before proceeding.

For owners of vehicles who would like to remove their bonnet, a clear bonnet (polycarbonate or clear resin) is an option.

### Windscreen Wiper Swept Area

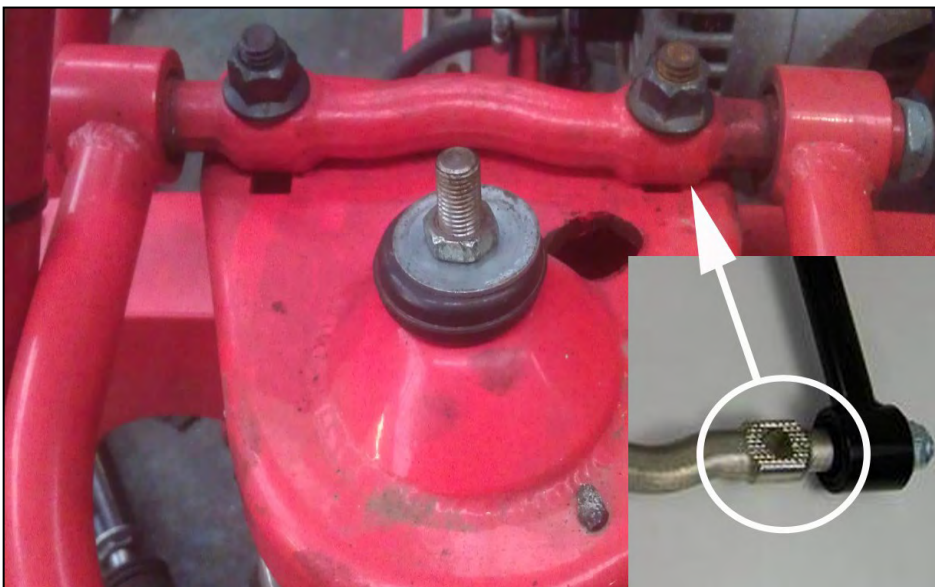
The LVVTA technical staff have been identifying some inconsistency between the way in which the windscreen wiping swept area requirements are being applied to scratch-built vehicles, particularly in relation to vehicles with very low windscreens or chopped windscreens - both of which make achieving a good swept area difficult with only two wipers.

Paragraph 15.12.1 of the Hobby Car Technical Manual (HCTM) requires "...a swept area such that no significant area of the windscreen remains unswept by the wipers, other than for the areas at the top of the intersection points of the wipers' swept areas, and the areas at the outer-most upper corners of the windscreen".

An illustration in chapter 15 of the HCTM shows the suggested 3-wiper arrangement for chopped cars, or cars with very low windscreens. If an LVV Certifier is approving a chopped screen or low screen vehicle with only two wipers, he should provide LVVTA with a scaled schematic of the swept area.



### Aftermarket Mustang II-based Custom IFS 'Dog Bone' Mounting System



TAC members recently discussed an aftermarket copy of a Mustang II IFS (shown at left), which uses the top horizontal surface of the upper shock mount to attach the upper a-arm. The arm is positively located using through-bolts and nuts, however the lower surface of the 'dog-bone' is also serrated, which effectively locks the two surfaces together once correctly tightened. TAC members agreed that this was an adequate attachment method, which replicates an existing OE design (the original Mustang II unit also uses this same method of attachment) provided that the serrated surface is present, and as there have been no known failures of this system, these are able to be approved. LVV Certifiers should always check to ensure that the underside of the dog-bone has a serrated surface.



## Brake Hoses Don't Require Standards Markings

It has recently been identified that there is a difference in the requirements for brake hose compliance - in relation to standards markings - between the LVV Braking Systems Standard (no requirement for any standards compliance), and the Braking Systems Chapter of the Hobby Car Technical Manual (HCTM) (where standards compliance is required).

The reason for the conflict between the Standard and the HCTM chapter is that the requirement for standards compliance for brake hoses wasn't thought about in 2000 when the Braking Standard was written, but by the time that part of the HCTM was written some years later the requirement was included for standards compliance for brake hoses, because by that time NZTA required the presence of standards markings on all brake hoses.

Shortly after the publication of the original version of the HCTM, NZTA removed the requirement for standards compliance of brake hoses at WoF and entry, and it was subsequently agreed between NZTA and LVVTA that there is no sense in LVV applying the requirement if it's not required at normal WoF and used entry. However, the amendment wasn't recorded and the change wasn't made during the HCTM's 2010 amendment process.

The HCTM will be amended at the next opportunity, but in the meantime, LVV Certifiers should be clear that standards markings do not have to be present on brake hoses during LVV certification.

There are however specific requirements relating to braided stainless steel brake hoses that must be followed, contained in 'LVVTA Information Sheet #04-2007 - Stainless Steel Braided Brake Hoses'.

## Brake Pedal Design & Construction

The 'fail-safe' design of a custom-made brake pedal requires that the pedal material fully 'encapsulates' the pedal pivot boss, however no guidelines currently exist in the Hobby Car Technical Manual (HCTM) for a minimum thickness of material at this fail-safe area. TAC members have agreed that the thickness around the pivot boss must be at least the same as the pedal thickness; - eg, an 8mm thick pedal should have at least 8mm of 'fail-safe' material around the pivot boss.

Other points to remember when assessing any custom brake pedal:

- the pedal pivot must incorporate some form of self-lubricating bushing to prevent premature wear through metal-to-metal contact; and
- the bushing must be seated on the bolt's shank, and not on the threaded section; and
- the pedal must be one-piece, except for the pedal pad or pivot boss attachment; and
- any welding to the pedal (including pedal pad to pedal) must be via TIG, and should have an NDT carried out (remember to use the F008 NDT Request Form to ensure the NDT operator holds the appropriate qualification); and
- the HCTM's spec of 8mm should be considered a minimum; if a pedal is unusually long, or incorporates bends within its length, the material thickness may need to be increased.

Remember also that any offset crank brake pedal requires approval in writing from the TAC. Contact the LVVTA Tech Team for details.

## 'Heidts'-brand Suspension Arm Issue

A 1940 Ford Coupe hot rod was imported from the USA recently fitted with a 'Heidts'-brand front end. Upon inspection at Terry's Chassis Shop while carrying out some remedial work, Terry Bowden noticed that one of the lower front suspension arms (pictured) was badly bent at the point where the coil-over shock mount attached to the lower arm. Terry's inspection of the front end showed that the design of the lower arms - particularly in relation to the way in which the lower end of the coil-over shock is mounted to the arm - is of poor design, had a below-spec 7/16" coil-over through-bolt, and it was therefore no surprise that the lower arm bent as a result of over-loading. In addition - although they hadn't bent like the lower arm did - the upper suspension arms are made from tubing that is below the minimum specification required by the Hobby Car Technical Manual (HCTM) for the vehicle weight. A number of things pointed to the upper and lower arms being inadequate for the type of vehicle to which the Heidts front end was fitted.

*Lying on a flat surface, the bend in the suspension arm is clearly visible at the pivot end of the left side section of the arm (where daylight can be seen between the arm and the surface).*



From LVVTA's investigations into the Heidts range of front suspension products, it would appear that the arms fitted to the Heidts front end in the Ford Coupe are not available as part of a complete Heidts IFS assembly. All complete Heidts IFS assemblies incorporate suspension arms of a different design - in particular a better-designed lower spring platform, or coil-over shock mount, on the underside of the lower arms. The only suspension arms available from Heidts that are the same as those found on the Ford Coupe are the arms which are sold as individual arm sets, offered as direct replacement arms for a Mustang II (to enable the Mustang II to be retro-fitted with a coil-over shock suspension system to replace the separate spring and shock). In other words, it would seem that the arms fitted to the Ford Coupe were never part of a complete Heidts IFS assembly, and never intended to be fitted to a full size car.

TAC members agreed that the design of the arm is inadequate, and if presented for Design Approval would not be approved.

This sub-standard lower-spec a-arm design is easy to spot, as it has the coil-over through-bolt tubes welded through the lower arm tube section, which fundamentally weakens the arm. The other Heidts lower arms found in complete IFS assemblies either have a large 'platform' on the lower arm to mount the spring, or a tube for a coil-over shock that mounts to the under-side of the lower arm.

Although a complete 'Heidts'-brand independent front suspension system (IFS) is not required to go through the TAC approval process, LVV Certifiers should, as best they can, ensure that all IFS assemblies meet all of the applicable technical requirements contained within the HCTM, and also that the IFS assembly is in fact a complete matching assembly, and not a 'mix'n'match' of various parts available that may not have been intended to work together.

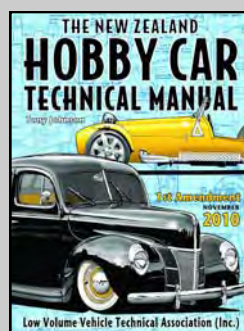
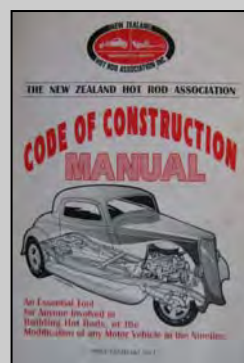
## PROCEDURAL STUFF

### Correct Documentation for Retrospective LVV Certification

It has become apparent that there is still some confusion on whether to apply the old Code of Construction Manual (COCM) or the newer Hobby Car Technical Manual (HCTM) when certifying vehicles that were built or modified pre-COCM (1992), and that some LVV Certifiers have still been applying the old COCM requirements instead of the current HCTM requirements to pre-'92 vehicles.

LVV Certifiers must apply the current HCTM when certifying pre-92 vehicles. When the HCTM was revised in 2010, pre-1992 modifications and builds were also catered for within the revised HCTM - via the use of the shaded 'retro-boxes' - to provide older vehicles with a slightly softer path. So, with the release of the November 2010 1st amendment of the HCTM, the old Code of Construction manual effectively became redundant. As from the start of 2011, the HCTM became the inspection document for all extensively modified and scratch-built LVV's, regardless of modification or build date.

It should also be remembered that, as the current HCTM is now applied to all vehicles (regardless of build date), the HCTM form-sets should be used in all circumstances instead of the Retrospective COCM form-sets. Remember also that if an LVV Certifier requires HCTM form-sets, these can now be sent electronically - just ask one of the LVVTA technical team members.



An example of where this confusion has existed is when an LVV Certifier is inspecting a pre-1992 car which has a welded brake pedal. In this case, the COCM states: 'If the certifier has any doubts as to the quality of weld or suitability of materials, N.D.T Certification may be required'. The HCTM requires however, that if the pedal is welded, then chapter 18.9 'critical function welding requirements' needs to be applied. This would require the pedal to be TIG-welded and NDT-certified.

20 years from when the original COCM was written, it's sensible to ramp up some of the technical requirements for the more safety-critical components within hobby vehicles.

### Don't Work in Isolation!

LVV Certifiers should avoid engaging themselves into production-run LVV certification work without first consulting LVVTA.

Some vehicles built or modified on a small production-run basis (built both here in NZ and overseas) can feature such complexity within their modifications (vehicles modified for disabled users are particularly problematic) that LVV Certifiers should not try and deal with these vehicles in isolation. There have been a number of instances over the past five years where an LVV Certifier has carried out LVV certifications for commercially-modified production-run vehicles, and problems have been missed at the time of LVV certification, which have caused a lot of time, cost, and frustration for the customer, the LVV Certifiers, and LVVTA, to resolve afterwards.

As an example, a company in Australia is considering exporting modified vehicles to New Zealand, and LVVTA provided a service whereby the manufacturer shipped a sample vehicle to LVVTA's offices for evaluation in January of this year, and after bringing a team of experts together to assess the vehicle and its modifications, a comprehensive report was provided by LVVTA to the manufacturer enabling him to understand what will be required in order to meet NZ's LVV compliance requirements. This process will substantially reduce the likelihood of one individual LVV Certifier missing important compliance or safety issues during the inspections.

LVVTA is willing and happy to provide any LVV Certifiers with help and support if they are becoming involved in any volume-based vehicles, so any LVV Certifiers who are considering providing LVV certification for such vehicles should contact the LVVTA technical team before commencing.

### Dealing With Previously-certified Problems

On occasion a vehicle that was modified before 1992, or a previously certified vehicle, will need re-certification for new modifications.

In either case, the existing modifications will still be assessed by the LVV Certifier for general safety, most importantly any critical function components. Also, previously-certified components should still come under scrutiny if the LVV Certifier believes they did not meet the requirements in place at the time of the original certification. The question often arises if the system that doesn't comply isn't related to the new modifications; - for example, an older scratch-built car is being re-certified for a new custom independent front suspension, but in the course of his inspection, the LVV Certifier notices no driveshaft loop, or he notices a two-piece brake pedal.

Obviously, 'winding back the clock' is frustrating for the vehicle owner, and it places the LVV Certifier in a position where he will be likely to create an argument by failing the vehicle on something that should have been sorted out by the previous LVV certification.

LVVTA's view on this is that the LVV Certifier should not be concerned about non-compliant components or systems from a previous LVV certification provided that he is satisfied that there are no clear safety risks, particularly if there is an element of 'time-proven' history associated with the component or system. However, he should always fail the vehicle on that unrelated component or system if the item performs a critical function, or there is a clear safety risk. For example, the LVV Certifier might ignore non-compliant lighting on the vehicle, but not a welded steering arm.

Where an LVV Certifier is in this situation and finds himself unsure on the best way forward, he should contact an LVVTA Technical Team member for guidance on how to best handle the particular issues relating to the previous LVV certification.



### Changes to LVV 'Scratch-built' Definition

Progress on the long-awaited changes to the (LVV) 'scratch-built' definition (and introduction of an associated 'modified production' vehicle definition) is finally happening. While not quite past the goal-posts just yet, the legislative changes should be made by the end of this year.

For over a decade problems have arisen from the way in which the term 'scratch-built' is defined within the Land Transport Rules. The 'scratch-built' term has become too complex for most people to understand, it varies from Rule to Rule, and the meaning of the original term has changed (as a consequence of altering it several times to try and fix gaps in the system) to the extent that it no longer serves its originally intended purpose.

LVVTA and NZTA have been working together on this problem for some years, and the agreed changes - contained within the 2013 Omnibus Amendment Rule - will resolve the situation once and for all. NZTA has removed the word 'scratch-built' wherever possible from the Compliance Rule and all of the individual equipment rules, simply referring to the term 'low volume vehicle' (LVV) instead. Then, any definitions that are subordinate to the definition of 'LVV' (either 'scratch-built' or 'modified production') will live only in one place - within the Low Volume Vehicle Code. This prevents any chances again in the future of the definitions varying from place to place (because it will only exist in one place), and it enables the decision as to which type of 'low volume vehicle' an individual vehicle that comes into question in fact is (ie - a 'scratch-built' LVV or a 'modified production' LVV) to be dealt with far more quickly, easily, and appropriately than it ever has been in the past.

Vehicles which have been adversely affected in the past include those such as where a passenger car is retro-fitted with a utility chassis, a pre-war hot rod has its rusty old chassis replaced by a new reproduction chassis, a 1932 chassis is fitted to a 1930 vehicle, and a vintage car has a sedan body replaced by a period-styled open sports body.

This is a very big step forward for the LVV community, in terms of dealing with these decisions for affected vehicle owners quickly and easily as they crop up, and being sure of getting the right outcome consistently. Equally as importantly, it means that LVVTA and NZTA can respond to needs to change or amend the 'scratch-built' or 'modified production' definitions from time to time quickly and easily, because such a change now won't involve a change to one or more NZTA Rules, which is a multi-year process.

The Omnibus Amendment Rule is still not signed off (submissions are currently being reviewed and considered by NZTA), but LVVTA is confident that the changes will go through without difficulties, as this doesn't affect anyone except for a small number of motor vehicle enthusiasts.

The definition changes that will occur with the signing off of the Rule will be a huge help for a small number of people owning very specialised vehicles, and a big step forward for the LVV system.

### Update of LVVTA-recognised IFS Manufacturers

A requirement within the LVV certification system is that any custom-built independent front or rear suspension system (IFS or IRS) is required to be approved in writing by the LVVTA Technical Advisory committee (TAC).

Over a period of time, once the TAC has developed a high level of confidence in a specific manufacturer (usually through a combination of having reviewed a number of applications and also through having confidence that the manufacturer maintains a high level of quality control within their design and manufacturing processes), a manufacturer can be added by the TAC to the list of 'LVVTA-recognised IFS Manufacturers'.

Well known and highly-regarded American kit car manufacturer 'Factory Five', along with British Lotus 7 replica manufacturers 'Caterham' have both recently had their IFS assemblies added to the list of 'LVVTA-recognised Manufacturers', meaning that a custom IFS manufactured by either of these companies is no longer required to be submitted to TAC for individual approval. LVV Certifiers will need to ensure that no post-manufacture modifications have taken place, and will still need to carry out a full visual inspection of every aspect of the IFS, including a bump-steer swing-check.

Due to confidentiality agreements between some IFS manufacturers and LVVTA (entered into because LVVTA requires their full working drawings in order to consider LVVTA-recognised Manufacturer status, but the manufacturers don't want their detailed information out in the public domain) the information can't be provided on the LVVTA website for LVV Certifiers to make visual comparisons against. However if an LVV Certifier has any concerns or questions, he should contact an LVVTA Technical Team member.

The complete list of 'recognised IFS manufacturers' is: Rods by Reid, TCI, Alston, Morrison, Heidts, Kugel, Factory Five, and Caterham.

### 'Fair Go' School Bus

Many people would have seen the 'Fair Go' piece on the Hot Rod school bus in Hamilton early in September. This vehicle was a scratch-built small American bus body fitted onto a Chevy crew-cab 'dually' chassis. Despite having a laden weight of under 3500 Kgs in its intended use as a motorhome, the vehicle from which the chassis was sourced was slightly over 3500 Kg GVM, and so NZTA determined that the vehicle had to be treated as a heavy vehicle and the owner had to wait 13 months for the heavy certification to occur. Unfortunately, the changes to the scratch-built definition (covered elsewhere this page) won't resolve situations like this, but LVVTA is at the early stages of working with NZTA to sort out a practical solution for vehicles like this which are effectively over-weight cars and utes - vehicles that we refer to as 'light heavies'.

### Yeah, I didn't think that would be any good...

During the process of reviewing LVV Forms and Form-sets, it seems increasingly that when LVVTA technical staff find a technical issue with a certification (where the vehicle is either not safe or not compliant), the LVV Certifier will make a comment such as "well I wasn't sure whether it was ok either, so I thought I'd put it through and see if you guys picked it up".

These responses are coming from a range of LVV Certifiers, including ones in whom LVVTA have a high degree of confidence. This trend of LVV Certifiers relying on LVVTA to identify safety or compliance issues through the form-set review process is not acceptable.

When an LVV Certifier signs an F001 Statement of Compliance, he is signing that a vehicle is fully compliant and safe, and that declaration cannot be undone. Whenever an LVV Certifier makes such a declaration on a vehicle that is non-compliant or unsafe, he is at risk of having a technical error recorded against him.

If an LVV Certifier is presented with a grey area, then he should contact LVVTA technical staff at the time of inspection to establish the correct way of moving forward before signing off and submitting the certification documentation.

### No Electric Vehicle Form-set For Now

LVVTA will not be developing a form-set for Electric Vehicles (EV) at this stage. Because there are so few EV certifications taking place, it is difficult to justify the development time. For the few that are done, LVV Certifiers are to use an EV LVV standard each time, and tick off each requirement and make comments as necessary directly onto the LVV Standard. Those LVV Certifiers who have already done this have reported that for something as complex as an EV, this may in fact be a better way of doing it.

### An LVV Certifier's Moan for the Day

Here's a note that LVVTA staff received from an LVV Certifier during September this year:

"I get pissed off when I remove a (LVV) cert plate for whatever reason and it still has the paper on the back of it. Can you put a note in the next newsletter re the requirement for this. Also, some plates have the paper removed and stuck on, and no rivets. Cheers."

So there you go, you recidivists (that's a person who habitually lapses into crime, in case you didn't know!): - LVVTA has been banging on about this for about 20 years, so now you've been told by one of your peers!

### Don't forget the wheel alignment report

In order to determine that a vehicle's suspension geometry is within the limits specified in the LVV Suspension Systems standard or the HCTM (meaning that either of these requirements have been applied to the modifications), an LVV Certifier must obtain a copy of a wheel alignment report which records the vehicle's identity, and which has been carried out within 14 days of the LVV inspection date. A copy of this report must accompany the certification application when submitted to LVVTA for processing.

### Disability Transportation Systems Form-set

A mistake has been identified within Form-set FS040 - Disability Transportation Systems, relating to line item # 115 near the end of the Form-set. Item 115 requires a FS033 External Projection Form-set to be filled out and provided with each disability transportation system certification.

The intention of line item # 115 is that LVV Certifiers should provide a FS033 External Projection Form-set with a disability transportation system certification only if modifications have been made to the exterior of the vehicle, such as an externally-mounted wheelchair lifter.

If there is no externally-mounted equipment, LVV Certifiers are not expected to complete and submit a FS033 External Projections Form-set. LVV Certifiers should operate on this basis, effective immediately. Form-set FS040 will be amended at the first opportunity to rectify this mistake.

### Nah, that's a pre-rectification photo...

LVV Certifiers must be sure to clearly distinguish between pre-rectification and post-rectification photos submitted with certification documentation.

When the LVVTA technical staff identify compliance or safety problems associated with photos that they are reviewing (as part of the form-set review process) and contact the LVV Certifier, staff are often told "that's a pre-rectification photo", however nothing is recorded on the F004 Rectification Form.

So in such situations, either the LVV Certifier has required rectifications and not used the F004 Form (as he is required to do), or the photos are of the vehicle in its present condition.

Please ensure that the F004 Rectification Form is always used correctly, and if photos of aspects of a vehicle prior to rectification are submitted, that these photos are clearly identified as such with subsequent photos showing the same aspects of the vehicle in its rectified condition.

### LVV Certifier Category Extensions

The ORS does not make it clear that a LVV certification category extension should be applied for before the LVV certification documentation is submitted to LVVTA. There have been a number of instances where the LVV category extension application has arrived with the certification documentation. Making an assumption that the extension will be granted and submitting everything together can create difficulty for everyone if an application is rejected for whatever reason. When an application rejection occurs in these circumstances, the inspection has already been completed, so the LVV Certifier has to go back to his customer and undo everything and refer him to another LVV Certifier, so the customer gets grumpy with the LVV Certifier, and the paperwork has entered the LVVTA system so the certification plate fee cannot be refunded, so then the LVV Certifier gets grumpy with LVVTA.

The moral of the story: - even though the ORS is not clear in this regard (it will be clarified at the next amendment opportunity) - please apply for a category extension before you agree to start the certification.



# AUTHORISED VEHICLE INSPECTORS' PAGE

## Valid Modification (LVV Certification) Plates

From time to time LVVTA finds that a vehicle has not been referred by an Authorised Vehicle Inspector (AVI) for LVV certification because it has some sort of unauthorised plate or label attached to the vehicle, claiming or implying that it meets all applicable LVV certification or modification requirements.

There are three common examples of these 'modification plates', which many AVIs have passed as authorised modification plates, or LVV certification plates. Van Extras, an Auckland-based seat installer, use two different blue and silver-coloured aluminium plates (one called a 'Modification Plate' and another called a 'Test Compliance Plate'), that they affix to the vehicles they modify. Otago Auto Trimmers, a Dunedin-based seat installer, affix a black and silver-coloured aluminium 'Modification Plate' to their vehicles.

Such plates or labels are not modification plates (or LVV certification plates), nor are they any kind of regulatory or authorised plates or labels. Further, some vehicles to which some such plates or labels are fitted do not in fact comply with the regulations that they claim to comply with. Although it may not have been intentional, some of these unauthorised plates and labels have deceived AVIs, and caused them to inadvertently issue a WoF to many illegal vehicles.

The only certification plate that AVIs may accept as proof of LVV certification is the plate featuring the NZTA (or LTNZ or LTSA) and LVVTA logos. No other plate or label can be accepted as proof of LVV certification for modifications. The Warrant of Fitness manual has examples of the five types of valid LVV certification plates issued since 1992. Alternatively, LVVTA can be contacted for advice on (04) 238-4343.

*The LVV certification plate shown at right is the only modification plate that is legally authorised by the New Zealand Transport Agency. No other type of plate or label may be accepted for proof of LVV certification.*

Low Volume Vehicle Certification Plate

Land Transport NZ  
Ikiiki Whenua Aotearoa

Plate No. **3405JJ**  
Date **9/07/2013**

Make **TOYOTA** Model **HIACE**

VIN. **JTFHX02P405002692** Reg. No. **GWJ895** Year **2013**

Body Style **WINDOW VAN/5-DR/6-ST** Chassis rating **-----** kg

Cons. Body/Chas. **3 NEW STRESSED SEATING POSITIONS AND SEAT BELTS AND ANCHORAGES ROW 2/**

Susp/Axle **OE**

Brakes **OE**

Stg. **OE PWR** Rim **OE F&R**

G-Box **TOYOTA 5SP MAN** Eng.Cap **2694cc** Make **TOYOTA**

Config. **IL4-DOHC** Induction **FUEL INJECTED** No. **2TR-FE**

Exemptions **-----**

*The plate at right is not an authorised modification plate, despite the presence of the words 'Modification Plate', and despite similarities in size and plate material. This plate must not be used as evidence of LVV certification compliance.*

**VAN EXTRAS**

9/11 FAIRFAX AVE, PENROSE, AUCKLAND, PH: 0-9-580 0477

**MODIFICATION PLATE** DATE: \_\_\_\_\_

DESIGN NO. **71 MAPD 42011** CERT. NO. \_\_\_\_\_

TEST NO. **TSL 797** CHASSIS NO. \_\_\_\_\_

COMPLIES WITH THE TRANSPORT (VEHICLE STANDARDS) REGULATIONS 1990 18-19-20 & A.D.R. No's 3/00, 4/00 & 5/00

**THIS PLATE IS NOT TO BE REMOVED**

**TEST COMPLIANCE PLATE**

Testing complies with the leading requirements of internationally recognised standards. Including but not limited to: ADR 3/02, 2/03 ADR 5/02, 5/04, 5/05 and ECE 14, ECE 17.

DATE: \_\_\_\_\_ VEHICLE: \_\_\_\_\_

TEST No. \_\_\_\_\_ VIN No. \_\_\_\_\_

9-11 Fairfax Ave, Penrose  
Auckland, New Zealand  
P 09 580 0477 F 09 580 2547  
www.vanextras.co.nz

**VAN EXTRAS**

**THIS PLATE IS TO REMAIN PERMANENTLY ATTACHED**

*The plate at left is not an authorised modification plate, despite the presence of the words 'Test Compliance Plate', and must not be relied upon for proof of compliance*

*The plate at right is also not an authorised modification plate, despite the presence of the words 'Modification Plate', and despite similarities in size, printing colour, and plate material. This plate is not evidence of LVV certification.*

**OTAGO AUTO TRIMMERS**

19 BRAEMAR ST, 5TH DUNEDIN  
PH. 455-6600

Using VAN EXTRAS AUCKLAND MODIFICATION SYSTEM

**MODIFICATION PLATE** DATE: \_\_\_\_\_

TEST No. **71 MAPD 42011** CERTIFICATE No. \_\_\_\_\_

DESIGN No. **TSL 797** CHASSIS No. \_\_\_\_\_

COMPLIES WITH TRANSPORT (VEHICLE STANDARDS) REGULATIONS 1990 18, 19 and 20 AND A.D.R. No's 3/00 4/00 and 5/00

**THIS PLATE IS NOT TO BE REMOVED**

## Gearbox swaps & LVV Certification

Swapping, or converting, from an automatic transmission to a manual gearbox (and vice-versa) is quite common, and it is a popular misconception that it never needs LVV certification.

Almost all transmission conversions do in fact require LVV certification to ensure that everything has been carried out safely.



The LVV threshold (reproduced as the 'Modification Tables' within the Vehicle Inspection Requirements Manual [VIRM]), states that a gearbox conversion does not require LVV certification as long as:

- the OE gearbox cross-member has not been heated, cut, or welded; and
- the OE gearbox cross-member mounting to the OE body or chassis members is unchanged; and
- no replacement gearbox cross-member is used; and
- the OE drive-shaft(s) is un-modified; and
- no substantial modifications have occurred to the floor or gearbox tunnel area, other than provision for gear-shift mechanism.

In almost all cases a gearbox conversion also requires a change to the brake pedal (or the complete pedal box), or changing the booster and master cylinder. A full easy-reference list of modifications that don't require LVV certification can be found in 'LVVTA Info-sheet 08-2012 - Re-issue of LVV Certification Threshold Schedule', from [www.lvvtanews.co.nz](http://www.lvvtanews.co.nz)

## New Light Vehicle WoF Inspection Frequency to be Introduced From January 2014

The government has announced that the changes to the warrant of fitness inspection system, agreed by Cabinet in January this year, will be introduced in two stages.

From 1 January 2014, light vehicles first registered anywhere between 2004 and 2008 will move to annual, rather than the current six-monthly warrant of fitness inspection. They will remain on annual inspections for their lifetime.

From 1 July 2014, annual inspections will be extended to include all light vehicles first registered anywhere on or after 1 January 2000. Also from this date new vehicles will have an initial inspection, another one when they're three years old, then annual inspections for their lifetime.

Vehicles first registered anywhere before 1 January 2000 will remain on six-monthly inspections for their lifetime.

Date of first registration	Frequency of WoF inspection from 1 January 2014	Frequency of WoF inspection from 1 July 2014
2012-14	annual	** WoF to third birthday OR annual WoF
2009-11	annual	annual
2004-08*	annual WoF	annual WoF
2000-03	6-month WoF	annual WoF
Pre 2000	6-month WoF	6-month WoF

\* These vehicles join the group of vehicles that are currently younger than six years old on annual inspections.

\*\* The expiry date of the WoF will depend on how much time has elapsed since the vehicle was first registered.

## New Zealand's Total Vehicle Fleet Numbers

The New Zealand Transport Agency (NZTA) have released a schedule which shows the total New Zealand vehicle fleet, which includes any vehicle, including trailers, caravans, and vehicles not intended for road use (such as agricultural machines and ATVs), that are registered with NZTA, as at the end of August this year. The total fleet is broken into vehicle sub-groups.

This database includes all low volume vehicles, however these are not shown separately, but are distributed throughout the relevant NZTA sub-groups, such as in 'Goods Van/Truck/Utility', and 'Passenger Car/Van'. LVVTA's records of the total number of low volume vehicles is not relevant for drawing comparisons as we can't distinguish between those that are registered and those that aren't.

AS AT	VEHICLE TYPE	SUBTOTAL
31/08/2013	AGRICULTURAL MACHINE	1,778
31/08/2013	ATV	5,560
31/08/2013	BUS	24,151
31/08/2013	GOODS VAN/TRUCK/UTILITY	539,885
31/08/2013	HIGH SPEED AGRI-VEHICLE	59
31/08/2013	MOBILE MACHINE	16,111
31/08/2013	MOPED	31,007
31/08/2013	MOTOR CARAVAN	34,966
31/08/2013	MOTORCYCLE	121,253
31/08/2013	PASSENGER CAR/VAN	2,873,841
31/08/2013	SPECIAL PURPOSE VEHICLE	2,878
31/08/2013	TRACTOR	40,132
31/08/2013	TRAILER NOT DESIGNED FOR H/WAY USE	1,172
31/08/2013	TRAILER/CARAVAN	638,697
	<b>TOTAL</b>	<b>4,331,490</b>

## Farewell to NZTA's Graeme Swan

From the bad news department, we bring you the news that Graeme Swan of the New Zealand Transport Agency (NZTA) is leaving NZTA. Graeme, a Technical Co-ordinator, has been with NZTA for seven years, and part of his responsibilities during the last five years has been as a 'go-to person' for LVVTA. Graeme has had a lot to do with LVVTA, attending the joint NZTA - LVVTA Technical Working Group meetings, and being our main NZTA point of contact.

Attracted to the South Island Central Otago lifestyle, Graeme will be taking on the Service Manager role at Queenstown Motor Group, a VW Audi & Subaru dealership. Graeme says "it's been great being involved with LVVTA and the LVV Certifiers - I've learnt heaps over the years, and really enjoyed working with the LVV system".

Graeme has been an excellent contact for LVVTA, and he will certainly be missed.





## LVV PEOPLE

### LVVTA at CRC Speedshow

Over the weekend of 20-21 July 2013, the CRC Speedshow was once again held at the ASB Showgrounds in Auckland. The CRC Speedshow is a rich and diverse mix of all automotive denominations, and it has become the biggest motor show in New Zealand. One of the features of the 2012 and 2013 events has been an entire hall dedicated to modified and customised cars and motorcycles. It is now a must-see event.

Whilst this type of event is an excellent platform from which to promote safe vehicle modification, LVVTA - as a not-for-profit organisation - generally doesn't have budgeting in place for this sort of promotional activity, however a free space was made available to LVVTA by the event promoters, a very kind and much appreciated gesture.



At left, shown taking their responsibilities very seriously, are, from left, LVVTA's Justin Hansen, one of Dan Myers' new friends from the CRC Speedshow, Dan Myers, another of Dan's new friends, and Tony Johnson. Justin and Tony were looking at Dan to make sure he was playing nicely with his new friends.

Right: Dan Myers, Justin Hansen, and Tony Johnson were on-site all weekend to answer questions and provide technical help and advice for modifiers and builders. Below & below right: Auckland's Mike Robert's kindly made his incredible hand-built Model-A Ford pick-up available to LVVTA for the trade display. This amazing car has to be studied to be believed - so high quality is the hand-built engineering and fabrication work, that much of the car's componentry is assumed to be factory forgings or castings.



### All Shook Up Over 'Quakes in Wellington



While the mid-year earthquakes caused heart-ache for many in Wellington, all it created at LVVTA HQ was a lot of laughter at Tony Johnson's expense. Knowing Tony's eye for detail, and his concern that all pictures must hang perfectly straight, the rest of the LVVTA staff thought it was hilarious that every time Wellington shook, Tony would be having another anxiety attack...





### New LVV Certifier for Nelson Region

A new LV1A/1B LVV Certifier has been appointed for the Nelson & Marlborough region. LVVTA made a concerted effort to find 'Mr Right' for the region during July and August, the result of which is the appointment of Nelson's Gavin Martin. Gavin owns and operates Rodz Ridez & Restorationz Ltd, a small business which provides body restoration work, and looks after both the bodywork and chassis engineering sides of hot rod construction. Gavin can be contacted on (03) 544-8446. Welcome aboard Gavin!



### Frances in Overdrive



New LVVTA Plate production Officer Frances Bradey has hit the ground running, and we have had many reports from LVV Certifiers saying that plate production service, quality, and accuracy is first-class. Frances says her automotive engineering qualification has been a big help in the role. She's fitted in amongst the Wellington team perfectly, and they all say she's a 'keeper'! Well done Frances - you're a star!

*A recent article in the Kentucky Post reported that a local woman, Bessie Maynard, has sued St Luke's hospital, saying that after her husband had surgery there, he lost all interest in sex. A hospital spokesperson stated "We've done nothing wrong. Mr Maynard was admitted in Ophthalmology - all we did was correct his eye-sight."*

Now there's a wise saying that would make our lives at LVVTA a bit simpler if everyone stuck to it! 'There's no such thing as a dumb question - it's only dumb if you don't ask it!'



### E-database of LVV People

One of the projects that LVVTA has recently got to the top of the to-do list is to compile a database of people involved in the vehicle modification and construction industry in New Zealand. There are all kinds of different modification-related businesses out there, large and small, including 4-wheel drive, sports cars, kit cars, classic cars, performance imports, vehicles for disabled people, motorhomes, trikes, custom motorcycles, and even modified vintage cars. So often we see and hear of cases where people - even professionals - dive in and carry out modification work without knowing about, or having access to, the various technical requirements within the LVV Standards, Information Sheets, and so on.

LVVTA's Frances Bradey and Nikki Thomas have been compiling a list of businesses, and they will all start receiving the LVVTA Newsletter (starting with this issue), and any industry press releases, particularly those containing 'aftermarket alerts'. If anyone would like to be on the e-list and isn't receiving LVVTA Newsletters, feel free to contact Nikki at [nikki@lvvta.org.nz](mailto:nikki@lvvta.org.nz), and she'll be happy to add you to the list. There is no charge for this service.

### Don't Try This at Home Kids...

In case anyone needs a reminder on how evil a 9" cut-off wheel can be, here it is. Carterton-based LVV Certifier and all round top bloke Julian Cheer, had one come back and bite him badly while working under a car during August, cutting through his face, neck and throat, and stopping just a few millimetres from his jugular vein. Julian's been a mechanic all his life, and has used 'death wheels' for 24 years. His message to others is simply "don't get complacent".





## ODDS & ENDS

### Just Because You Can...

...doesn't mean you should. LVV Certifiers will find this link interesting: [www.industrialchassisinc.com/?p=906](http://www.industrialchassisinc.com/?p=906) It will take you to the website of an American hot rod shop, and through some interesting text and good photographs (sample photograph shown below), they describe their ordeal of putting a hot rod right after being 'engineered' by someone else. This 'check out this website' sort of thing can be a real time waster, but we think this one really is worth a look! Those of you with high standards of fabrication might want to pop a couple of Panadol first...



### LVVTA Office Christmas Holiday Closure

It seems a little early to be talking about Christmas, but just to give LVV Certifiers plenty of early lead-time, LVVTA's Christmas-New Year holiday period closure details are as follows.

Close of business Friday 13 December is the last day for receiving certification plate applications with a guarantee of plate turnaround and despatch prior to Christmas closure. As always, every effort will be made to despatch plates requested during the last week of December, and we are hopeful of providing same day turnaround right up until the last working day, as we have for the past four years.

The office will close at noon on Tuesday December 24, and will re-open on Monday 6 January. Mark it on your wall-planner now.

### Thanks Mac's Equipment!

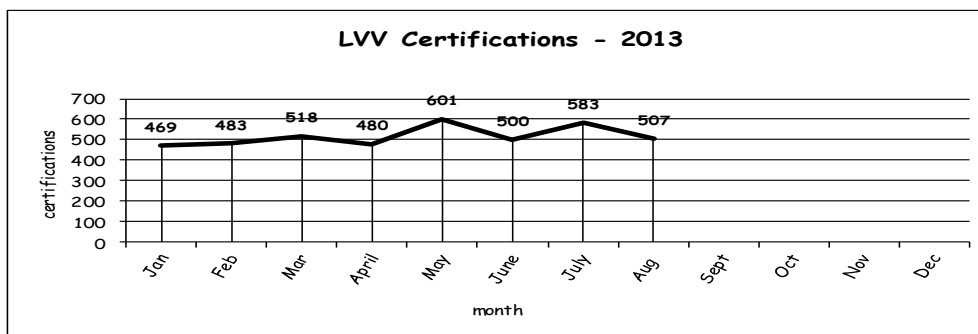
LVVTA had a great 'score' in August, when we became the winner of a lucky draw for a 9-drawer Kinchrome tool chest from Mac's Equipment. The prize and timing were both perfect, as we are in the process of setting up some basic tools and equipment in the LVVTA workshop. We know the Mac's Equipment team well - they're a great bunch of guys, who are heavily into the car scene, and they provide all kinds of quality automotive equipment for the trade. It's worth checking out their website [www.macsequipment.co.nz](http://www.macsequipment.co.nz). Accepting the Kinchrome tool chest at left is LVVTA's Justin Hansen (with son Blake sneaking into the picture) from Mac's Ian McNeill.



### Changes in Postal Delivery Time

NZ Post has recently confirmed that it's scrapping next-day delivery for standard mail, and the delivery time-frame target for normal mail will now be three days. Fastpost mail still intends to provide a next-day delivery. LVVTA strongly recommends LVV Certifiers use a traceable courier service for all certification documentation. Using normal postal service means that there's no tracking, and if one disappears, the whole LVV certification documentation process would have to start all over again. Now, that would rip your undies.

### LVV Certification Numbers for 2013



The graph to the left shows the national per-month LVV certification numbers for the first two-thirds of 2013. The monthly average for the first 8 months of 2013 is 517, which is almost identical to the monthly average for 2012 of 516.

These averages compare to 575 for 2011, 562 for 2010, and 566 for 2009.

Low Volume Vehicle Technical Association (Inc) [www.lvvtta.org.nz](http://www.lvvtta.org.nz) Office & courier: 21 Raiha Street, Porirua City  
E-mail: [info@lvvtta.org.nz](mailto:info@lvvtta.org.nz) Phone: (04)238-4343 Fax: (04)238-4383 Postal: P.O. Box 50-600, Porirua City 5240