

Light vehicle load restraint

Summary

Every time you (or your staff) drive your work ute or trailer out of your driveway, you could be breaking the law. The problem is that determining the rules and regulations around load restraint for vehicles under 4.5T GVM is confusing at best.

While there is the National Transport Commission’s [Load Restraint Guide](#) (2004) that covers heavy vehicles, and that many jurisdictions refer to for lighter utility vehicles, the rules are enforced on a state-by-state basis, and in some cases, the penalty depends on the police officer and traffic authority themselves.

In other words, most states are doing a poor job of educating drivers, fleet managers and others – not to mention law enforcement agents.

Is it legislated under Work Health & Safety? Or traffic regulations? And what is the Chain of Responsibility? On top of this, there is also a raft of Australian and international standards governing load restraint that need to be understood.

The bottom line is whether you are a sole trader, subcontractor, small business tradie, handyman or brickies’ labourer, you are bound by the same basic rules and regulations as the heavy haulage industry.

Basically, this means your load must not be placed in a way that makes the vehicle unstable or unsafe; it must be secured so that it is unlikely to fall or be dislodged from the vehicle; and an appropriate method must be used to restrain the load on a vehicle.

Your method of load restraint needs to not only be suitable for day-to-day driving, but must stay in place in the event of sudden braking or swerving, collision or rollover.

Sole traders, as well as all other users, are responsible for ensuring loads are fully secure. If you employ or subcontract others, Chain of Responsibility (COR) laws mean you also bear some responsibility to ensure their loads are secure.

As a leader in the field of Service Bodies and canopies, XL has experience in working with our customers to ensure they remain compliant, no matter which state they operate in.

This White Paper aims to address much of the confusion around load restraint for vehicles under 4.5T GVM. It also provides some solutions to the issue and some guidance around how best to restrain any load.

It is essential reading for fleet managers, sub-contractors, sole traders and anyone that transports cargo using a utility or trailer.



Introduction

Every year Australians are injured and killed in crashes caused by unrestrained loads. It is an offence under the Heavy Vehicle National Law (HVNL) and State Transport legislations if your load is not properly restrained and is at risk of falling from your vehicle.

Correct load restraint for utility vehicles in Australia seems to be a vexed issue, with very little definitive rule or regulation. In general, it is something that is enforced on a state-by-state basis, but most states are doing a poor job of educating drivers, fleet managers and others.

For heavy vehicles, there is the National Transport Commission's [Load Restraint Guide](#) (gazetted in 2004), a fairly hefty tome of 268 pages covering everything from choosing the right vehicle to load distribution, load shifting, types of restraints available, right up to calculating restraint requirements and certifying a load restraint system.

Comprehensive, sure, but not particularly helpful for your average tradesman who just wants to:

- comply with legislation;
- avoid a fine; and
- prevent accidents and injuries.

Chances are you could be breaking the law every time you pull out of the driveway. The restraining of loads carried in utes, tray-bodies and service vehicles is in the law-makers' target – and for good reason.

And that is just in everyday driving. You also need to consider whether any load restraint can withstand heavy braking or sudden swerving to avoid an accident. Not to mention whether your load will stay safe and secure in the event of a collision or roll-over. It's not just about making sure the load does not come off – it is also about making sure that the load does not shift in a way that makes the vehicle unstable or unsafe.



Did you know?

Unsecured loads such as household goods, building materials, green waste and trade equipment pose a serious danger to road users and the public.

Every year in Australia, unrestrained loads cost thousands of dollars and contribute to serious injury and deaths on our roads. In August this year (2015) the ABC reported that debris – including milk crates, hardhats and piping – from unsecured loads cost WA taxpayers \$2 million a year, with more than 50 items a month cleaned up from Perth's freeways. In 2013, Main Roads WA received 1675 callouts to collect debris from roads. And VicRoads' website states that 80 tonnes of debris are removed from Victorian roads each month, with 700 callouts each year putting staff and the public in danger.

We can assume the statistics are similar across Australia.

While we know that no matter which state you are operating in, it's illegal to transport an unrestrained load on public roads, and there is an Australian Standard (AS/NZS 4345) for transport fibre rope used in cargo restraint, what is less certain is how the law actually defines 'unrestrained'.

State-based legislation is ambiguous at best, and can be confusing to even the most experienced fleet manager, not to mention a sole trader, whose entire livelihood depends on the contents of his or her ute.

While ropes, webbing and tarpaulins are all used in cargo restraint throughout the country, ensuring the restraints are secure and safe for all sizes and shapes of loads and can prevent accidents caused by load shifting, an unbalanced load or debris escaping the restraints appears to be an inexact science.

Where a load may seem to be controlled, is it really 'restrained'?

The European Union is leading the way with a Best Practice Guide on Cargo Securing for Road Transport, which was developed by the Directorate-General for Energy and Transport in 2002. It is a detailed document that covers all forms of vehicles and, although not legally binding, it represents the accumulated views of a range of experts in the field.

Australia, however, has been slow to follow suit and at this stage has nothing that explicitly covers smaller vehicles, such as utilities or trailers.

Instead, industry bodies are being forced to formulate their own guidelines, which can lead to confusion and lack of consistency both within states and nationally.

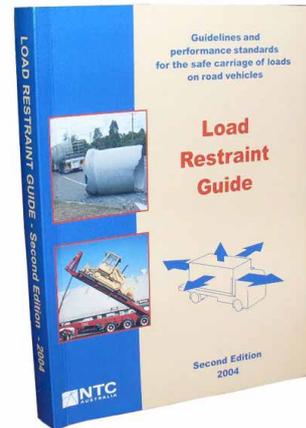
What we know about loads

1. Loads must not exceed legal limits in relation to weight, length, height, width and rear overhang of vehicles.
2. Driving slowly and over a short distance won't help – in fact since it is easier for brakes to grab at low speed, there is also a greater chance of losing a load. Most load failures occur on metropolitan roads and over a short distance.
3. The weight of the load alone cannot provide enough friction – a heavy load is just as likely to fall off as a light load. Always use restraints.
4. Restraints need to be checked regularly: when the load settles, there may be a reduction in tension.
5. Different loads require different methods of restraint, as can different tray deck surfaces.
6. Similar items should be bundled together into a single, more stable unit.
7. Most headboards and loading racks are not strong enough to fully restrain heavy loads.
8. High and narrow items, such as stacks of smaller cartons, usually need more than one restraint.
9. Spaces and gaps between piles should be filled before restraining the load.



The legislation

Specific light vehicle load restraint legislation and fines are state-based and vary somewhat across borders. All states reference the above Heavy Vehicle [Load Restraint Guide](#) (2004) as the guiding principle, even when they do not specifically decree that it applies to vehicles until 4.5T GVM.



And given there is no standard national legislation and load restraint falls somewhere between WH&S, state regulations and traffic laws, anecdotal evidence suggests individual police officers have different interpretations of the legislations and Load Restraint Guide, as demonstrated by media reports in Queensland in 2013 of a builder issued a ticket for having an unrestrained shovel and water bottle in the tray of his ute, and more recent reports in Griffith, NSW, of people being fined for having unrestrained work boots in their ute tray.

Not restraining a load properly might cause an accident, injury or death if:

- Objects fall from your vehicle on to other traffic or pedestrians.
- Other drivers swerve to dodge items that are falling or have fallen from your vehicle.
- Loads that have spilled onto the road cause other vehicles to skid and lose control.
- Unsecured loads crash into your vehicle cabin during emergency braking.
- Shifting loads contribute to your vehicle becoming unstable or unsafe.

In **Victoria and NSW**, the law requires that:

- A load on a vehicle must not be placed in a way that makes the vehicle unstable or unsafe.
- A load on a vehicle must be secured so that it is unlikely to fall or be dislodged from the vehicle – including driving consisting of emergency braking or turning suddenly.
- An appropriate method must be used to restrain the load on a vehicle.

In **Queensland**, the overriding load restraint requirements include all the above. As well, the load must not project from your vehicle in a way that is likely to injure a person, obstruct the path of other drivers or pedestrians, or damage another vehicle or anything else. QLD are also quite clear that load restraint laws apply to all vehicles regardless of their GVM and that drivers, consigners, loaders and receivers all have a responsibility to make sure the load restraint requirements are met.

In **SA**, the rules are similar: You must not drive with a load on a vehicle or trailer that is not properly secured, causes the vehicle or trailer to be unstable, or projects in a way that could be dangerous or obstruct the driver's view of the road.

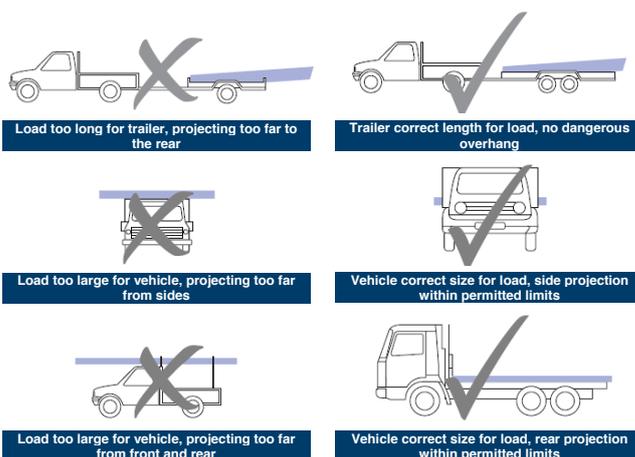
In addition, loads on vehicles, including trailers, must not project more than 1.2 metres over the front of the vehicle or 150 mm either side. Loads that do overhang to the rear and cannot be seen easily must have a bright and visible piece of cloth attached by day and a red light by night.

In **Tasmania** a person must not use, or cause or permit the use of a light vehicle or light vehicle combination on which the load is not placed, secured or restrained in accordance with the performance standards recommended for that load as detailed in the Load Restraint Guide.

WA is now quite clear that the rules governing heavy vehicles also govern utes and other vehicles under 4.5T GVM.

In other words, no matter where you live and work, both light vehicle drivers and heavy vehicle operators have the same responsibility for proper and safe load restraint.

The National Transport Commission (NTC) is planning a technical review (working closely with the NHVR) of the Heavy Vehicle Load Restraint Guide, with an amendment package due in 2017.



Select the correct vehicle

Projecting loads

Queensland Department of Transport and Main Roads

Some State Legislations to reference:

- QLD – Transport Operations Act 1995, (Road Use Management – Mass, Dimensions and Loading Regulation 2005)
- QLD – Transport Operations Act 1995, (Road Use Management – Vehicle Standards and Safety Regulation 2010)
- NSW – Roads & Traffic Legislation Acts, 1993 / 1999 & Amendments
- VIC – Road Safety (Vehicles) (Mass, Dimension and Load Restraint) Regulations 2005
- SA – Road Traffic Act
- SA – Road Traffic (Light Vehicle Mass & Loading Requirements) Regulations 2013
- TAS – Vehicle & Traffic (Vehicle Operations) Regulations 2014
- WA – Road Traffic (Vehicles) Act 2012; Road Traffic (Administration) Act 2008
- NT – Northern Territory Traffic Regulations
- ACT – Road Transport (Safety & Traffic Management) Regulation 2000

Quick Links to State Load Restraint Guidelines & Tips:

- [QLD Department of Transport & Main Roads](#)
- [NSW Roads & Maritime](#)
- [NSW Driving Offences](#)
- [VIC Roads](#)
- [TAS Transport Dept Fact Sheet](#)
- [SA Govt Fact Sheet](#)
- [WA Mainroads](#)
- [NT Department of Transport Bulletin](#)
- [ACT Road Transport Authority](#)

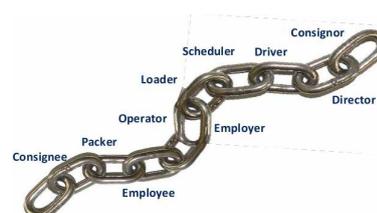
Chain of Responsibility

As well as the load restraint legislation and requirements, most states now follow National Model Chain of Responsibility laws that recognise the responsibilities that others have in the transportation of goods by road, beyond that of just the driver and operator.

Chain of Responsibility (COR) laws basically mean that if you consign, pack, load or receive goods as part of your business, you could be held legally liable for breaches of the Heavy Vehicle National Law (HVNL) and state legislations even though you have no direct role in driving or operating a heavy vehicle. This, in effect, takes some onus away from the driver and ensures everyone in the supply chain shares equal responsibility for safe load restraint.

According to the National Heavy Vehicle Regulator, this could include:

- corporations, partnerships, unincorporated associations or other bodies corporate
- employers and company directors
- exporters/importers
- primary producers
- drivers (including bus drivers and owner-drivers)
- prime contractors of drivers
- the operator of a vehicle
- schedulers of goods or passengers for transport in or on a vehicle, and the scheduler of its driver
- consignors/consignees/receivers of the goods for transport
- loaders/unloaders of goods
- loading managers (the person who supervises loading/unloading, or manages the premises where this occurs).



Are you a link in the chain?

Again, while this specifies heavy vehicles, this is the law that the states and territories refer to when it comes to safe load restraints on utes and trailers.

And, in April 2015, Western Australia led the way by introducing new legislation that decrees that WA Chain of Responsibility legislation applies to vehicles less than 4.5T GVM. The [Main Roads WA website](#) is a font of information when it comes to load restraint and Chain of Responsibility.

Queensland is also reviewing Chain of Responsibility laws to better align with WH&S legislation and penalties. It is expected this review will be presented to the state government in November 2015.

The penalties

Given the legislation mainly refers to heavy vehicles, the penalties can be quite hefty – especially for corporations.

Penalties for light vehicles – utes, trailers, roof racks, etc – differ throughout the country and are often at the discretion of law enforcement officers.

In NSW, unsecured loads could attract a penalty of three demerit points and a \$425 fine, while in WA, failure to restrain a load correctly on a vehicle may result in legal action being taken against any persons involved, including a fine of up to \$400.

Victoria has three different levels of penalty: a minor risk breach attracts a fine of \$170 for an individual (\$851 for a company); a substantial risk breach that poses a danger to people, property or the environment attracts a fine of \$454 (\$2268 for a company); and a severe breach that causes harm to people, or damage to property or the environment may result in a court appearance, and up to \$11,000 fine for an individual (\$58,000 for a company).

No matter which state you are driving in, the fact is that if an unsecured load causes an accident, injury or death, you will be subject to serious fines, penalties and possible further legal actions.



A dangerously overloaded and unrestrained ute and trailer scrutinised during recent Police blitz in NSW.

Standard and Codes

Apart from State and National legislation, there is also a number of International and Australian Standards in relation to load restraint.

The following are all available from the National Standards Centre, www.standard.com.au

- Cargo Restraint Systems
 - Motor vehicles – Cargo Restraint AS/NZS 4344 Systems – Transport Chain and Components
 - Motor vehicles – Cargo Restraint AS/NZS 4380 Systems – Transport Webbing and Components
 - Motor vehicles – Cargo Restraint AS/NZS 4345 Systems – Transport Fibre Rope
- Motor Vehicles
 - Motor vehicles – Anchorages and AS/NZS 4384 anchor points for securing internal cargo
- Fibre Ropes AS 4142 (Parts 1 & 2)
- Short-link Chain for Lifting Purposes AS 2321
- Steel Wire Ropes AS 3569 Shackles AS 2741
- Shank Hooks and Large-eye Hooks – Maximum 25t AS 3777
- Thimbles for Wire Rope AS 1138
- Packaging – Tensional Strapping AS 2400.13
- Load Anchorage Points for Heavy Vehicles NZS 5444
- Pressure Vessels AS 1210
- Storage & Handling of LP Gas AS/NZS 1596
- Anhydrous Ammonia – Storage and Handling AS 2022
- Road Tank Vehicles for Dangerous Goods – General AS 2809 (Parts 1–6)
- Requirements Freight Containers AS/NZS 3711 (Parts 1–9)
- Motor Vehicles – Cargo Barriers for Occupant Protection AS/NZS 4034 (Parts 1 & 2)
- Lashing and Securing Arrangements on Road Vehicles for Sea Transportation on Ro/Ro Ships ISO 9367 (Parts 1 & 2)
- Securing of Cargo on Road Vehicles, Lashing Points on Commercial Vehicles for Transportation, Minimum Requirements and Testing. DIN EN 12640-2001 (German Institute for Standardisation)

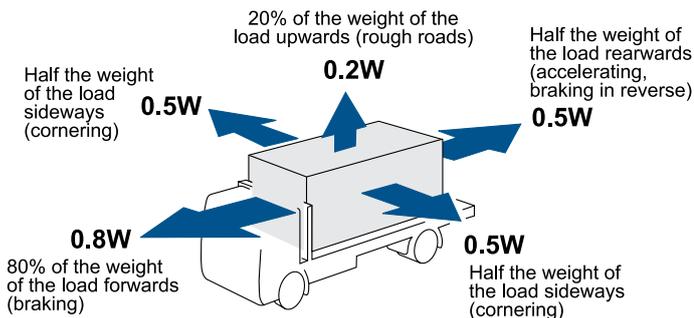
So what can you do?

As you can see, whether you are a subcontractor, small business tradie, handyman or brickies' labourer, you are bound by the same basic rules and regulations as the heavy transport industry, as the big guns of road transport.

Sole traders, remember you have a responsibility to ensure your load is fully secure. If you employ or subcontract others, COR laws mean you also bear some responsibility to ensure their loads are secure.

Here are some basic guidelines to follow:

- Choose a suitable vehicle for your load.
- Position the load correctly.
- Select and use suitable restraint equipment (it should be 'rated' for each application, be serviceable and functional and meet Australian Standards).
- Drive carefully, considering the load and the conditions, and regularly check your restraints.
- Provide adequate load restraint to prevent unacceptable movement during all expected and unexpected conditions of operation. The load restraint system must be capable of resisting each of the forces illustrated.



(W = Weight of the load)

This picture applies equally to sedans, vans, wagons and utilities and trailers – ANY vehicle carrying a load.

*Figure A8, page 21, Load Restraint Guide (2004)
National Transport Commission*

Further steps you can take that can help you meet your obligations and limit risk:

- Although rope is not as suitable as tie-down straps, if you are relying on rope to secure your load, you need to ensure you have enough, that it is in good condition, certified, is strong enough for your load and meets the AS/NZS 4345 standard.
- Webbing straps are more effective than certified ropes.



- Nets and tarpaulins are generally an easy and effective way to retain lighter items.
- Make sure any tie-down lashings are rated and are as near to vertical as possible.
- Attach lashings at tie rail support points.
- Check and re-tighten restraints regularly.
- Protect ropes and other restraints from sharp edges.
- Make sure that loose bulk loads cannot fall or be blown off your vehicle.



- Avoid loading heavier items on top of lighter items.
- Utilise 'fit for purpose' and approved ladder racks, conduit carriers and pipe cages.
- Enclose smaller items in lockable compartments or toolboxes.
- Ensure toolboxes, Service Bodies and canopies are correctly fitted, serviceable and are maintained regularly.

Note: If the vehicle does not have sufficient or suitable restraint equipment, the load should NOT be carried.

The National Transport Commissions [Load Restraint Guide](#) (2004) outlines the best ways to restrain and cover different types of loads.

The guide gives information on how to restrain your load depending on the type of vehicle and the size and weight of the load. When using the methods for load restraint from the guide, your load will be:

- Placed so that your vehicle doesn't become unstable.
- Secured so that it is unlikely to fall from your vehicle.

While the load restraint methods shown in the guide are not the only way to restrain a load, they are examples of methods that have been shown to meet the load restraint performance standards.

If you wish to restrain your load by another method not included in the guide, we recommend that you refer to Part 2 of the Load Restraint Product Bulletin and consult with a suitably qualified engineer to ensure your method meets the performance standards.

There is, however, one form of load restraint for utility vehicles that, when used correctly, is virtually 100 per cent fail safe.

Service Bodies, favoured by the most risk averse operators, give you peace of mind that your load is fully secured at all times.

If you manage a fleet, run a small or medium business, have responsible-officer or duty of care obligations in a larger corporation, it makes sense to ensure your entire workforce and the general public are safe at all times. Not only is it the right thing to do but under Chain of Responsibility laws, it is also the legal thing you must do.

Our Service Bodies are made of steel and aluminium with externally accessible, weatherproof side cabinets and a central load area with tie-down points can be fitted to most makes and models of light utilities. It can be moved to a new vehicle when you upgrade. Ladder racks, conduit carriers and cages for long pieces of piping to be held in place over the cab and trailer can be included.

Not only can a properly fitted and maintained Service Body reduce (or eliminate) any chance of your load coming loose, it can also improve fuel efficiency and handling of your vehicle.

Finally, Service Bodies look more professional and tidier than a utility full of bits and bobs of your trade, improving brand recognition and customer experience.

A Service Body maximises compliance and safety, and reduces the risk of on-the-spot fines, court-imposed penalties, and possibly the loss of your livelihood.

The confidence you gain knowing your load is properly restrained is priceless.

XL is Australia's #1 supplier of Service Bodies, and we stand by our expertise 100%. Once you've used XL Service Bodies in your fleet, we know you will confidently carry your load safely.