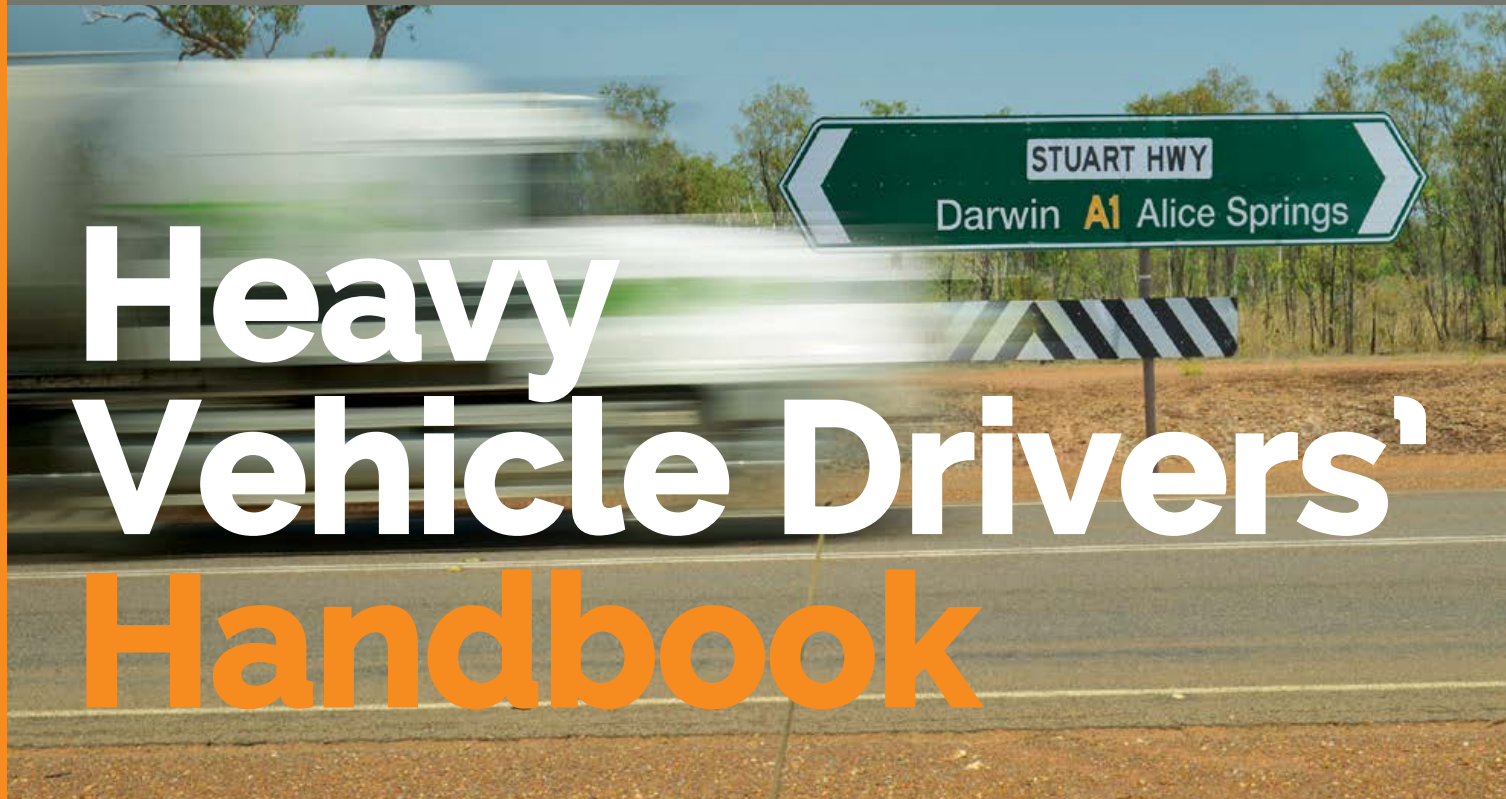
NORTHERN TERRITORY GOVERNMENT

MOTOR VEHICLE REGISTRY (MVR)

Driving a Heavy Vehicle in the Northern Territory

January 2020



Heavy Vehicle Drivers' Handbook

Heavy Vehicle Drivers' Handbook – Driving a Heavy Vehicle in the Northern Territory

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Contents

disclaimer

This handbook is not intended to be used as a legal document. It is intended as a guide only, and its aim is to set out, in simple form, the main legal requirements in the Northern Territory that a heavy vehicle driver is required to observe in everyday driving, as well as other useful information for heavy vehicle drivers.

This handbook is not the law, but is a guide to some of the laws relating to driving in the Northern Territory.

Be aware that:

- The statements in this handbook are not precise legal interpretations of the road traffic laws.
- Any diagram, pictures or examples are included for illustrative purposes only and are not intended to be definitive.
- Not every law is covered in this document.
- Laws are subject to change from time to time. The information in this book is believed to be correct at the time of original publication, but may not accurately reflect the current law.
- This document only covers the Northern Territory and while many laws and regulations are uniform across Australia, some laws are different between the jurisdictions. When driving/riding interstate please familiarise yourself with other states' road rules and demerit point systems before you travel.

If you require a more detailed statement of the law, Northern Territory legislation can be found on the nt.gov.au website.

The information in this publication is provided in good faith and is believed to be accurate at the time of publication. The Territory will not be liable for any loss sustained or incurred by anyone relying on this information.

Other publications

- Road Users' Handbook
- Load Restraint Guide
- NT Worksafe Fatigue Management
- Motorcycle Riders' Handbook
- Learner Drivers' Guide

Introduction

All road users in the Northern Territory (NT) are responsible for their actions and are subject to the rules, regulations, fees and charges as well as penalties that are outlined in NT legislation.

The Heavy Vehicle Drivers' Handbook will help you understand the additional rules and regulations that apply to you and your heavy vehicle. It is a useful guide outlining rules and regulations, skills and correct attitude required by heavy vehicle drivers. This publication must be read in conjunction with the Road Users' Handbook and Load Restraint Guide. It is essential reading if you are planning on attempting a heavy vehicle knowledge test.

When driving interstate, please familiarise yourself with other states road rules and demerit point systems before you travel.

Remember, safe road use is a responsibility we all share, whether as drivers, motorcyclists, bicycle riders, pedestrians or passengers.

This publication is available for free download from nt.gov.au

Important information

Change of details

All licence holders and owners of registered vehicles must notify MVR within 14 days if any of the details recorded against their licence or registration changes. Some common examples are changes of name or address.

The MVR must also be notified if a licence card or vehicle number plates are lost, stolen, defaced or damaged, or if a vehicle is sold, disposed of or altered.

You can update your contact details online, over the phone or in person at a MVR office or participating Australia Post outlet.

For more information, phone the MVR Contact Centre on 1300 654 628 or visit the nt.gov.au website.

Privacy

The Registrar of Motor Vehicles collects and retains your personal information such as photographic images, biometric data, registration and licensing history under the provisions of the *NT Motor Vehicles Act 1949*. The information you provide may be disclosed to government, law enforcement and other bodies as required by Australian law. Your information is also supplied to NEVDIS for the purpose of national exchange of vehicle and driver information.

Documents you provide may also be verified with the issuing authority through the Commonwealth Document Verification Service. All personal information is managed in accordance to information privacy principles under the *NT Information Act 2002*.

For more information on privacy, go to the Office of the Information Commissioner website.

Demerit points

You can check your demerit point tally online from the nt.gov.au website.

Before you check online you will need your:

- Northern Territory Driver's licence number
- Licence card number
- MVR Customer ID number – Located on your driver licence or vehicle renewal notice. You can call the MVR Contact Centre on **1300 654 628** during business hours to get your ID number.

For more information about the NT demerit point scheme call **1300 654 628**, or go to the nt.gov.au website.

Transferring an interstate licence

Drivers from other Australian jurisdictions are considered NT residents after living in the Northern Territory for three months and must transfer to an NT licence.

Exclusion from insurance or benefit reductions may apply if you are deemed a resident of the territory and have not transferred your interstate licence.

If your interstate licence is current, transferring your licence can be done at no cost. Any time remaining on the interstate licence will be transferred to your new NT licence, provided that the remaining time on your interstate licence is not a longer period than you could have an NT licence issued for.

In most cases, the same licence classes and conditions will apply between Australian states and territories; however, there may be individual cases where items such as provisional requirements or other licence conditions are not identical in all jurisdictions. In these cases, NT rules will be applied when you transfer your licence.

Any demerit points accrued in other jurisdictions could also affect your NT licence.

Photographs

When you are issued with a NT driver licence, your photograph will be digitally stored by MVR. The stored image can be used for renewals of your licence for up to 10 years, as long as your appearance does not change significantly during this time. Your photograph will need updating every 10 years.

You must carry your licence

You must carry your current licence with you at all times when riding or driving.

Failure to produce your licence on demand is an offence.

how to use this handbook

Section 1 - How to use this handbook

The Heavy Vehicle Drivers' Handbook is an informative resource addressing the general rules and regulations that apply to heavy vehicles and the obligations of heavy vehicle drivers in the Northern Territory.

This handbook is divided into sections to make it easy to find what you need to know to operate a heavy vehicle safely and legally on the road.

You will need to refer to this handbook – in conjunction with the Road Users' Handbook – to prepare for the heavy vehicle drivers knowledge test. It is also helpful for experienced drivers who want to check current rules. The glossary of terms at Section 9 explains the meaning of words used in the heavy vehicle industry.

To make it easy to find what you want to know this handbook has been divided into the following sections:

- **Section 2 – Licences** provides licensing requirements for people wanting to obtain a licence to drive or ride on Northern Territory roads. It is also useful for drivers planning to upgrade a licence to drive a different vehicle, such as a truck.
- **Section 3 – Driver management** provides information on driver health, influences that can adversely affect a persons driving ability and legal responsibilities.
- **Section 4 – Safe driving** provides key safe driving techniques and behaviours for all drivers.
- **Section 5 – Heavy vehicle road rules** provides coverage of the main rules governing heavy vehicles and road users.
- **Section 6 – Knowing the vehicle**
- **Section 7 – Vehicle dimensions & loading**
- **Section 8 – Penalties** provides an overview of the penalties for traffic offences.
- **Section 9 – Glossary** provides definitions that you can refer to if you are unsure what a precise term means.
- **MVR Offices:** provides contact information for MVR offices.

licences

The licensing system

The Northern Territory (NT) licensing system helps to make travel on our roads safer for all road users. It provides rules and conditions for licence holders and penalties for drivers who do not meet their responsibilities. This system also ensures that all licence holders have demonstrated the required knowledge and skills to safely operate the vehicle they are licensed to drive or ride.

To drive on public roads in the NT you must be licensed and have the correct licence class for the type of vehicle you are driving.

To legally drive a heavy vehicle on public roads in the NT the following applies:

- you must have the right class of licence for the vehicle
- for NT residents you must hold a current NT licence
- for visitors from interstate you must hold a current interstate licence.

You cannot drive on public roads in the NT if you have:

- a licence that is expired
- a licence that has been cancelled or suspended by the MVR or equivalent interstate or overseas licensing authority
- been disqualified from driving by a court of law in Australia or overseas.

Heavy penalties apply for driving a vehicle without a licence.

A visitor to the NT is permitted to drive in accordance with the terms and conditions of their interstate or overseas licence. A visitor to the NT is deemed a person who is temporarily in the NT for a period of three months or less. **If you have been in the NT for more than three months and wish to continue to drive, you must apply for an NT licence.**

As a driver of heavy vehicles, you have additional obligations and responsibilities to the people you share the road with.

A heavy vehicle driver licence carries additional responsibilities. Like your car driver licence, it is a 'contract' or agreement between you as a driver and the rest of society. However you must also meet certain conditions and rules that apply only to drivers of heavy vehicles. This handbook contains information that will guide you towards the skills and knowledge you need to drive a heavy vehicle.

For more information on your car driver licence, refer to the Road Users' Handbook.

When your licence is checked

Police and authorised officers check that you have the correct licence when:

- you are involved in a crash, whether you were at fault or not
- you have been stopped because you committed a traffic offence
- you have been stopped for a random breath test or drug screening test either by a stationary testing unit or by a mobile testing unit
- you have been stopped at a weighbridge or roadside vehicle compliance audit.

Medical fitness to hold a heavy vehicle licence

All drivers and riders must be medically fit to drive a motor vehicle and are subject to personal and legal responsibilities and liabilities.

A medical condition does not necessarily mean that you cannot be licensed.

In reality, very few conditions prevent the issuing of a driver licence.

In the Northern Territory all drivers or intending drivers must notify the Registrar of Motor Vehicles if they have any medical condition (including disability, mental illness or eyesight) that could affect their ability to safely and legally drive a motor vehicle. Health professionals are also required to report any affected patients if they believe that the patients' condition could affect their ability to drive a motor vehicle.

The MVR is responsible for issuing, renewing, suspending or cancelling a person's licence (including a conditional licence), and decisions are based on a full consideration of relevant factors relating to health and driving performance.

The NT has adopted the national medical standards for private and commercial drivers contained in the Assessing Fitness to Drive (AFTD) guidelines. The AFTD guidelines are available from the Austroads website www.austroads.com.au. These standards apply to all licence holders.

If you have any questions about medical fitness to hold a licence, please contact the MVR on 1300 654 628 or consult your health professional for advice.

Drivers with medical conditions

When you apply for a licence, you must state whether your medical condition could affect your driving. Depending on the condition, you may need to have an assessment of your 'fitness to drive' carried out by a health professional.

Certain medical conditions could require that you complete an on-road driving assessment with an Occupational Therapist who will assess your ability to drive in relation to your medical condition.

Many drivers with medical conditions find that they are allowed to drive, with conditions applied. For example, it is quite common for some drivers' licences to have a condition that they must wear glasses while driving or that they can only drive automatic vehicles.

Driving and dementia

The gradual and permanent loss of mental functions caused by dementia will, over time, reduce a driver's ability to drive safely. In the early stages of this condition, doctors, family and friends should discuss alternative methods of transport for drivers showing signs of dementia.

Each person with dementia will have a different pattern and timing of their reduced ability to drive as their condition progresses, and some people may not need to stop driving immediately. Individual assessment and regular review are important, even though it is difficult to predict the point at which a person will no longer be capable of driving safely.

Organ donation

The place to register your intention to be an organ donor is the Australian Organ Donor Register.

Organ donor information is available at www.humanservices.gov.au or call **1800 777 203** for a registration brochure.

If you would like more information before making your choice, please contact Donate Life NT (the organ donation agency for the Northern Territory) at www.donatelife.gov.au or phone **08 8922 8349.**

Licence classes

The NT has different licence classes for the various types of motor vehicles that use Northern Territory roads.

To be allowed to drive or ride you must hold the correct licence class for that vehicle.

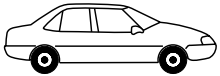
The list below shows the type of vehicle you can drive under each class of licence.

Rider (R)

- Any motorcycle or motor tricycle.

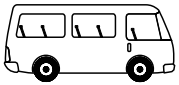
Car (C)

- A vehicle that is no more than 4.5t Gross Vehicle Mass (GVM).
- Holders of a C class licence may also drive some civil construction and agricultural vehicles (see nt.gov.au for more details).



Light Rigid (LR)

- A vehicle that has a GVM of more than 4.5t but not more than 8t (GVM).
- Can tow a trailer of no more than 9t Aggregate Trailer Mass (ATM).
- Holders of an LR class licence can also drive any vehicle allowed by a C class licence.

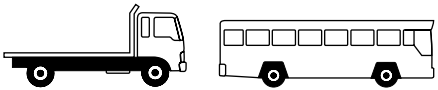


What you need to get this licence

- Have held a class C licence, (except a learner licence) equivalent to one year or more;
- Pass a knowledge test (read section on Knowledge tests); and
- Pass a practical driving assessment.

Medium Rigid (MR)

- A vehicle that has two axles and has a GVM of more than 8t.
- Can tow a trailer of no more than 9t (ATM).
- Holders of an MR class licence can also drive any vehicle allowed by an LR or C class licence.

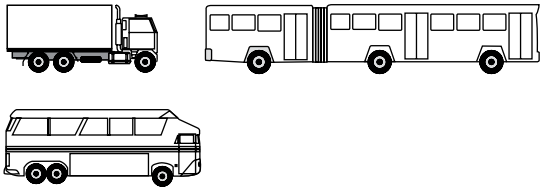


What you need to get this licence

- Have held a class C or LR licence, (except a learner licence) equivalent to one year or more;
- Pass a knowledge test (read section on Knowledge tests);
- Pass an eyesight test; and
- Pass a practical assessment.

Heavy Rigid (HR)

- A rigid vehicle that has three or more axles and a GVM of more than 8t.
- Can tow a trailer of no more than 9t (ATM).
- Can drive an articulated bus.
- Holders of an HR class licence can also drive any vehicle allowed by an MR, LR or C class licence.

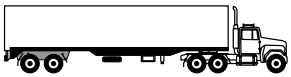


What you need to get this licence

- Have held a class C licence, (except a learner licence) equivalent to two years or more, or held an LR or MR licence for at least one year;
- Pass a knowledge test (read section on Knowledge tests);
- Pass an eyesight test; and
- Pass a practical driving assessment.

Heavy Combination (HC)

- A prime mover attached to a semi-trailer (plus any unladen converter dolly).
- A rigid vehicle towing a trailer of more than 9t (ATM).
- Holders of an HC class licence can also drive any vehicle allowed by a HR, MR, LR or C class licence.



What you need to get this licence

- Have held a class MR or HR licence for one year or more;
- Pass a training course; and
- Pass a practical driving assessment.

Multi-combination (MC)

- Any B-double or road train.
- Holders of an MC class licence can also drive any vehicle allowed by a HC, HR, MR, LR or C class licence.

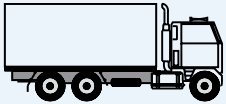
B-double

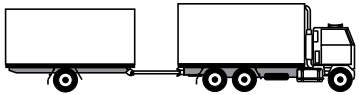
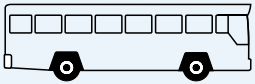
Road train (two or more trailers)

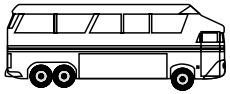
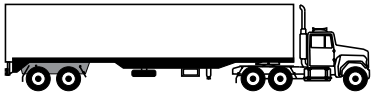
What you need to get this licence

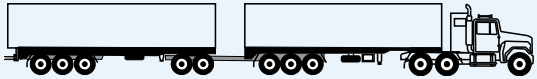
- Have held a class HR or HC licence for one year or more;
- Pass a training course; and
- Pass a practical driving assessment.

This list indicates what class of licence allows you to drive the vehicle shown.

Common vehicle types	Specifications	Class LR	Class MR	Class HR	Class HC	Class MC
 Rigid 2 axled vehicle	GVM greater than 4.5t but less than 8t	YES	YES	YES	YES	YES
 Rigid 2 axled vehicle with Pig Trailer	GVM greater than 8t, and trailer to 9t - providing GCM is not exceeded, no longer than 19 metres	NO	YES	YES	YES	YES
 Rigid 3 axled vehicle	GVM greater than 8t	NO	NO	YES	YES	YES

Common vehicle types	Specifications	Class LR	Class MR	Class HR	Class HC	Class MC
 Rigid 3 axled vehicle with Pig Trailer	GVM greater than 8t, and trailer to 9t - providing GCM is not exceeded, no longer than 19 metres	NO	NO	YES	YES	YES
 Rigid 3 axled vehicle with Dog Trailer	GVM greater than 8t, and trailer to 33t – providing that GCM is not exceeded, no longer than 19 metres	NO	NO	NO	YES	YES
 Rigid 4 axled (twin steer) vehicle (See Note 2.)	GVM greater than 8t	NO	NO	YES	YES	YES
 Rigid 2 axled bus (See Note 1.)	GVM greater than 8t, and trailer to 9t – providing GCM is not exceeded	NO	YES	YES	YES	YES

Common vehicle types	Specifications	Class LR	Class MR	Class HR	Class HC	Class MC
 Rigid 3 axled bus (See Note 1.)	GVM greater than 8t, and trailer to 9t – providing GCM is not exceeded	NO	NO	YES	YES	YES
 Articulated 3 axled bus (See Note 1)	GVM greater than 8t	NO	NO	YES	YES	YES
 Articulated vehicle with 2 axled trailer	GVM greater than 8t, and trailer greater than 9t GVM – providing GCM is not exceeded, no longer than 19 metres	NO	NO	NO	YES	YES
 Articulated vehicle with 3 axled trailer	GVM greater than 8t, and trailer greater than 9t GVM – providing GCM is not exceeded, no longer than 19 metres	NO	NO	NO	YES	YES

Common vehicle types	Specifications	Class LR	Class MR	Class HR	Class HC	Class MC
	Multi-combination (“B-double”) **Cannot exceed 25 metres**	NO	NO	NO	NO	YES
	Multi-combination (Articulated Vehicle with 1 Dog Trailer)	NO	NO	NO	NO	YES
	Multi-combination (Articulated vehicle with 2 Dog Trailers) **Cannot exceed 53.5 metres**	NO	NO	NO	NO	YES

NOTE 1: A licence “h” endorsement is required to operate for Hire and Reward.

NOTE 2: A higher licence class may be required if towing a trailer with a ATM greater than 9 tonne.

Ways to get a heavy vehicle licence

1. For class HC and MC undertake training and assessment with an approved training provider.
2. For class LR, MR and HR undertake training and assessment with an approved training provider or undertake practical driving test with an authorised heavy vehicle driving examiner.

Approved training providers and authorised heavy vehicle driving examiners can be found on the nt.gov.au website.

Knowledge tests

You must pass a heavy vehicle road rules theory knowledge test before you undertake a heavy vehicle driving test. The knowledge test pass result is valid for 12 months. If you do not upgrade your licence within 12 months of passing the knowledge test, a further knowledge test will be required.

The knowledge test assesses what you know about the general road rules as well as rules which relate only to heavy vehicles.

To prepare for the knowledge test you should study this handbook carefully and the Road Users' Handbook; all the information you need to pass the knowledge test is covered in these handbooks.

You can test your driver knowledge by taking the practice knowledge test on the mvr.nt.gov.au website.

A knowledge test is required if entering the rigid heavy vehicle licence classes of LR, MR or HR or the articulated heavy vehicle licence classes of HC or MC for the first time.

If you are upgrading from a Class LR or MR to a higher rigid heavy vehicle licence class a knowledge test is not required. For classes HC and MC the knowledge test is completed through your approved training provider before you take the practical driving test with an authorised heavy vehicle driving examiner.

Learning to drive

You can learn to drive a heavy vehicle on your current licence if you are eligible to apply for the particular licence class. You must be accompanied and supervised by a person who has the class of licence for the heavy vehicle you want to drive, or a higher class of driver licence.

While you are learning to drive, a "Driver Under Instruction" sign must be displayed at the rear.

Approved training providers

An approved training provider is a person or organisation that has been approved by the MVR to deliver driver training programs for licensing purposes throughout the NT.

After completing your training with an approved training provider you will need to pass the practical test with an authorised heavy vehicle driving examiner.

The training provider will issue you a Statement of Attainment or Certificate of Competency and the heavy vehicle driving examiner will issue you a practical test sheet. Bring these to an MVR office within 12 months of the issue date. Your licence will be issued on payment of the prescribed fee.

Driver training lessons

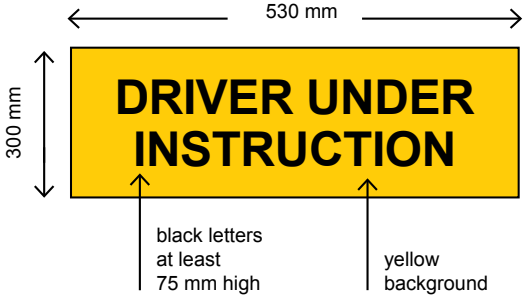
How you are taught to drive is extremely important. For that reason a training course with an approved training provider who is aware of modern driving practices and training techniques is highly recommended.

It is important that you find a training provider you are comfortable learning with. If for any reason you are not comfortable with your chosen training provider, you can change providers.

Supervised driving practice

While you are learning to drive a heavy vehicle it is strongly recommended that you get as much supervised driving practice as possible.

Even if you are having professional driving lessons you will benefit from supervised driving between your lessons.



A "Driver Under Instruction" sign must be displayed at the rear of the vehicle you are learning to drive.

Driver training

All practical heavy vehicle driving assessments are recorded by the authorised heavy vehicle driving examiner. A camera will record the road environment in front of the vehicle during the assessment and you will both be recorded inside the vehicle.

If you pass a driving test in a vehicle fitted with an automatic or synchromesh gear box you will be restricted to driving these types of vehicles (with the exception of Class LR and Class MR). To have the condition removed you have to pass a driving test in a vehicle fitted with a non-synchromesh gear box.

The driving test assesses your ability to drive safely and competently. During the test you will be required to demonstrate safe load restraint techniques and perform certain manoeuvres. Test manoeuvres may include:

- long reverse
- bus stop skills
- reverse park
- U-turn (three-point turn)
- kerbside stop
- pre-departure check
- coupling or uncoupling.

Fail and immediate fail items

During the test, you can be failed for doing anything that is unsafe or against the law.

Test vehicle

- In all cases, the vehicle must be a registered, roadworthy vehicle of the correct class for the licence being sought. The vehicle must also provide appropriate seating, i.e. approved seat and seatbelt in good working order for anyone in the vehicle during the test.
- Where any doubt in relation to roadworthiness exists, the test will not proceed.
- A "Driver Under Instruction" sign must be displayed at the rear.

General information regarding suitable vehicle types for assessment against each relevant heavy vehicle licence class is below:

Multi-combination (MC)

- A Heavy Combination vehicle with more than one trailer. The combination must be at least 22 metres in length.
- The minimum vehicle type for an MC is a three axle prime mover with at least two semi-trailers each with at least two axles.

Heavy Combination (HC)

- A vehicle consisting of a prime mover and a semi-trailer. The prime mover must have a minimum of three axles and the semi-trailer a minimum of two axles. The vehicle must have a GCM rating of at least 24 tonnes; or
- A Heavy Rigid vehicle which is towing a trailer. The trailer must have at least two axles and a (trailer) GVM of 12 tonnes or more.

Heavy Rigid (HR)

- A rigid vehicle, not being an unladen prime mover, with a minimum of three axles and a minimum 15 tonnes GVM; or
- A modified three axle prime mover with a certified detachable tray (with the capacity to carry 75% of its specified GVM) with a minimum GVM of 15 tonnes; or
- A three axle articulated bus; or
- A three axle bus above 15 tonnes GVM.

Medium Rigid (MR)

- A two axle rigid truck, not being a prime mover, above 8 tonnes GVM; or
- A two axle bus above 8 tonnes GVM.

Light Rigid (LR)

- A rigid truck or bus above 4.5 tonnes GVM but less than or equal to 8 tonnes GVM.

Assessments in a loaded vehicle

Vehicles used for the practical driving test must be loaded to at least 75% of the maximum mass allowable for the vehicle to be driven on public roads. This is at least 75% of either the Gross Vehicle Mass (GVM) for rigid vehicles or Gross Combination Mass (GCM), for articulated or heavy trailer combinations. The vehicle must be able to maintain adequate road speed.

All loads must be positioned and secured appropriately. **Refer Section 7 of this handbook for information on securing loads.**

driver management

Driving a heavy vehicle for work or other purposes can be demanding. It is important to abide by relevant driver fatigue laws, regulations, guidelines and generally take care of your health, in the interest of public safety and your own wellbeing.

As a heavy vehicle driver, you can spend a lot of time on the road, and you can be responsible for heavy loads, dangerous goods and passengers. It is very important that you are in good health for your own safety and that of the public.

Health of heavy vehicle drivers

Some important ways to stay healthy and keep on top of your driving are:

- get enough sleep
- eat a well-balanced diet
- exercise regularly
- try to relieve stress.

Enough sleep

The need for sleep varies among individuals with some people needing more sleep than others. Where possible, try to get most of your sleep at night time – it can be better than daytime sleep. Regular and quality sleep (at least seven to eight hours) is one of the best ways to manage driver fatigue.

See the following pages in this section on managing driver fatigue and for information on the associated legal responsibilities.

Diet and exercise

It is important to eat a well-balanced diet and do regular exercise to maintain overall good health. Ask your health professional for advice.

Try to relieve stress

Stress affects your driving. If you are having problems at home or at work, you are up to five times more likely to be involved in a crash. Your GP can advise you on where to go for help.

Driver fatigue

Driver fatigue is one of the biggest causes of crashes for heavy vehicle drivers. Many of these crashes occur late at night or early in the morning.

As a heavy vehicle driver, you need to understand what causes fatigue and how to pick up on the early warning signs so that you can do something about it before it affects your driving.

Causes of fatigue

Fatigue can be caused by a number of factors, including:

Sleep factors

- Getting less sleep than you need.
- Getting less sleep than you need over a number of days.
- Trying to sleep during the day.

Time of day factors

- Driving when you should normally be asleep.
- Driving in the early hours of the morning.
- Night time driving.
- Driving in the early afternoon after a heavy lunch.
- Sleeping during the day when you would normally be awake.

Physical factors

- Poor health and fitness.
- Emotional issues.
- Medical sleep problems.

Other factors

- Long driving hours.
- Irregular hours and early starting times.
- Tight scheduling.
- Insufficient time to recover from previous driving hours.
- Doing physical work such as loading and unloading.
- Poor driving conditions such as hot or wet weather.
- Monotonous driving.

Signs of driver fatigue

Driver fatigue severely impairs your concentration and judgement; it slows your reaction time. Watch for these early warning signs of driver fatigue:

- Yawning.
- Poor concentration.
- Tired or sore eyes.
- Restlessness.
- Drowsiness.
- Slow reactions.
- Boredom.

- Feeling irritable.
- Making fewer and larger steering corrections.
- Missing road signs and taking wrong turns.
- Having difficulty staying in the lane.
- Microsleeps (where you 'nod off' for a short time).

Tips on managing driver fatigue

- Resting and sleeping are the two most important ways to combat fatigue. Have a good night's sleep before you start your trip and even have an afternoon nap before starting back on a night shift. You should also take rests early on in the trip before you start feeling fatigued.
- Plan your trip ahead of time to allow for rest breaks.
- Plan your rest breaks to happen before you start feeling fatigued or plan where to stop if you do start to feel fatigued. If you can, plan rest breaks for when your body clock will tell you to be asleep (afternoon, night/early morning) because that is when you are most likely to become fatigued.
- Try and have a regular sleep and waking schedule on every day of the week.
- Be aware of the causes and effects of fatigue and recognise the early warning signs. Make sure you stop and rest as soon as possible when you realise you are becoming fatigued. Do not try and push on, especially in those 'body clock' danger times of night/early morning and afternoon.
- Allow enough sleep to become completely refreshed.
- Look after your health and fitness with regular exercise and a healthy diet.
- Never drink alcohol before or during your trip.
- Never drive longer than the appropriate work and rest hours, or agree to a roster that is longer than the appropriate work and rest hours.

Roadside rest areas

Rest areas are available 24 hours a day all year round and are clearly signposted. Service centres, petrol stations, parks and towns are other places you can stop and take a break from driving. Information on rest areas and truck parking bays in the Northern Territory can be found online at nt.gov.au

Fatigue management regulation in the NT

The NT has adopted an outcome-based approach to managing driver fatigue. While the Northern Territory does not regulate driving hours under transport law, if you drive any vehicle (heavy or light) for commercial purposes there are requirements and responsibilities under NT Work Health and Safety law. Employers have an obligation to provide a safe workplace, which does not endanger workers or others. In addition to employers, everybody who has an influence on a driver's work schedule (including you) has a general duty of care to ensure driver fatigue risks are managed effectively.

The Northern Territory (NT) has developed a Road Transport Fatigue Management Code of Practice under the provisions of the *NT Workplace Health and Safety Act* (WH&S Act).

The Code of Practice provides guidance on how to meet duty of care obligations under the WH&S Act and lists guiding principles which should be considered in the development of a fatigue management system for drivers. The code focuses on safe outcomes as a result of appropriate risk assessment based on the task at hand, the flexibility to take appropriate rest, and the management of driver health issues.

More information relating to fatigue management in the NT, including the Code of Practice, and a resource package to assist operators with developing a fatigue management system is available from nt.gov.au

For more information on WH&S obligations, please visit the NT WorkSafe website at worksafe.nt.gov.au

Operators complying with national regulations by adopting and complying with one of the National Heavy Driver Fatigue options of Standard Hours, or Basic or Advanced Fatigue Management; or the Western Australian fatigue management regulations will ensure they are meeting their WH&S obligations in NT.

Fatigue management regulation in other jurisdictions

Other jurisdictions regulate heavy vehicle driver fatigue differently to NT. Some of the applicable rules are complex and offences can carry large penalties. **Before driving a heavy vehicle in another state or territory, drivers must make themselves fully aware of their responsibilities under the relevant law.**

Western Australia has a combined Work Health and Safety, and transport law based fatigue management system for heavy vehicle drivers. There are specific driving hours and record keeping practices that must be complied with. Drivers of certain heavy vehicles must also participate in mandatory fatigue management accreditation. Contact Main Roads WA on 138 138, or at mainroads.wa.gov.au for more information.

All other jurisdictions (QLD, NSW, ACT, VIC, SA and TAS) regulate heavy vehicle driver fatigue through the Heavy Vehicle National Law (HVNL). Regulations under the HVNL prescribe maximum driving hours and record keeping via the National Driver Work Diary. The National Heavy Vehicle Regulator should be contacted on 1300 MYNHVR (1300 696 487) or at nhvr.gov.au for more information.

Alcohol and heavy vehicle drivers

It is illegal to drive while under the influence of alcohol.

Effects of alcohol on driving

Alcohol is a depressant and reduces your ability to drive safely.

- **Slower reaction time** to triggers requiring action (e.g. vehicle approaching from a side street, traffic lights changing or people crossing the road).
- **Poor judgement** about your speed and the speed of other vehicles and in judging distances (e.g. other vehicles might seem further away than they really are).
- **Observation skills, such as visual attention and hearing, are reduced.** After drinking alcohol, drivers tend to focus on the road straight ahead and ignore what is happening in their side vision (e.g. they won't hear or see things like vehicles approaching from side streets or people crossing the road).
- **Poor coordination** when trying to do more than one thing at a time, especially in an emergency.
- **Confidence up, judgement down,** leading you to believe you are OK to drive. You might take risks that you would not normally take. This can be extremely dangerous because you may not be aware how much your skills have deteriorated.

Alcohol can also:

- give you false confidence that leads to taking risks
- make it hard to do more than one thing at a time
- affect your sense of balance and coordination
- make you sleepy.

Getting back to zero takes time

After a night of heavy drinking, it can take many hours for your blood/breath alcohol concentration (BAC/BrAC) level to get back to zero. Many people are charged with a drink driving offence the day after drinking.

Approximately 10% of the alcohol passes out of the body, unchanged, through breath, urine and sweat.

Most of the alcohol in the bloodstream (more than 90%) is broken down by the liver. As a general rule, it takes the liver about one hour to dispose of the alcohol in one standard drink. This means that the BAC/BrAC drops by about 0.015 per hour. While this amount differs from person to person, a BAC/BrAC of 0.05 will take approximately three to four hours to reach zero.

What does not sober you up

There is nothing you can do to make the liver work any faster – only time will help you to sober up. Nothing can speed up this process. It is a myth that the following things will make a person more sober.

- A cup of black coffee.
- A cold shower.
- Fresh air.
- Mints or chewing gum.
- Milk.
- A short nap.
- Vomiting.

These things have no effect on your blood alcohol level. Once you have had a drink, you just have to wait it out.

Your BAC/BrAC must be 0.00% when you drive a:

- heavy vehicle with a GVM of more than 15 tonnes
- public passenger vehicle such as a bus or a coach
- vehicle which carries a dangerous load.

Even one drink can put you over the legal limit. You need to take into account any drinks you have had. It takes at least an hour or more for the body to get rid of the alcohol from one standard drink.

Drugs and heavy vehicle drivers

It is illegal to drive while under the influence of drugs, including some over-the-counter and prescription medicines.

A drug is any chemical substance that alters the normal way that your body or mind works. Drugs not only affect your physical skills such as reaction times, coordination and vehicle control but also affect your mood, perception, information processing and risk taking behaviour. That is why drugs can make your driving worse and greatly increase your chance of having a crash.

How a drug will affect you depends on:

- the drug itself – type, amount, purity and method of use
- your weight, body size and health
- other drugs you have taken and the setting such as surroundings and work situation.

Whatever drug is used, it is important that you know how it affects you, the harm it can do and what it does to your body.

Generally heavy vehicle drivers who do take drugs take two types – stimulants to try and stay awake and depressants to try and go to sleep.

Stimulants

Stimulants (uppers) speed up messages between the brain and the body. They include medicines with mild stimulants like pseudoephedrine and illegal drugs like speed.

The effect of stimulants on driving

Stimulants **do not** increase your driving ability or coordination, however, they can:

- give you a false sense of confidence
- increase your risk taking behaviour
- distort your visual perceptions making it difficult to judge distances
- make you feel exhausted because you cannot sleep which will affect your reflexes and your concentration
- increase your risk of having a crash.

As the effects of stimulants begin to wear off, you may experience a level of fatigue that is worse than when it was first taken.

The long-term health effects of taking stimulants include:

- anxiety
- chronic sleep problems
- compulsive repetition of actions
- depression
- extreme mood swings
- high blood pressure
- heart failure
- impotence
- irritability
- panic attacks or seizures
- paranoia
- weight problems.

A good sleep is the only way to prevent or cure fatigue. Taking stimulants to keep awake can make fatigue worse when the effect of the drug wears off.

Depressants

Depressants slow your reflexes, impair your balance and coordination, affect your vision and perception of time and space, your memory and your ability to think logically. The 'hangover' effects such as drowsiness and poor coordination can last for several hours after the initial effects, which can mean you are not able to drive safely.

Depressants greatly increase the risk of having a crash when you are driving because you can have:

- slower reaction time
- distorted perception of speed and distance
- impaired vision
- reduced ability to concentrate
- impaired coordination.

Prescription drugs

Some prescription medications can affect your driving. Read the instructions on the packaging or consult your doctor or pharmacist to find out if the medication you are taking would impair your driving ability.

Drink and drug testing

Roadside drink and drug testing

Police have the power to carry out roadside breath or saliva testing on any driver or rider in the NT. Specific Police testing operations will target heavy vehicle drivers.

Driving under the influence of alcohol or drugs

If the manner of your driving indicates that you are impaired by alcohol or drugs or you are involved in a crash, Police have the power to take you to hospital to obtain a blood and urine sample. The sample will be analysed for any substance, including some prescription drugs known to impair driving.

Seatbelts

It is important for truck and bus drivers to wear a approved seatbelt. Any driver or passenger must wear a seatbelt properly adjusted and securely fastened wherever there is one fitted. If there is an empty seat with a seatbelt, a passenger must move to that seat.

It is an offence to remove a fitted seatbelt from a vehicle, if you remove it you may be breached for not wearing it as well as for removing it.

The driver is responsible

Drivers are responsible for all passengers being properly restrained in a seatbelt or approved child restraint where seatbelts are fitted. There are fines and demerit points for a driver who is not wearing a seatbelt and who fails to ensure that passengers use seatbelts.

Children under seven years of age must be secured in an approved child restraint or booster seat when travelling in a vehicle. The type of restraint to be used also depends on the age of the child.

Passengers aged 16 years and over who do not use an available seatbelt will also be individually fined.

Entering and exiting a vehicle

For safety there is a procedure for entering and exiting a heavy vehicle. Bus drivers also need to be aware of this procedure.

To enter the vehicle the driver must check for traffic before moving out from the line of the vehicle and again before opening the door. When entering the vehicle the driver must use available steps and grab handles to climb into the vehicle, maintaining three points of contact at all times.

To exit the vehicle the driver must check again for traffic before opening the door. When exiting the vehicle the driver must exit facing the vehicle using available steps and grabs (not jumping) while maintaining three points of contact.

safe driving

Low risk driving

As a heavy vehicle driver you should at all times display 'low risk' driving. Only drive when you are alert, know how to control your vehicle and remember to respect other road users.

Driving is never risk free, but you should aim to drive 'low risk'. A low risk driver has good observation, speed management and road positioning skills. This is explained in detail in the Road Users' Handbook.

Observation

The key to good observation is scanning. Scanning is keeping your eyes moving, and checking for hazards in one area for a couple of seconds and then moving your eyes to another area.

Speed management

Drive at a speed that is within the speed limit and that will allow you to react and completely stop within the distance you can see is clear. When you see potential hazards, slow down and prepare to stop. If you cannot see at least five seconds ahead you must slow down. Slow down on wet, icy, dirt or gravel roads where it will take longer for your vehicle to stop.

Use of mobile phones and visual display units

A mobile phone may be used to make or receive an audio phone call or as a drivers navigational aid and is only permitted if the phone:

- is secured in a commercially designed mount fixed to the vehicle, or
- can be operated by the driver without touching any part of the phone.

A mobile phone does not include a CB radio or any other two way radio.

You must not drive a vehicle that has a television or visual display Unit (VDU) operating and visible to you or drivers of other vehicles.

This does not apply to a driver's aid in a secure mounting to the vehicle, such as:

- closed-circuit television security cameras
- dispatch systems
- navigational (eg GPS) or intelligent highway and vehicle system equipment
- rear-view screens
- ticket-issuing machines
- vehicle monitoring devices.

Road positioning

Position your vehicle to maximise the distance from hazards (this is also referred to as buffering). For example, moving left at the crest of a hill to create space between your vehicle and oncoming vehicles, or moving away from a parked car to avoid doors opening and pedestrian movement.

Crash avoidance space

A low risk driver maintains a crash avoidance space completely around the vehicle. The crash avoidance space is managed by adjusting the vehicle's speed and road position.

To determine the crash avoidance space to the front of the vehicle you need to take into account two key factors – reaction time and response time.

Reaction time is the time the driver needs to:

- see the information
- perceive what it means
- decide on a response
- instigate that response.

A driver who is fit, concentrating, and alert, and not affected by alcohol, drugs, fatigue or a distraction, will still require about 1.5 seconds to react.

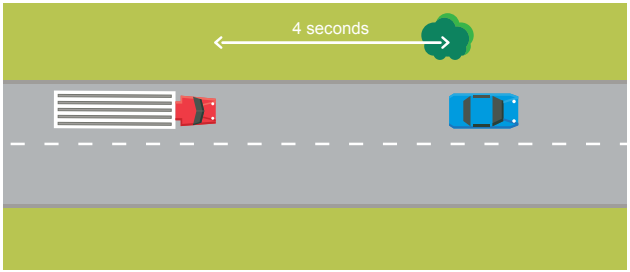
Response time is the time required to take action. Generally a minimum of two to three seconds is needed to respond. In many situations braking may be the only possible response. Swerving is rarely appropriate and can result in a more severe crash, for example a head-on collision.

A total of at least four seconds crash avoidance space is needed for heavy vehicle drivers to react and respond to a situation in front of you. You may need even longer in poor conditions such as rain or darkness.

The four second gap can be used when following another vehicle or if there is potential for something to move into your crash avoidance space.

Following another vehicle

Four second crash avoidance space. To calculate a four second crash avoidance space when following another vehicle use this basic technique: as the rear of the vehicle in front of you passes an object at the side of the road such as a power pole, tree or sign, start a four-second count ‘one thousand and one, one thousand and two, one thousand and three, one thousand and four’.



If your vehicle passes the object you picked before you finish the four second count, you are following too closely. Your crash avoidance space is not large enough. Slow down, and repeat the count again until the four second crash avoidance space is achieved.

In poor driving conditions, such as rain, night or gravel roads, it may be necessary to increase your crash avoidance space to six or more seconds.

Potential for something to move into the crash avoidance space

The four second gap can also be used for situations where there is potential for something to move into the crash avoidance space, for example, a car in an adjacent street could fail to give way and pull out. Low risk drivers experienced in maintaining a four second following distance are able to mentally judge a four second crash avoidance space in front of their vehicle. If there is potential for a hazard to enter this crash avoidance space, reduce your speed and create a buffer. It is necessary to maintain the crash avoidance space for all potentially hazardous situations, including blind corners and crests.

Many of the crashes that occur each day in the NT could be avoided if drivers actively maintained their crash avoidance space.

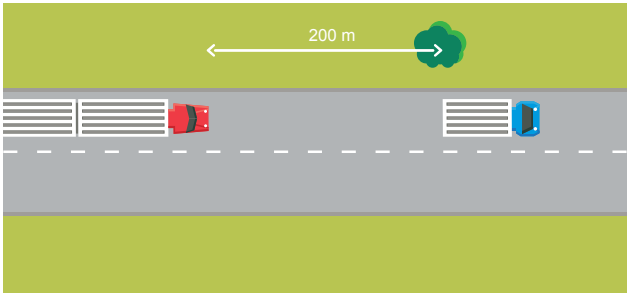
Legal minimum distances between large vehicles

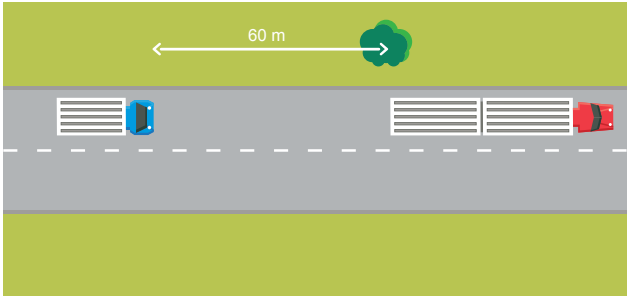
The driver of a long vehicle must drive at least the required minimum distance behind another long vehicle that is travelling in front.

A long vehicle is a vehicle that is 7.5 metres long or over. This includes any trailers attached to the vehicle and a vehicles load.

- A road train that is behind a long vehicle, the required minimum following distance is 200 metres
- A long vehicle other than a road train that is behind a long vehicle, the required minimum following distance is 60 metres.

This rule does not apply on multi-lane roads, in built-up areas or when overtaking.





Sharing the road with cyclists

Bicycles are classed as vehicles and cyclists have the same rights and responsibilities as all other road users. They deserve the same respect and courtesy.

Cyclists are more difficult to see than other road users and are more vulnerable to injury in the event of a collision, particularly with heavy vehicles. Be alert for cyclists on the road and drive carefully when near them. Don't drive too close behind cyclists and allow them plenty of room.

Heavy vehicle drivers should be particularly aware of cyclists when turning at intersections where the tracking (cut in) of rear wheels can be a danger to cyclists.

Drivers should also be aware of the wind effect generated by their vehicle and potential impacts when passing cyclists, particularly at speeds greater than 60 km/h.

- Cycles are small and can be difficult to see, especially at night. Don't just look for car-sized vehicles.
- Stay wider of the rider when passing a cyclist. When travelling at 60 km/h or less, the minimum distance between you and the cyclist must be at least one metre. When traveling greater than 60 km/h the distance between you and the cyclist should be increased to a minimum of one and a half metres. **As a heavy vehicle driver you should provide more space where permissible when passing a cyclist.**
- Cyclists are allowed to ride side by side (up to two abreast) on the road, so please be patient and only overtake only when safe to do so.
- It is an offence to cut in front of cyclists at intersections. Do not overtake a cyclist if you are planning to turn left at a nearby intersection.
- Be aware of young cyclists, who can be unpredictable and lack road sense. Be especially careful around schools in the early mornings and afternoons.
- Cyclists need extra room at intersections and roundabouts.
- Cyclists are allowed to ride slowly across pedestrian crossings.
- Cyclists may ride away from the kerb or occupy a lane – not because they want to annoy drivers, but to:
  - avoid drains, potholes or roadside rubbish
  - be seen as they come up to intersections with side roads
  - avoid parked vehicles.
- Cyclists turning right are exposed. They need extra consideration from drivers, especially on multi-laned roads with fast-moving traffic.
- Cyclists are dazzled by headlights on full beam, just like other road users – remember to dip your lights for cyclists as well as other motor vehicles.
- Cyclists can be fast movers, capable of travelling at speeds of 40 km/h or more.
- Cyclists have a right to use the roads and to travel safely.

Sharing the road with motorcyclists

Unlike drivers of motor vehicles motorcyclists are highly mobile and less visible. Remember:

- to check your mirrors and blind spots before turning;
- to look behind you before reversing, opening your door or changing lanes;
- motorcyclists have the right to use a whole lane;
- motorcyclists that hold an unrestricted, full or open licence are permitted to safely lane-filter between stationary or slow moving traffic travelling at 30 km/h or less in the same direction; and
- motorcyclists may suddenly swerve or slow down to avoid road hazards.

Sharing the road with pedestrians

Please look out for pedestrians whenever you're behind the wheel.

- Always be ready to stop near schools, bus stops and pedestrian crossings.
- Be careful when driving past parked vehicles. Pedestrians may walk out without warning.
- You should slow down to 20 km/h when passing or coming towards a school bus that has stopped to let children on or off, no matter which side of the road you are on.
- Watch out for elderly people or people with disabilities.
- Take special care near roadside stalls and parked vendors. Pedestrians visiting these may forget to watch for traffic when crossing the road.

People who are blind or vision-impaired often use aids such as a white cane or a guide dog. When drivers see people with these aids trying to cross the road, they should take extra care and let them cross in their own time.

Vehicle controls

Spring brakes or 'Maxi-brakes'

Most fully air-braked vehicles on the road are equipped with spring-loaded parking brakes. These brakes rely on air pressure to hold them in the OFF position. See this section on Brake failure.

Trailer brake

Some vehicles are fitted with a hand operated trailer brake. This is a separate valve operated by hand which applies the trailer brake independently of the footbrake. The trailer brakes must not be used for normal braking as they will wear, overheat or burn out, and lose their effectiveness completely. A trailer with ineffective brakes attached to a towing vehicle with effective brakes can cause it to jack-knife or rollover under heavy braking.

A trailer hand brake may be applied if necessary to prevent the vehicle from rolling backwards and to avoid transmission shock load when moving off on a hill. Trailer brakes are not parking brakes and should not be used as such.

Controlling speed

- Brake early and gradually.
- Where possible, brake when your vehicle is driving in a straight line.
- Allow for the weight of the load – a loaded vehicle takes far more braking effort to slow down than an unloaded one.
- Brake according to the road surface – allow more braking distance if the road is gravel, steep or slippery.
- Ease off the brakes as the vehicle slows down.
- Always test the brakes immediately after driving through deep water as wet brakes do not perform well.

The service brake should be used under all normal conditions.

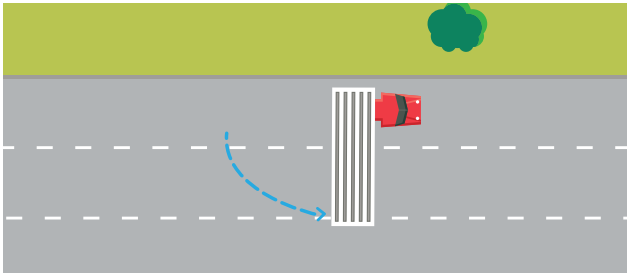
Brake failure

Brakes kept in good condition rarely fail. Most brake failures occur because of:

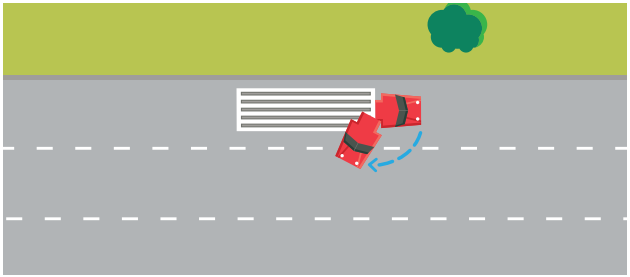
- loss of air pressure
- loss of hydraulic pressure
- brake fade (boiling of hydraulic fluid) on long hills
- bad driving practices
- poorly maintained brakes.

Jack-knife and trailer swing

You can reduce the chances of jack-knife or trailer swing by making sure that all brakes and tyres are in good condition and that the load is evenly distributed between axle groups. You should be especially careful in wet weather.



Trailer swing is where the trailer slides dangerously.



A jack-knife is where the trailer and prime mover lock against each other.

Loss of pressure in air brakes

Whenever you drive, make sure there is enough air pressure for at least five brake applications. Air brakes can fail because of a leak in the air lines or over-use. Stop immediately if the low air pressure warning device comes on. You should stop by gearing down until the vehicle is slow enough to apply the brakes.

Most vehicles fitted with full air system brakes are usually fitted with spring parking brakes, also known as maxi-brakes, where air pressure is required to keep them off.

On some older vehicles the spring brakes may come on when the air pressure is very low. You should monitor the air pressure gauges often as low air pressure can happen anytime. When the gauge shows low air pressure, release the brakes at least twice, so you can move the vehicle to a safe area.

Loss of hydraulic brakes

What to do if your hydraulic brakes fail:

- change down gears
- pump the brakes – sometimes pumping them can partially restore hydraulic brakes
- use the emergency parking brake.

Basic driving techniques

Hills

If you lose control of your heavy vehicle on a steep road the result could be deadly, you could kill or cause serious injuries to yourself or others.

Throughout parts of Australia the gradient and length of some descents, truck and bus drivers must limit their speed to avoid brake fade/loss and to maintain control of their vehicle. These descents may incorporate a safety ramp to provide drivers who have lost control of their heavy vehicle an opportunity to slow or stop their vehicle safely away from other vehicles on the road.

When you are driving a truck or a bus on a road with the sign 'trucks and buses must use low gear', you must drive in a gear that is low enough to limit the speed of your vehicle without using the primary (foot) brake. Look out for the warning signs that alert you to steep descents.

As soon as you see the 'trucks & buses must use low gear' sign, you must start slowing down and switching to a low gear. This means you will be using the right gear before starting to descend, and will not need to use the primary brake when driving down the hill.

You should always drive down hills at a safe speed appropriate for your vehicle and load. This may be below the signed speed limit for the descent.

Before going down a hill

Reduce speed and select the correct gear before beginning the descent. It is very important to select a gear low enough to slow down the vehicle.

If you try to gear down but you miss the gear, stop the vehicle with the brakes immediately, then select the correct gear. Attempting to coast while you struggle with the gears is very dangerous. Do not try to change gears while going downhill as you can lose control of the vehicle.

Braking going down hills

Brake failure can be prevented by good driving technique.

If you use the brakes to slow a vehicle travelling downhill it can cause overheating. This leads to brake fade, or brake burn-out in which the brake linings completely lose their grip and are no longer effective.

Going down hills

- Select a gear low enough to slow down the vehicle without the constant use of brakes.
- If you miss the gear when trying to gear down, stop the vehicle with the brakes immediately, then select the correct gear. It is very dangerous to coast while you struggle with the gears.
- Use auxiliary brakes to help control the vehicle speed.
- Reserve your service brakes for coping with emergencies, traffic conditions or sharp corners.
- Try to brake on straight sections of road where possible as this reduces the chance of skidding.
- Avoid fanning (repeatedly applying and releasing) the brakes as this leads to an increase in brake temperature and failure due to brake burn out. In air brake systems, fanning wastes compressed air, reducing the reserve available for an emergency.

Going up hills

- Shift down early to prevent engine 'lugging'. Lugging is shuddering or excessive vibration in the engine.
- Use engine torque (the turning force available at the crankshaft) efficiently. Do not let engine revs fall below the maximum torque speed.
- Shifting down two or more gears at once may be necessary when going up a steep hill.

Before entering a sharp curve

Reduce speed and select the appropriate gear before you enter the curve. The gear you select should have the engine revs near the maximum torque level as specified by the engine manufacturer, allowing you to accelerate smoothly out of the turn.

Slowing and stopping

When slowing or stopping a heavy vehicle it is best to use your brakes only. However, when driving down a steep hill it may be necessary to remain in a low gear to control the vehicle's speed.

Never drive out of gear (coasting). This is extremely dangerous and can lead to loss of vehicle control and overheated brakes.

You must select a low gear before commencing steep descents.

Animals and vehicles

A driver or passenger must not lead an animal including by tethering while the vehicle is moving.

Animals that are being transported must be housed in appropriate areas.

Domestic animals travelling in the cab of a heavy vehicle must be seated or secured in an appropriate area. Drivers must not drive with an animal in the driver's lap

Road conditions

The edges on some sealed roads may be soft, so take care if you leave the bitumen. Reduce speed before nearing the road edge and be cautious of edge drop offs, 'washaways' and loose stones.

Unsealed road surfaces can vary from gravel roads to graded natural surface (dirt) roads. Take extra care when driving on unsealed roads with loose or shifting surfaces, which is more hazardous than driving on bitumen roads because controlling the vehicle and braking is more difficult.

Unsealed roads and dirt tracks can often have corrugations a series of regular bumps or ripples with shorts spacings in the road surface.

Always be cautious when driving on corrugations and slow down when rounding curves as speed may cause loss of traction and control of your vehicle or trailer, and significantly increase your braking distance.

Dust on unsealed roads could obscure your vision and conceal ruts and potholes; slow down or pull off the road and stop until the dust settles. Leaving your headlights on will help other vehicles see you through the dust.

Slow down on corrugated surfaces as they can cause the wheels to bounce and lose traction. Watch for approaching vehicles throwing up stones that could break your windscreen.

Driving in wet conditions

Wet roads reduce tyre grip and can result in loss of control.

You should drive at a speed that allows you to brake gradually and stop within the distance you can see. The safe speed for your vehicle and its load may be much lower than the posted speed limit.

To avoid skidding, slow down when approaching corners and select an appropriate gear to maintain vehicle control without the need for braking.

Some roads in the Northern Territory are prone to flooding. If you come across a flooded road:

- check the depth
- do not drive through water at speed- fast flowing water can be like hitting wet concrete
- be aware that if you cannot see the road surface, obstructions may be present or wash outs may have occurred. If in doubt do not cross
- fast flowing water can make your vehicle or trailer float. If in doubt do not cross
- be alert for crocodiles as they inhabit many waterways in the north
- wait until the water level drops.

Never attempt to cross a flooded road where there are 'road closed' signs or other traffic controls in place indicating that the road is impassable.

If attempting to cross and you cannot see the line markings or the road, use roadside markers and guide posts to help you stay on track.

Reversing

When reversing a heavy vehicle, you must:

- activate hazard warning lights before starting to reverse
- avoid unnecessary reversing. Plan ahead to use the shortest possible reversing distance
- use another person to guide you whenever possible. You should be able to see the guide who should have a clear view of where your vehicle is going
- get out and have a look if you are not sure what is behind you.

Reverse your vehicle into position in a driveway or loading dock wherever possible. Although you may need to hold up traffic while you reverse, it is much safer to drive forward into traffic as you leave.

Fires

To minimise the risk of fire:

- make regular checks of the vehicle during your trip
- follow recommended vehicle operating rules
- check the instruments and mirrors as part of your regular scanning routine.

If there is a fire in your vehicle:

- keep vehicle well away from anything else which may burn
- notify emergency services (dial 000)
- use the correct fire extinguisher
- if the trailer is on fire, and it is safe to do so, uncouple the prime mover and move it away
- if the engine is on fire, try not to open the engine bay any more than necessary. Spray the fire extinguisher through grilles, or from the underside of the vehicle
- where the load is on fire in an enclosed load space or trailer, open the doors slowly and only far enough to let you use the extinguisher properly.

heavy vehicle road rules

As a professional driver it's your responsibility to know the road rules that apply to all vehicles, especially heavy vehicles.

Speed limits

The maximum speed limit for a heavy vehicle that exceeds a GVM of 12 tonnes or a bus that exceeds a GVM of 5 tonnes is 100 kilometres per hour.

For certain road conditions (e.g. sharp bend, steep descent, winding road), special speed limit signs may be posted for trucks, road trains and buses. You must not drive at a speed greater than the speed shown on the sign.

Speed limiters

Speed limiters are devices that limit a vehicle's maximum speed. If your vehicle falls into one of the following groups, it must be speed limited to 100 kilometres per hour.

A heavy vehicle or bus manufactured on or after 1 January 1988, being either a:

- truck having a GVM exceeding 15 tonnes
- bus used to provide a public passenger service and with a GVM exceeding 14.5 tonnes.

A heavy vehicle or bus manufactured on or after 1 January 1991 being either a:

- truck having a GVM exceeding 12 tonnes
- bus used to provide a public passenger service and with a GVM exceeding five tonnes.

Heavy vehicle drivers

Drivers of heavy vehicles are required to obey speed limits. Penalties on drivers failing to comply with speed limits include demerit points, licence suspension, cancellation or disqualification and fines.

Intersections

At intersections you may have to swing wide to make a left turn. At marked intersections:

- position your vehicle so that any vehicles behind cannot pass on your left
- position yourself to get the best view possible of the road you are turning into.

Heavy vehicle drivers may need to start a left turn further into the intersection than a car so that the back wheels do not run over the kerb.

Crossing or entering traffic

You must choose a suitably large gap in the traffic to get across an intersection, enter a new street or merge with traffic.

Consider the size and weight of your vehicle when crossing or entering intersections, changing lanes, and making other manoeuvres. Also remember that a loaded vehicle will accelerate slower than an empty one.

Before moving from a stationary position at the side of the road or a median strip parking area, you must signal for at least five seconds, check mirrors and blind spots.

Turning

Heavy vehicles need more space to turn wide or cut into traffic so allow enough space on either side of your vehicle to avoid sideswiping other road users or objects.

Turning right from a one way street

A vehicle (or vehicle and trailer) that is 7.5 metres or longer and has a DO NOT OVERTAKE TURNING VEHICLE sign displayed on the back, can turn right from the lane on the immediate left of the far right lane.

Plan your turn early so that you are in the correct part of the intersection and you have time to signal. Avoid turning too soon because the side of your vehicle may hit vehicles on your right as the back of your vehicle cuts in to the turn.

On a road with two right turn lanes, always use the turning lane on the far left.

A vehicle of 7.5 metres or longer may display the words ‘do not overtake turning vehicle’ on one of the rear marking plates.

If your vehicle (or vehicle and trailer) is under 7.5 metres long, you must not display this sign on the back, and you must turn within the lanes marked on the road at all times.

DO NOT OVERTAKE TURNING VEHICLE

Overtaking

There are additional risks associated with overtaking while driving a heavy vehicle.

It is very important to watch for small vehicles, such as motorcycles or cyclists. Before pulling out check your mirrors and glance down to check for vehicles below your cabin. Air movement caused by a large vehicle travelling fast can force a small vehicle off the road, or draw it into the side of a larger vehicle.

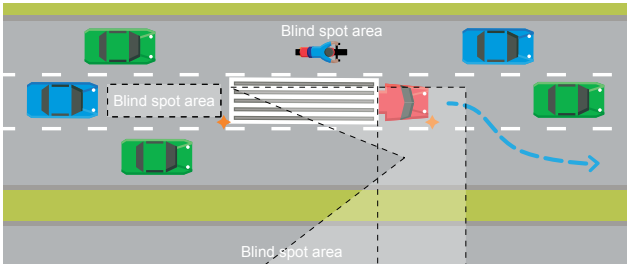
Being overtaken

If it is safe, move into the left lane to allow faster moving traffic to overtake.

It can be dangerous to direct following vehicles to overtake, using your hand or the indicator. You may be encouraging an inexperienced driver to attempt an unsafe move.

Lane changing

It is very important to check that the road is clear when you want to change lanes, or when lanes merge. You also need to check before leaving the kerb and before turning. You must look in the appropriate mirrors and do blind spot head checks before making any of these moves. In a heavy vehicle it is also essential to check down the side door in the cabin.



Before pulling out check mirrors, signal, check blind spot below cabin.

Restricted areas for road trains and B-doubles

Generally road train access is restricted to recommended road train routes as published in the Northern Territory Permit Guidelines. Recommended road train routes are necessary to enhance the free flow of traffic to control damage of the infrastructure and to promote the safety of all road users.

Where the Guideline does not provide for a specific route or the applicant considers that special circumstances exist, a written submission should be forwarded to the Chief Transport Inspector (contact via the MVR Contact Centre) for further consideration. Further information relating to road train access can be found at nt.gov.au

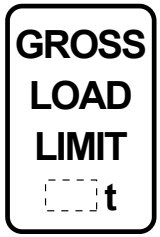
Road trains and B-double operators planning a journey interstate should plan their journey in accordance with the requirements of that state or territory. For more information relating to interstate road train and B-double access routes go to the National Heavy Vehicle Regulator's website www.nhvr.gov.au

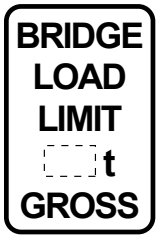
A road train must have this sign fitted to the front and rear.

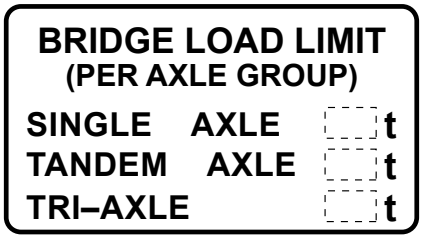
This sign must be fitted to the rear of vehicle combinations longer than 22 metres.

Load limit sign

You must not drive on a road with a load limit sign if the total weight of your vehicle is the same as, or heavier than, the weight shown on the sign. You must not drive past a load limit sign if the total weight (Gross Mass in tonnes) of your vehicle, and any vehicle connected to it, is more than the gross mass indicated in the sign.







No trucks sign

Drivers of long or heavy vehicles, except buses, must not drive past a NO TRUCK sign unless the vehicle is equal to or less than the mass or length specified on the sign.

When the sign does not provide detailed information, no truck (i.e. GVM greater than 4.5 tonnes) is permitted to drive past the sign.

Trucks must enter sign

Heavy vehicle drivers must enter the area indicated by information on or with this sign.

Where heavy vehicles can stand or park

Heavy vehicles (GVM of more than 4.5 tonnes) or long vehicles (7.5 metres long or longer) must not stop on a length of road outside a built up area, except on the shoulder of the road. In a built up area they must not stop on a length of road for longer than one hour.

For more information on where vehicles can stand or park, refer to the Road Users' Handbook.

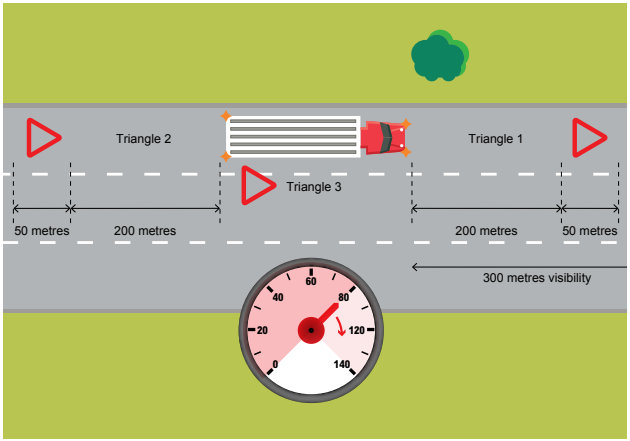
Warning triangles

A vehicle or a vehicle and trailer with a GVM of more than 12 tonnes, must carry three portable warning triangles to use if the vehicle is stopped on the road or roadside and is likely to cause a hazard to other road users.

The display of warning triangles depends on the speed limit in the area and visibility from all directions.

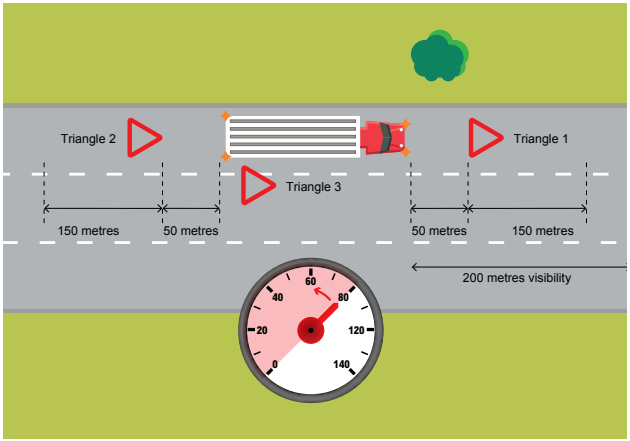
Speed limit 80 km/h or more with no visibility for at least 300 metres

Triangles must be placed between 200-250 metres behind and in front of the vehicle or fallen load. The third triangle placed at the side of the vehicle, to provide sufficient warning to road users of vehicle position or any hazard.



Speed limit 80 km/h or less with no visibility for at least 200 metres

Triangles must be placed between 50-150 metres behind and in front of the vehicle or fallen load. The third triangle placed at the side of the vehicle, to provide sufficient warning to road users of vehicle position or any hazard.



Truck and bus lanes

Truck lanes

Truck lanes are in operation in some areas of Australia and are marked by the following sign. Trucks more than 4.5 tonnes GVM must use these lanes.

Bus and bus only lanes

Bus and bus only lanes are operational in some areas of Australia and are marked by the following signs, or by lane markings. Bus lanes are principally used by public buses and are often placed in locations to ensure efficient operation of the public transport network.

Priority for buses

Other vehicle drivers must give way to a bus displaying the give way sign in areas where the sign posted speed limit is 70 km/h or less, when the bus is about to enter or proceed in the lane or line of traffic and the bus is in front of the driver.

You are still required to obey the road rules when entering the traffic.

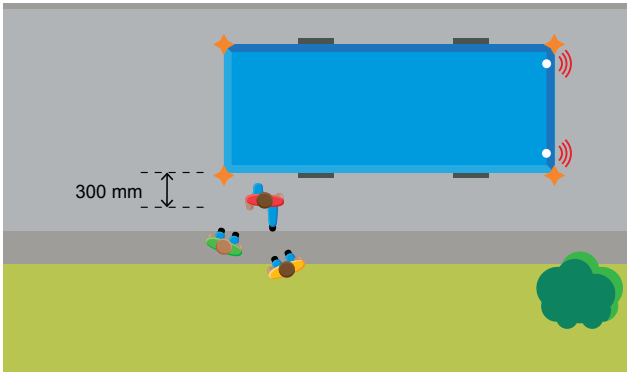
Buses cannot park at bus stops but may wait at a bus stop prior to commencing a regular passenger service.

Buses

Stopping at a bus stop

Bus drivers should pull up so the entrance and exit doors are as close as possible to the kerb at a bus stop.

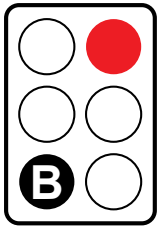
- Signal your intention.
- Stop the bus smoothly.
- Stop parallel with the kerb.
- Stop within 300 millimetres from the kerb measured from the front bus step.
- Stop the bus without hitting the kerb.
- Apply the bus stop brake. If the bus does not have a bus stop brake then you must apply the normal parking brake.
- Indicate for at least five seconds and ensure it is safe to proceed before pulling out of a bus stop.



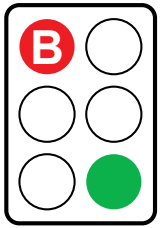
Stop within 300 millimetres of the kerb.

Bus (b) signals

In some areas of Australia B signals separate buses and other vehicles at intersections with traffic lights. B signals are attached to the traffic lights and show a white B on a black background. Some traffic lights have a red, yellow and white signal attached. Shortly before the usual traffic signals change to green the B signal lights up white. Buses may proceed in any direction unless signs or markings indicate otherwise.



White B means buses only go.



Red B means buses stay. Green means other vehicles go.

Vehicle monitors

Vehicle monitors are devices which automatically record details about the operation of a vehicle at all times, whether the engine is on or off. There are various types of vehicle monitors. Among them are tachographs and electronic boxes, also known as trip computers or black boxes.

Monitors record:

- lengths of time the vehicle is moving and stationary during a journey
- speeds at which the vehicle is driven
- distance the vehicle travels between stops
- the time, date and place of starting and finishing a journey, drivers' details and vehicle identification.

Monitors produce a continuous record of vehicle operation. Vehicle monitoring records may be used to identify drivers and operators who have broken the law and help identify vehicles in which the speed limiter has been tampered with or disabled.

If you own a vehicle with a monitor fitted, you should ensure that:

- your vehicle monitor is working correctly, is properly calibrated and that its seals are intact
- your vehicle specifications are not altered in any way that could affect calibration of the device
- your device is recalibrated immediately when the vehicle specifications are altered or at least every six years
- your drivers are instructed properly in the use of the device
- you recover trip records from your vehicle and store them in continuous date order for at least six months
- you make your records available at the request of an authorised officer
- you check the records for each trip and for each driver to ensure that driving hours and speed limits have been observed
- your drivers continue to keep manual records for each journey if the monitor breaks down.

knowing the vehicle

Heavy vehicles come in a variety of configurations.

It's your responsibility to know your vehicle. Regular checks should be carried out to minimise the risk of breakdown and ensure your vehicle is roadworthy.

Roadworthiness

The driver and the owner/operator are responsible for a vehicle's roadworthiness. A roadworthy vehicle is a safe one that offers advantages to both the driver and operator as well as other road users.

It is very important to check your vehicle is roadworthy. Pre-departure checks can save time and expense later on and reduce the chance of a crash resulting from mechanical failure.

To make sure that your vehicle remains roadworthy, you should carry out daily pre-departure checks and more 'in depth' weekly inspections.

All door latches or hinges must be secure and working well. The cabin must be sealed from the engine and fuel areas.

Brakes

Air brake operation

Most heavy vehicles have full air brakes. It is important that brakes are properly adjusted and well maintained.

When you apply the foot brake pedal you are opening a valve that allows pressurised air to flow to the brake chambers at each wheel, therefore braking effectiveness depends on how far you depress the pedal.

It is very important to check your brakes properly and regularly, and to refer to the manufacturer's manual. Use the following procedure as a guide only and get a professional to service your brakes often.

Inspection of hydraulic brakes

Step 1: external check

1. Check for line damage and leaks.
2. Check wheel backing plates and brake hoses for any signs of leaks or damage, such as chafed hoses or pipes.
3. Check around the master cylinder and hydraulic oil reservoir for leaks. Also check that the reservoir is full.

Step 2: system check

1. Check the feel of the brake pedal when you apply the foot brake.

   If the pedal sinks down further than usual or if it feels spongy, there may be a leak or air in the system.
2. Keep full pressure on the pedal – it should continue to be hard. If the pedal starts to sink, there may be a leak in the system.
3. Vacuum brakes – check booster retention with full vacuum and the engine off. When you apply the pedal it should stay down without resistance.

   The vacuum must be available soon after the engine is started with low vacuum available after 30 seconds and normal working vacuum after 60 seconds.
4. Check that the vehicle does not pull to one side when you brake while the vehicle is moving. Do this check in a low traffic environment where possible.

Inspection of air brakes

Step 1: secure the vehicle

1. Put on the parking brake.
2. Switch off the engine.
3. Where manual valves are fitted to air tanks, drain daily.
   - It is illegal to discharge fluid on the ground as it can be washed down drains and is an environmental hazard.

Step 2: drain all air tanks

On vehicles with a dual circuit braking system, drain one system first. Check to make sure that only one gauge indicates no pressure, then drain the other system. If both gauges show no pressure after draining one system, do not use the vehicle before your brakes have been checked by a professional.

Step 3: refill the system

1. Start engine and run at fast idle – do not race the engine.
2. Check that:
   - any low air pressure warning signals (if fitted) are operating as a result of having no air in the system
   - the low air pressure warning signals (if fitted) operate at about 410 kPa
   - the time it takes for air pressure to build up from 0 to 80% of maximum pressure limit (refer to manufacturer's specification) is not longer than five minutes.
3. Allow maximum pressure to build up and turn off engine.

Step 4: system check

1. Chock the wheels and release the park brake.
2. Stop the engine.
3. Apply the foot brake fully and check the drop in air pressure on the gauge. The drop in pressure per minute should not exceed 20 kPa. An additional drop of 5 kPa per trailer is allowed.
4. Apply the foot brake another four times, holding it down on the fourth application. The pressure should not have fallen by more than half normal system operating pressure.

   If it has, do not use the vehicle before your brake system has been checked by a professional.

5. Start engine and recharge air system.

Step 5: trailer check

1. Turn the engine off.
2. Disconnect the air hoses between the hauling unit and trailer (articulated vehicles and truck/trailer combinations). The trailer brakes must automatically come on and remain on for at least 15 minutes. This is to check if the breakaway system is operational.
3. Re-connect air hoses.
4. Walk around the hauling unit and trailer and listen carefully for air leaks.
5. Apply the park brake.

These 'general checks' do not replace the need for thorough inspections of the systems by a professional.

Anti-lock braking systems (ABS)

Many trucks have ABS, which is designed to stop wheel lock-up and improve steering under heavy braking.

Maximum braking occurs when the wheels are just on the point of locking. However, if a wheel does lock and skidding occurs, braking is not effective and you may lose control of the vehicle.

For best results when using an ABS-equipped vehicle in an emergency situation, press the brake pedal down fully and allow the ABS to regulate braking for you. This allows you to have full steering control at the same time as maximum braking.

If the ABS fails, the system reverts to normal brake operation.

Parking brake

When applied a parking brake must be capable of holding the vehicle stationary on any slope up to a gradient of at least 15 degrees, or prevent it from moving under light throttle and must function by mechanical means such as springs.

Engine/exhaust brakes or speed retarders

These devices may be fitted to medium and large vehicles to supplement the vehicle's service brake system. They will not stop the vehicle completely but may help to slow it down. They are not considered service brakes as they act on the engine or drive train and are otherwise known as auxiliary brakes.

Three most common types are:

- Exhaust brake.
- Engine brake.
- Electric, magnetic or hydraulic retarder.

Applying these brakes may cause a lightly loaded vehicle to skid or jack-knife on slippery roads.

Auxiliary brakes are generally noisier than the service brake. Try to reduce brake noise in urban areas by limiting the use of auxiliary brakes.

Couplings

Prime mover/semi-trailers – Turntable mountings and other tow couplings must be secure and comply with Australian Standards for installation.

Other vehicles – All towbar, coupling and drawbar components must be in good working condition. Steps on performing uncoupling and coupling are covered at the end of this section.

Driving controls

All controls should function correctly and be regularly checked and maintained.

Electrical system

Electrical wiring and connections, both inside and outside the vehicle, must be secure, damage-free and not exposed to excessive heat.

Engine

When running above idle speed, the engine must not discharge excessive crankcase fumes.

Exhaust system

The exhaust system must not have leaks due to damage, loose connections and mountings or poor maintenance.

The exhaust system must not be too noisy.

Smoke from engines

Excessive smoke from vehicles is illegal, unpleasant and at times dangerous. It can also lead to expensive engine repairs and time off the road.

Blue smoke normally indicates engine wear or damage. Black and grey smoke results from incomplete combustion and may be caused by a number of factors. These examples can usually be fixed during routine maintenance:

- blocked air filter
- obstruction of fuel filters or water traps with dirt, grit or fuel wax
- incorrect fuel pumps timing
- engine speed too high
- incorrect valve or tappet adjustment
- poor cylinder compression indicating leakage past valves or piston rings
- excessive back-pressure in exhaust system
- injectors misfiring or leaking

- faulty turbo chargers where fitted
- poor driving techniques.

Noise pollution

Noise can affect your physical health, cause nervous stress and annoy others. It adds to fatigue, lowers productivity and can also increase the risk of heart disease.

Types of noise pollution

In heavy traffic flow each vehicle contributes to the general roar. Trucks contribute about half the noise energy from traffic even though they are less than 10% of vehicles on the road.

There is also noise pollution from excessively noisy individual vehicles - these contribute more than their fair share to general traffic noise.

Noisy vehicles

Excessive noise can come from:

- deterioration of the exhaust system from corrosion
- fitting an unsuitable muffler
- engine modifications such as raising the maximum governed speed
- removing sound absorbent materials
- using the exhaust brake or a noisy retarder unnecessarily in built up areas
- body noise on hitting bumps in the road.

What you can do to reduce noise

- Fit a good exhaust system.
- Beware of 'cheapies' - they can wear out faster and may not have a warranty. A noisy muffler does not mean higher performance or better fuel consumption. Tests conducted have shown that in many cases noisy systems were no better for backpressure or fuel consumption.
- Buy quality replacement mufflers. The manufacturer's recommended part is usually the best for all-round performance as well as noise control.

Get your truck or bus tested for noise

Ask the muffler fitter to check that your new muffler has a low noise level.

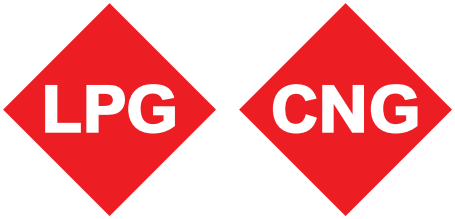
The legal noise limits vary according to GVM, manufacture date, type of engine and whether the exhaust pipe is vertical or horizontal.

Fuel system

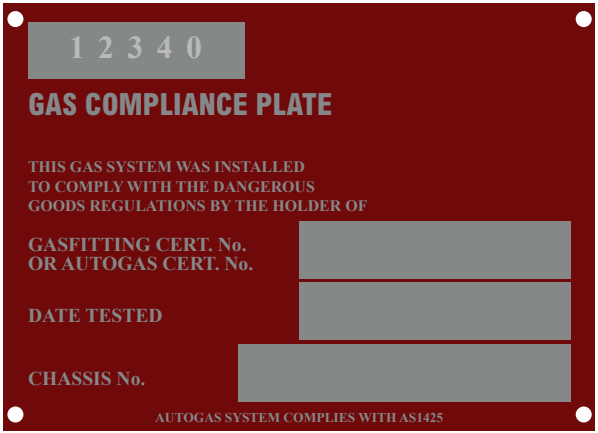
The fuel tank and lines must be secure and not leak. The fuel tank cap must be properly fitted.

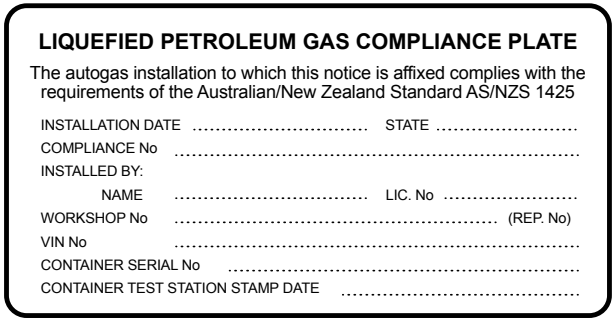
LPG fuelled vehicles must be fitted with an AUTOGAS plate near the LPG fuel tank and display the appropriate plates or stickers on the front and rear number plates. LPG cylinders need to be periodically inspected.

Compressed Natural Gas (CNG) is an alternative fuel and a CNG vehicle must display the appropriate plates or stickers, be fitted with a compliance plate and also be fitted with a refuelling information plate near the filler connection. CNG cylinders need to be periodically inspected.



LPG and CNG retroreflective identification labels must be in the shape of a square and mounted diamond-wise.





Examples of a LPG Compliance plate.

Gear boxes

Heavy vehicles must use low gear on roads where a sign displays TRUCKS & BUSES MUST USE LOW GEAR. The gear chosen by the driver must be able to control the speed of the vehicle without use of the brakes.

There are typically three types of gear boxes.

Non-synchromesh gear box (constant mesh)

In this type of gear box, the matching of engine and road speeds depends entirely on your judgement and skill as there are no synchronisers in the gear box to help you. Double-declutching is essential while you are learning to use this type of gear box. A non-synchromesh gear box may commonly be known as a crash box or constant mesh gear box.

Double-declutching means to change gear, by moving the gear lever first into neutral and then into the desired gear, releasing the clutch pedal between each movement. You should learn this technique from someone who is experienced with operating a non-synchromesh gear box.

Synchromesh gear box

This type of gear box works in much the same manner as those in most modern cars. They are easy to use, as the synchronising of the gears is done within the gear box. Be aware that damage can be caused by forcing gear changes before the engine and road speeds are matched.

Double-declutching is not recommended for synchromesh gear boxes as it may cause long term damage.

Automatic gear box

These work in much the same manner as in modern automatic cars where gear changes occur automatically.

Lights and indicators

All lights, and reflectors must work properly and their lenses must not be damaged. All rearward facing lights except reversing, numberplate and indicator lights must be red.

Warning lights

Parking brake and brake failure warning lights, where fitted, must work.

Flashing lights

A flashing light can be distracting to the driver so must not be directly visible from the normal driving position of the vehicle to which it is fitted.

The use of flashing warning lights is limited to particular types of vehicles and in particular circumstances. Flashing warning lights, where required, must be visible in normal daylight from a distance of 200 metres to drivers approaching from any direction.

An amber/yellow flashing light warns road users of an obstruction to the free flow of traffic and is generally used by road maintenance vehicles, tow trucks and roadside assistance vehicles.

A red and blue flashing light warns road users of the presence of an emergency service vehicle associated with a risk-to-life situation. Red and blue flashing lights can only be fitted to police vehicles, fire and rescue service vehicles and ambulances.

Rear marking plates

All motor vehicles with a GVM exceeding 12 tonnes and trailers with a ATM over 10 tonnes must be fitted with retroreflective marking plates at the rear of the vehicle. Smaller trucks may have rear marking plates fitted too.

Prime mover and semi-trailer combinations must display rear marking plates at the rear of the semi-trailer.

Rear marking plates may also display DO NOT OVERTAKE TURNING VEHICLE in black letters 50 millimetres high as shown if the vehicle exceeds 7.5 metres in length.

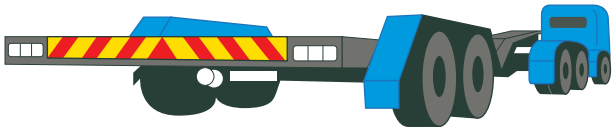
Only use plates with approved retroreflective material. Do not modify or use alternative plates except those described previously.

Keep the plates clean and in good condition. Plates must not be covered or obscured by any vehicle equipment or load.

When a hauling unit vehicle is rated with a GCM exceeding 12 tonnes or the sum of the laden mass of the trailer and hauling unit exceeds 12 tonnes, rear marking plates must be fitted to the rearmost trailer being towed.

Rear marking plate rules do not apply to route buses used only in urban areas.

The marking plate shown below may be an acceptable alternative, if the first option is not practicable, provided it meets specific dimensions and locations. For further information refer to Standards Bulletin VSB12 – Rear Marking Plates



Rust and corrosion

Any structure, chassis, frame etc. must not have advanced rust – that is rust which could cause the metal to collapse in a crash. Any panel separating the driver or passenger from fuel or engine fumes must not have advanced rust.

Seats and seatbelts

Seats and mountings must be an approved restraint, structurally sound with no exposed parts that protrude due to damage.

All seatbelts must be undamaged and working properly.

Steering

The steering wheel must be undamaged and firmly attached to the steering column. All steering components must be secure, undamaged and not have excessive free play.

Structure

Any structure, chassis, frame etc. must not be distorted, cracked or damaged.

Suspension

Suspension springs must not sag or be modified and all suspension components must be aligned and undamaged.

Wheels and tyres

The correct number of wheels must be properly attached to the vehicle with the right type of nuts and studs. Wheel rims must not be cracked or bent.

All tyres fitted to a heavy vehicle must have at least 1.5 millimetres tread depth over 75% of tyre surfaces which normally contact the road. All tyres must have correct air pressure. Manufacturer's recommendations are a good guide.

Regrooved tyres are acceptable provided such tyres (or retreads) are marked by their manufacturers as being suitable for regrooving. This only applies to heavy vehicles.

Regrooved tyres must be regrooved to meet the requirements of the relevant Australian Standard.

Windscreen and windows

The windscreen directly in front of the driver or in the path of the windscreen wipers must not be cracked, scored or chipped.

Wiper blades, windscreen washers and demisters must be fitted and work well.

Pre-departure checks

All drivers are legally responsible for the safety and roadworthiness of the vehicles they drive. Before driving any vehicle you must ensure it is safe and roadworthy.

Pre-departure safety checks

It is very important to check your vehicle before you drive. These checks can save time and expense later on, reducing the chance of component failure and subsequent loss of vehicle control, which may result in an accident.

The areas you need to cover are listed in this section and can be checked off while completing the safety check.

Engine compartment

- Engine oil level ……
- Engine coolant level ……
- Clutch fluid level ……
- Brake fluid level ……
- Power steering fluid level ……
- Screen washer fluid level ……
- Ancillary drive belts ……

Electrical

- Headlights: high and low beam ……
- Driving and fog lights ……
- Park lights ……
- Indicators: left and right ……
- Clearance lights ……
- Tail lights and plate light ……
- Brake lights ……
- Hazard lights ……
- School warning lights ……

Vehicle posture, leaks and load

- Vehicle posture ……
- Fluid leaks ……
- Load properly secured (trucks) ……

Coupling

- Air hoses and cables .....
- Security .....

Vehicle body

- Body damage .....
- Mud flap(s) and guards – front and rear .....
- Cabin entry grab handles .....
- Door operation and locks .....
- Windows – operation and damage .....
- Bus rear window – Emergency Exit .....
- Cargo and luggage doors (if available) .....
- Mirror(s) – lens and security .....
- Plates and signs .....
- Fuel tanks .....
- Air tanks .....
- Toolbox(es) .....
- Other .....

Brakes

- Foot and hand controls correctly adjusted and not worn .....

Hydraulic brakes

- Brake fluid reservoirs must be full .....
- Hoses, pipes and cylinders leak free .....
- Rigid pipes bracketed, free of rust and have grommets when passing through chassis frames .....

Air brakes

- Compressors, drive belts, exhausters and reservoirs securely mounted and undamaged .....
- Brake air lines, hoses, valve drain cocks and plugs secure, functional and leak-free .....

Continued over the page

Wheels and tyres

- Rims (dents in flanges, loose lugs and nuts, rust trails, cracks in rim assembly) ……..
- Tyres (tread minimum legal depth of 1.5 millimetres) ……..
- Tyre inflation correct ……..
- Tyre cuts, damage, dual tyres touching, rocks lodged between duals ……..
- Spare wheel(s)/tyre(s) ……..

Generally

- Registration current and in the correct configuration for intended use (use the NTREGO app) ……..
- Warning triangles ……..
- Fire extinguishers ……..

Dealing with problems

If the vehicle you are driving has a maintenance or mechanical problem, you should attend to these immediately.

Keep a record of all repairs and check that the fault has been fixed. Take it back to the repairer if the problem persists.

Uncoupling and coupling

Uncoupling and coupling a prime mover and semi-trailer is a task which can lead to serious accidents, injury and vehicle damage. Follow these steps to perform the task correctly.

Uncoupling a semi-trailer

Before uncoupling:

- make sure your semi-trailer is parked on a level area
- ensure the vehicle is on a surface firm enough to support the trailer landing gear and its load
- make sure the prime mover and semi-trailer are in a straight line.

You will then need to:

1. Apply the parking brakes and tractor/trailer protection valve.
2. Chock the trailer wheels. Always use chocks when you have to park a semi-trailer on a grade. It is best to chock the semi-trailer's front axle in case the landing legs collapse and the rear axle(s) lifts.
3. Disconnect and secure all air hoses and cables.
4. Lower the landing gear ensuring firm and even contact with the ground.
5. Release turntable jaws from kingpin.
6. Raise the trailer until a gap is visible at the fifth wheel (turntable).
7. Secure the landing gear handle.
8. Move prime mover forward slowly until the fifth wheel is just clear of the skid plate.
9. Apply prime mover park brake.
10. Ensure semi-trailer supports its own weight.
11. Drive slowly away.
12. Ensure driver's door is closed whenever vehicle is moving.
13. Conduct all procedures safely and efficiently.

Coupling a semi-trailer

Position the vehicle

- Reverse the prime mover into position, lined up straight in front of the trailer, stopping the prime mover within 30 cm of the skid plate.
- Apply the parking brake.

Trailer check

- Check the trailer skid plate, kingpin, turntable jaws, airlines, leads and connections for damage.
- Make sure the turntable jaws are open and aligned with the kingpin.

Coupling the trailer

1. Return to the vehicle and reverse the prime mover slowly under the trailer until the turntable jaws lock around the kingpin.

   You should hear the jaws close and lock into place.
2. Raise landing gear just clear of the ground (approximately 1 cm).
3. Perform a ‘tug test’ to check the trailer is locked on by trying to move off in first gear with the trailer brakes on. The prime mover should not move.
4. Repeat this check to be absolutely sure.
5. Check that the coupling release lever is in the locked position and there is no gap between the turntable and the trailer skid plate.

   A visible gap between the turntable and the trailer skid plate may mean the trailer is set too high.

   Try lowering the trailer on the landing gear slightly and the gap should close but if it does not check for any problems.
6. Check that the turntable jaws are closed correctly and have locked on to the kingpin.

   Make sure that the head of the pin is not sitting on top of the jaws.
7. Connect air hoses and cables.
8. Fully raise the landing gear and stow the handle.
9. Remove wheel chocks (where applicable).
10. Check operation of all lights and indicators on trailer and prime mover.
11. Return to cab and charge trailer brake air system.
12. Apply trailer brakes, release parking brake and perform secondary tug test.

Uncoupling a truck and trailer

Secure the vehicle

- Make sure your truck and trailer are parked on a level area.
- Ensure they are on a surface firm enough to support the trailer drawbar support leg if fitted.
- Make sure the truck and trailer are in a straight line.

Uncoupling the trailer

1. Apply park brake.
2. Lower drawbar support leg.
3. Disconnect and secure all hoses and cables.
4. Release towing connection.
5. Drive slowly forward.
6. Check mirrors to confirm disconnection.

Coupling a truck and trailer

Note: These procedures may need to be varied.

1. Check coupling assembly including guide flange, towing and locking pins, and connections.
2. Check pin is in the coupling position.
1. Reverse truck close to, but not touching, draw bar.
2. Check height and alignment of eye ring to coupling assembly, adjusting if necessary.
3. Reverse truck slowly until the towing system is locked or in position to be connected.
4. Look to check the connection.
5. Connect air hoses and cables.
6. Raise drawbar support leg and stow (if fitted).
7. Perform a 'tug test'.
8. Check operation of all lights and indicators on trailer and prime mover.
9. Switch off engine and inspect by listening for air leaks.

vehicle dimensions and loading

It is the responsibility of the driver to ensure the vehicle does not exceed dimension or mass limits and that the load is appropriately restrained in accordance with the performance standards contained in the load restraint guide.

More information relating to load security can be found in the load restraint guide which can be purchased at MVR offices or downloaded for free at from the National Transport Commission website. It is recommended that drivers read this guide and keep one on hand at all times. There are also load restraint training courses with national recognised competencies which can be done.

Vehicle dimensions and mass

The *Motor Vehicles Act* (MVA) and *Motor Vehicles (Standards) Regulations* (MV(S)R) – incorporating the *Australian Vehicle Standards Rules* (AVSR) specify the maximum dimensional and mass limits for vehicles which may travel on public roads in the Northern Territory (NT).

These limits are necessary to enhance the free flow of traffic, to control damage of the infrastructure and to promote the safety of all road users. **The limits include any load placed in or on a vehicle.**

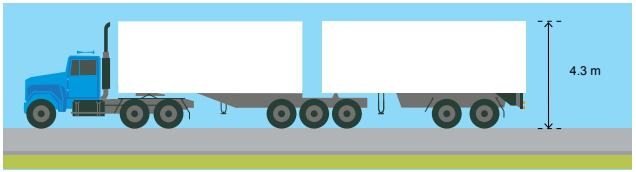
All vehicles travelling on the road network in the NT must comply with the maximum dimensional and mass limits. Some of these limits are described on the following pages.

The MVA does recognise the possibility that sound reason may exist for allowing vehicles and loads that exceed these limits to operate on all or part of the road system by permitting exemptions to be granted by the Registrar of Motor Vehicles.

Information on oversize or overmass vehicles and how to apply for a permit can be found online at nt.gov.au. You can also email mvr.permits@nt.gov.au

Maximum dimensions

The height of a vehicle and its load is limited to a maximum of 4.3 metres except for cattle crates and car carriers, which must not exceed 4.6 metres.



The maximum ength of a rigid motor vehicle must not exceed 12.5 metres.

The maximum ength of an articulated or rigid motor vehicle and trailer combination other than a road train must not exceed 19 metres.

The maximum length of a road train is 53.5 metres.

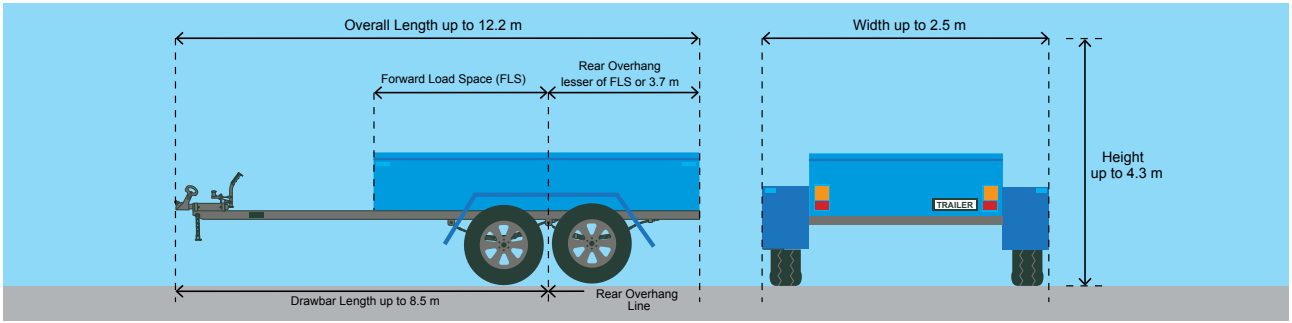
Vehicle Type	Maximum Standard Dimension Limit			
	Width (metres)	Length (metres)	Height (metres)	Rear Overhang (metres)
Rigid Truck	2.5	12.5	4.3	Lesser of 3.7 or 60% of wheelbase
Special Purpose Vehicle (e.g. Mobile Crane)	2.5	12.5	4.3	Lesser of 3.7 or 60% of wheelbase
Rigid Truck and Dog Trailer	2.5	19.0	4.3	Lesser of 3.7 or 60% of wheelbase
Rigid Truck and Pig Trailer	2.5	19.0	4.3	Lesser of 3.7 or front loading space
Articulated Vehicle	2.5	19.0	4.3	Lesser of 3.7 or 60% of “S” dimension
Articulated Vehicle Double Deck Cattle Transporter	2.5	19.0	4.6	As above
Articulated Vehicle Double Deck Car Transporter	2.5	25.0	4.6	4.9 to the rear of the rear most vehicle
Road Train	2.5	53.5	4.3	Lesser of 3.7 or 60% of wheel base
B-double	2.5	*20.6	4.3	As above

All dimensions include vehicle/combinations and its load.

As dimension limits may change from time to time, it is incumbent on the operator to check the relevant legislation.

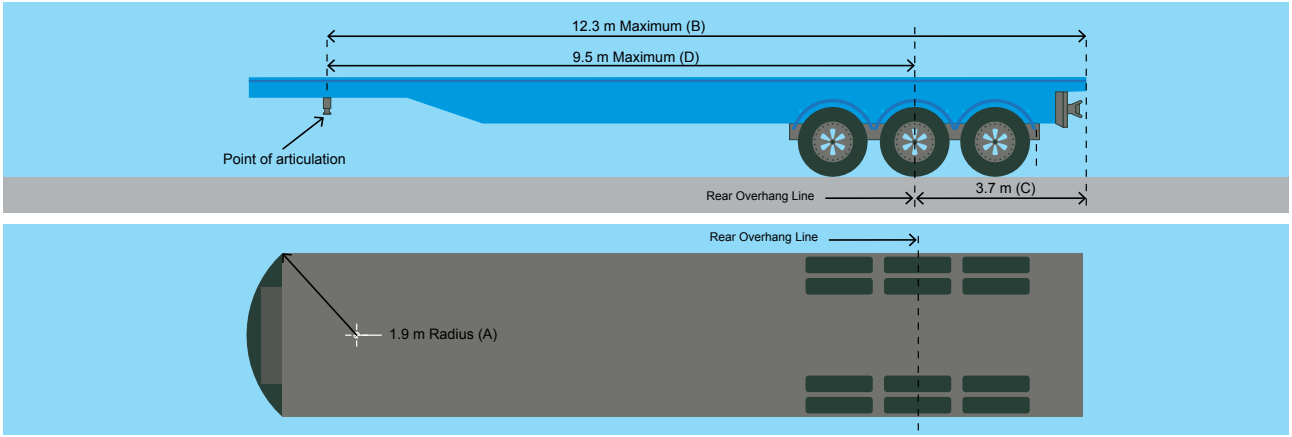
*20.6 metre B-double length is measured from the kingpin on the lead trailer to the rear. There is no overall length requirement to enable better utilisation of prime mover fleets.

Length of a Pig Trailer



Note: I) Rear overhang must not exceed Forward Load Space (FLS).
Drawbar length, Forward Load Space (FLS) and rear overhang must be measured from the rear overhang line.

Length of a semi-trailer



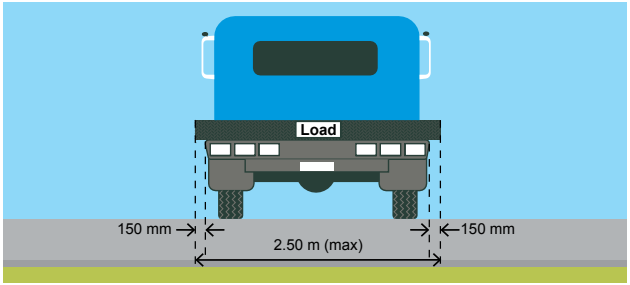
Maximum standard dimensions of a semi-trailer

DIMENSION	LENGTH (m)	DESCRIPTION
A	1.9	Maximum radius from point of articulation – forward projection
B	12.3	Maximum length from point of articulation to rear of trailer
C	3.7	Maximum rear overhang must not exceed, the lesser of 60% of the wheel base or 3.7 metres
D	9.5	Maximum dimension from point of articulation to the centre of axle group “S” dimension
Livestock Trailer	12.5	Maximum length inside trailer from wall to wall

Maximum standard front and side projections

The loading or equipment of a vehicle or vehicle combination shall not project more than 1.2 metres to the front or more than 150 millimetres from the outermost part of either side of the vehicle.

Side Projections



Rear projections

The rear of a load on a vehicle is to carry a warning signal if the load:

1. Projects more than 1.2 metres behind the vehicle;
2. Projects to the rear of the vehicle so that the end of the load cannot be seen easily from behind; or
3. Is on a pole-type trailer.

Note:

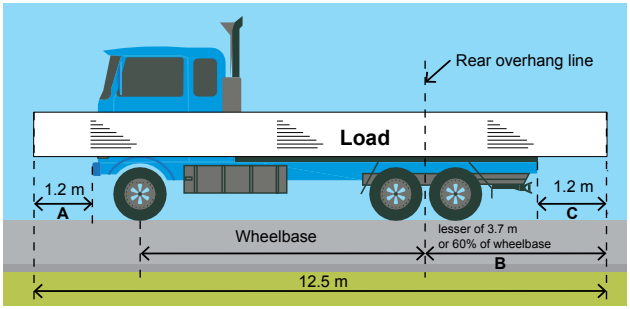
4. In daylight, the warning signal referred to is to be a brightly coloured flag or piece of material with each side at least 300 millimetres long.
5. At night, the warning signal referred to is to be a red light that can be seen for 200 metres.
6. Any rear projections must not exceed legal rear overhang dimension.

Rear overhang

Rear overhang is the distance measured at right angles between the rear overhang line of a vehicle and the rear of the vehicle or any load it is carrying.

The rear overhang of a vehicle shall not exceed the lesser of 60% of the shortest distance between the centre of the foremost front axle and the rear overhang line (wheelbase) or 3.7 metres.

Rear overhang, forward and rearward projecting load limits



Note:

A: Front projection limit

B: Rear overhang limit

C: Maximum rear projection of a load allowed without a warning signal (provided rear overhang is not exceeded)

Dangerous projections

A load on a vehicle is not to project in a way that is dangerous to a person or to property - even if all dimension and warning requirements are met.

Maximum standard dimensions of a loaded car carrier

Height

The height of a vehicle that is carrying vehicles on more than one deck and its load is not to exceed 4.6 metres.

Rear overhang

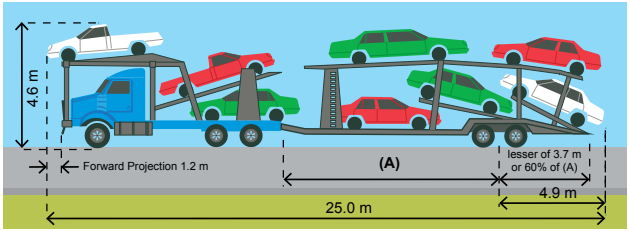
The distance measured at right angles between the rear overhang line of a trailer carrying vehicles on more than one deck and the rear of the rear-most vehicle on the trailer is not to exceed 4.9 metres.

Forward projection

The load on a car carrier must not project more than 1.2 metres to the front of the vehicle.

Length

The overall length for a combination, except a road train, designed to carry vehicles on two or more partly or completely overlapping decks is not to exceed 25 metres.



Legal maximum mass limits

Maximum mass limits

Description of axle or axle group *(axle spacing not greater than 1.2 m apart)*	**Mass limit** *(tonnes)*
Single axles and single axle groups *(min 1 axle with 1 m max distance between extreme axles)*	
Single steer axle on a motor vehicle	6.0
Single axle or single axle group fitted with single tyres with section width of:	
(a) less than 375 millimetres	6.0
(b) at least 375 millimetres but less than 450 millimetres	6.7
(c) at least 450 millimetres	7.0
Single axle or single axle group fitted with dual tyres on:	
(a) a Pig Trailer	8.5
(b) a bus licensed to carry standing passengers	10.0
(c) any other vehicle	9.0
Twin steer axle groups	
Twin steer axle group without a load-sharing suspension system	10.0
Twin steer axle group with a load-sharing suspension system	11.0
Tandem axle groups *(min 2 axles with max distance between extreme axles > 1 m & ≤ 2 m)*	
Tandem axle group fitted with single tyres with section width of:	
(a) less than 375 millimetres	11.0
(b) at least 375 millimetres but less than 450 millimetres	13.3
(c) at least 450 millimetres	14.0

Description of axle or axle group *(axle spacing not greater than 1.2 m apart)*	**Mass limit** *(tonnes)*
Tandem axle group fitted with single tyres on one axle and dual tyres on the other axle	13.0
Tandem axle group fitted with dual tyres on:	
(a) a Pig Trailer	15.0
(b) any other vehicle	16.5
Tri-axle groups *(min 3 axles with max distance between extreme axles > 2 m & ≤ 3.2 m)*	
Tri-axle group on a vehicle fitted with single tyres with section width of less than 375 millimetres on all axles or single tyres on one or 2 axles and dual tyres on the other axle or axles	15.0
Tri-axle group on a pig trailer with either single tyres with section width of at least 375 millimetres, dual tyres on all axles or a combination of those tyres	18.0
Tri-axle group on a vehicle, other than a pig trailer, with either single tyres with section width of at least 375 millimetres, dual tyres, or a combination of those tyres	20.0
Quad axle groups *(min 4 axles with max distance between extreme axles > 3.2 m & ≤ 4.9 m)*	
Quad-axle group fitted with single tyres with section width of less than 375 millimetres	15.0
Quad-axle group fitted with single tyres with section width of at least 375 millimetres or dual tyres	20.0
Other axle groups	
Any other axle group not specifically referred to in this Schedule	20.0
Axle groups fitted with complying road friendly suspension – *(each axle group fitted with dual tyres)*	
Tandem axle group	17.0
Tri-axle group	22.5

Load shift

When moving, a vehicle's load can shift from forces caused by changes of speed, braking, accelerating, cornering, travelling over uneven road surfaces, and slopes. Load shift needs to be managed to prevent danger to any person or damage to any property.

How to carry a load safely

To carry a load safely and prevent danger to any person, or damage any property you must:

- choose a suitable vehicle
- position the load correctly
- use suitable and adequate restraint equipment
- use appropriate driving methods
- ensure loose bulk loads i.e. quarried material such as sand, rocks and gravel are adequately covered.

The right vehicle

To carry a load safely you must make sure the size of the load space and the condition of the platform are suitable for the job you want to do.

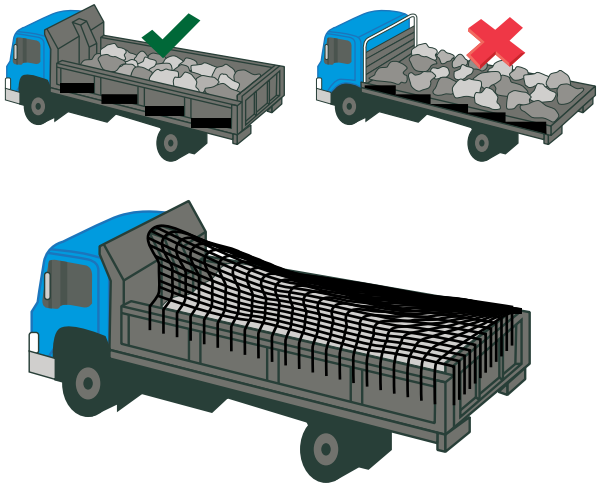
Vehicles carrying:

- long loads should be long enough to avoid excessive overhang and ensure good weight distribution for vehicle stability
- liquids and loose bulk material must be designed to completely contain the load and to minimise the effect of load movement.

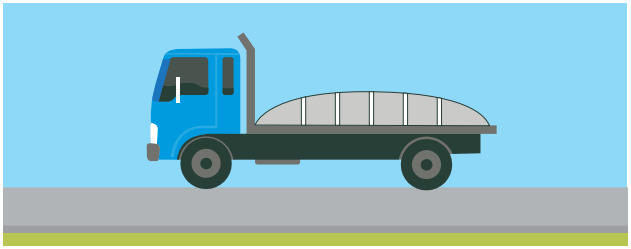
To carry a load safely you must make sure the size of the load space and the condition of the platform are suitable for the job you want to do.

Contained loads

Tipper bodies are best to contain loose loads such as rock, sand, gravel etc. The most suitable vehicles for these loads have solid sides and tailgates such as tippers. The solid sides prevent the load from spilling. Sheets or tarpaulins must be used to cover loose loads to prevent them from being blown out of the truck. Liquid loads or 'fine powder loads' such as cement powder, flour etc. are best contained in tankers.



A correctly contained loose load.



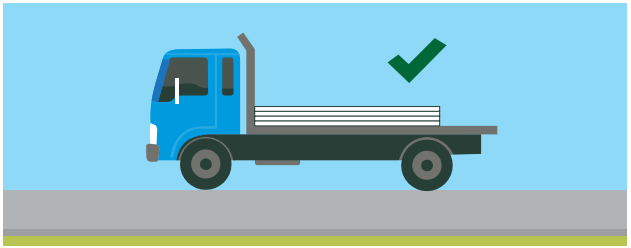
Loose loads need to be safely restrained as shown above.

Load nets and tarpaulins can also be used effectively for containing loose bulk loads.

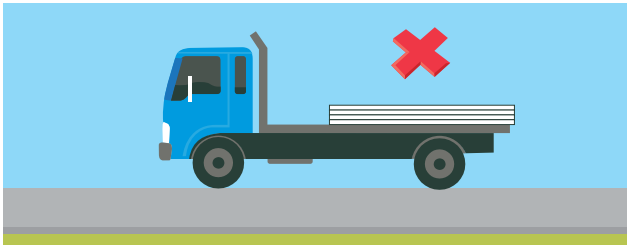
Heavy loads

A long, heavy load can make your vehicle difficult to handle. You can overcome this by using the right vehicle for the job.

An incorrectly loaded heavy load can take weight from the front wheels and make steering difficult. In some situations an incorrectly loaded vehicle may pivot on its rear wheels, lifting the front wheels entirely off the road.



The load weight is well positioned and evenly distributed.

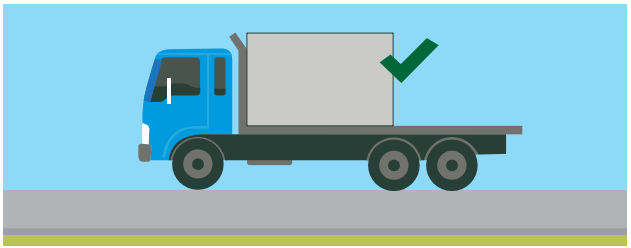


The load is dangerously positioned.

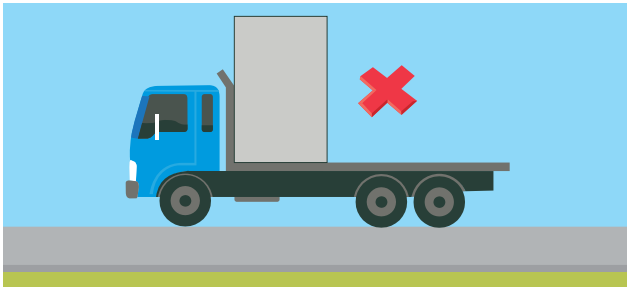
High loads

High loads, and loads with a high centre of gravity may become unstable, shift or tip over when cornering if not correctly loaded and restrained. High loads should be carried on vehicles with a low platform whenever possible such as a drop frame trailer or low loader.

The overall height of a loaded vehicle must be checked to make sure that it clears any overhead bridge or other obstruction on your route.



The load weight is well positioned and evenly distributed.



The load is dangerously positioned with the centre of gravity too high.

Clearance signs and low clearance signs

You must always obey clearance and low clearance signs.

Low clearance sign indicating clearance height

You should ensure that you know the total height of your vehicle and its load before driving it on a road. You must also obey clearance signs and low clearance signs that impose restrictions on the height of vehicles that can travel near, under or through an asset e.g. under a bridge, overpass or through a tunnel.

If your vehicle exceeds 4.3 metres in height you should also ensure that prior to any journey you plan your trip to identify any restrictions that may affect your proposed route.

Tankers

Bulk liquid loads should be carried in tankers and have the same problems of weight distribution as other loads as well as the special problems of a fluid load.

Avoid swerving and slow down before any curve or corner.

The tank is divided into compartments which are filled separately. Be aware that difficulties can be caused by the partial filling of compartments. A part-filled compartment allows the liquid to move from side to side (cornering) and rear to front (braking). The shift of the cargo's centre of gravity is a safety concern because it makes the vehicle easier to rollover. Try to empty one compartment completely before you start to empty another one.

Always empty the centre compartments first and work outwards to keep weight evenly balanced over the front and rear axles of the vehicle.

There is still some space left when the compartment registers full – this reduces spillage and allows for expansion of the fluid.

This small space also allows the fluid to move but much less than if the compartment has been partly emptied. Even minor movements are sometimes enough to make your vehicle unstable and perhaps cause a rollover.

Loading

The limits on the mass or weight of your vehicle (including the load) are set to reduce wear on roads and bridges, and to increase safety. Vehicle manufacturers set gross mass (GVM/GCM) limits for each vehicle model.

A vehicle must not be operated at a mass limit that will exceed the:

- manufacturer's GVM/GCM
- manufacturer's individual component rating (i.e. axles, springs, tyres etc.)
- statutory mass limits or overall axle spacings.

It is the operator's responsibility to make sure these limits are not exceeded.

Millions of dollars are spent every year to repair damaged roads and bridges.

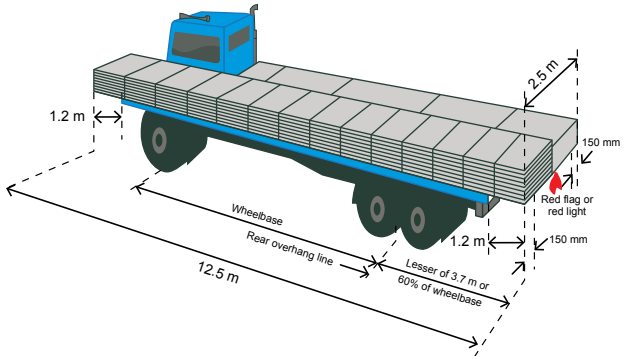
Even a little overloading causes damage to roads and bridges. It is very important for the future of NT roads, the heavy vehicle industry and public safety that you do not overload your vehicle

Projecting loads

A load on a vehicle must not project more than 1.2 metres in front of the vehicle, or more than 150 millimetres from the side of a vehicle. The vehicle width, including the load, must not be greater than 2.5 metres.

A warning signal must be attached to the rear of the load in daytime if it:

- projects more than 1.2 metres behind the vehicle
- projects from the rear of the vehicle (irrespective of length) and is such that the end of the load cannot be seen easily from behind e.g. sheet metal, pipes, rods etc
- is on a pole type trailer.



This diagram shows the allowable projected load limits.

The warning signal must be a brightly coloured flag or piece of material with each side at least 300 millimetres long.

At night time the warning signal must be a red light which can be seen for 200 metres.

A load on a vehicle must not project in a way that is dangerous to any person or likely to cause property damage, even if all dimension and warning requirements are met.

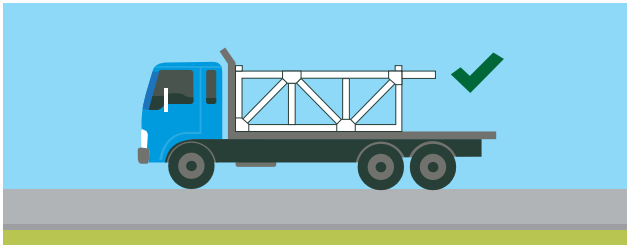
The rear overhang, including the load, measured from the centre of the rear axle group, must not exceed 60% of the vehicle's wheelbase or 3.7 metres, whichever is less.

The maximum allowable length for a rigid vehicle including any overhanging load front or rear is 12.5 metres. The maximum allowable length for a single articulated or heavy trailer combination, including any overhanging load, is 19 metres. See vehicle dimensions and axle loads in this section.

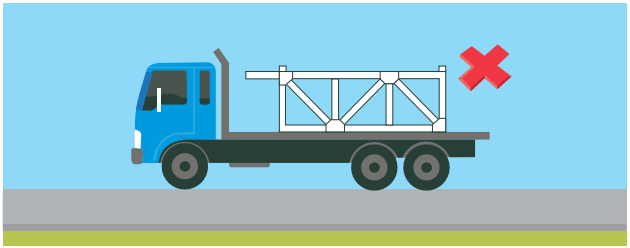
If the size of the vehicle, or vehicle with load, is more than the allowable length, you must get a permit from MVR and/or the National Heavy Vehicle Regulator.

Dangerous projections

A load with any potentially dangerous projection should be placed to minimise risk to the driver or any other person, should the load shift during braking or a collision.



The potentially dangerous projections is correctly positioned to minimise the risk of load shift.



The load is incorrectly positioned and projections are potentially dangerous in the event of load shift.

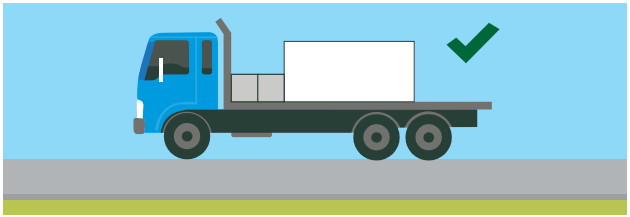
Security of the load on trucks must meet performance standards as set out in the load restraint guide.

Load distribution and arrangement

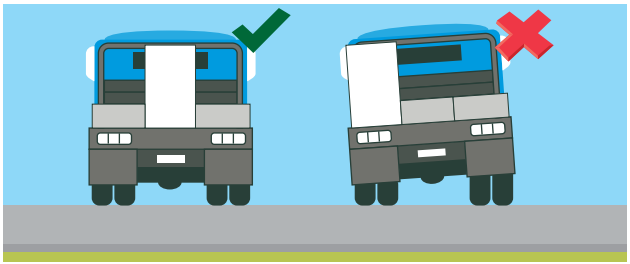
An overloaded vehicle is unsafe to drive, inefficient to operate and damages the road.

Poor load distribution can cause:

- loss of steering
- loss of traction under power
- wheel lock-up under braking resulting in a jack-knife or trailer swing
- vehicle rollover when cornering, on a roundabout or when changing lanes.



The weight of the load should be evenly distributed.



The weight of the load needs to be evenly distributed.

It is important to have even distribution of weight because:

- driving control is improved through the wheels.
- the chassis frame will not be damaged by twisting or bending.

Positioning the load

For stability, the load should be spread close to the centre line of the vehicle. You should stack the heavier things at the bottom. Loading a heavy item on one side may result in twisting and stress on the chassis frame, or overloading of axle housings, wheel bearings and tyres. This could be bad enough to:

- allow the brakes to lock on the wheels on the lighter side
- cause flat spots on the tyres
- skid on a wet surface.

Problems may occur in a rigid vehicle, when a very heavy small load is placed against the headboard. This could cause:

- the chassis frame to bend, perhaps permanently
- overloading in the front tyres
- irregular tyre wear or even a blowout.

Avoid these problems by placing any small heavy load just ahead of the rear axle.

If you need to place a load back from the headboard to distribute weight, the load should be blocked so that it cannot move forward. Unless it is blocked, even the heaviest load will move forward if you stop suddenly.

Securing the load

The following information is a guide only. For more information on load restraints and loading performance standards, please read the load restraint guide.

The way your vehicle is loaded is very important for your safety and for the safety of others. If you are involved in packing, loading, moving or unloading a vehicle you are responsible for complying with load restraint laws.

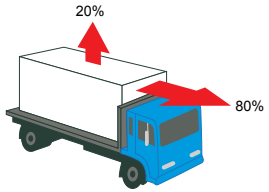
If your load is not properly secured and is unstable, elements such as strong winds, bumpy, uneven or windy roads, speed changes and braking can cause your load to move, you could even lose your load or control of your vehicle.

The weight of your load should also be evenly distributed so you can control your vehicle properly.

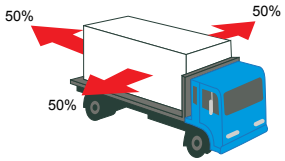
Load restraints

A load restraint system on a vehicle should be capable of restraining the following percentages of the weight of the load from shifting:

- 20% upward
- 80% forward
- 50% rearward
- 50% sideways.



20% upwards and 80% forward.



50% rearward and sideways.

Loads must be secured to prevent:

- any part of the load hanging over or sticking out of the vehicle in a way which could hurt someone, damage property or cause a hazard to other road users
- any part of the load tipping, being dislodged or falling out of the vehicle.

It is against the law to drive a vehicle where the load is not secured. You can stop your load from moving by:

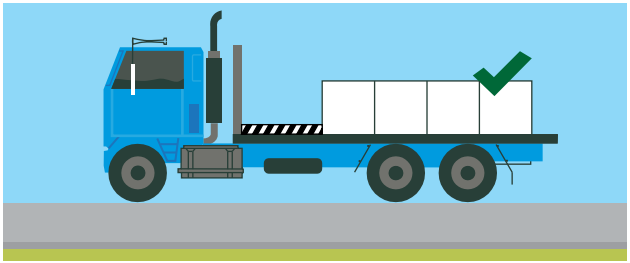
- Lashings secured to the vehicle chassis, including:
  - cross bearers
  - outriggers
  - tie rails and similar arrangements.
- Blocking arrangements such as:
  - load racks
  - headboards
  - bulkheads
  - stakes in pockets
  - transverse beams
  - shoring bars
  - chocks, dunnage, etc.
- Containing the load by using a truck with solid sides and tailgate, a tanker or a shipping container.
- Covering loose loads such as sand or gravel with sheets or tarpaulins.

Blocking

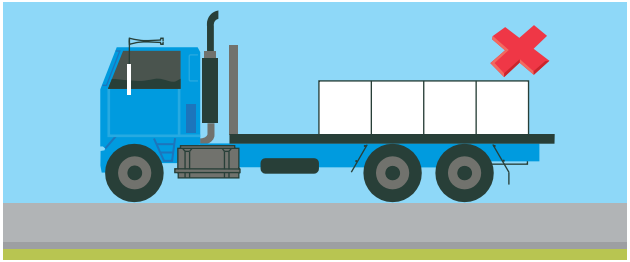
The most important part of the blocking is the headboard or bulkhead. It is best to put most loads right against the headboard to prevent the load acting like a battering ram if it moves forward. If other restraints fail in a sudden stop, the load might break the headboard. This could damage the cabin and leave you severely injured.

Many vehicles carry loads that could crush the driver's cab if the load shifted forward under sudden braking. If you carry loads such as coils, sheet steel, steel pipes, structural steel and timber, you should have a solidly constructed bulkhead instead of a normal headboard.

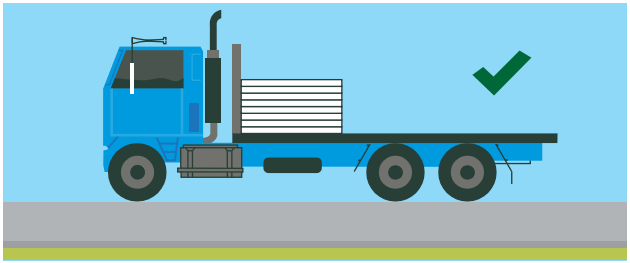
When carrying a load of metal bars, it is particularly important to ensure that all bars are secured and unable to move out of the stack. One bar that moves could go through the bulkhead.



The headboard and extra blocking can be used to stop load shift.



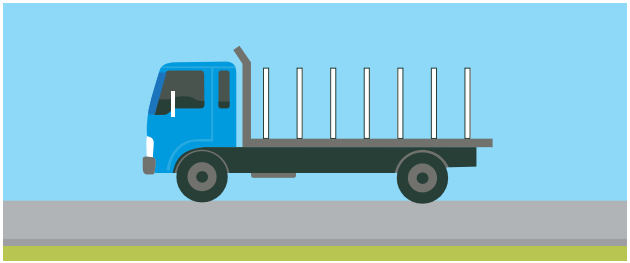
The load is not secured and could shift.



The load is correctly blocked against the headboard.

Stakes in pockets

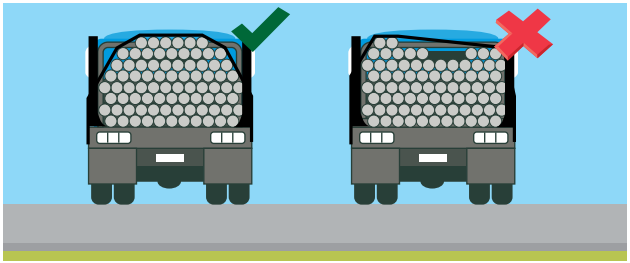
These or stanchions may be used in conjunction with lashings to prevent long rigid loads such as pipes, logs etc. from moving sideways.



Stakes or stanchions should be used to prevent sideways movement.

Crowned loads

It is important that long rigid loads such as pipes, logs etc. be crowned to ensure the load is lashed securely without ‘gaps’. Gaps in the load may allow it to move and cause the lashings to become loose.

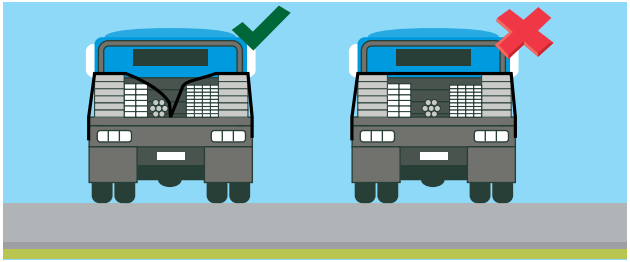


To restrain movement in loads such as pipes, they need to be crowned and have no gaps.

The gaps in this load can cause potentially dangerous load shift.

Divided crowned loads

In some cases it may be necessary to divide the load into two or more stacks to crown it effectively. This can be achieved by attaching the lashings along the middle of the deck.



A load that is divided to minimise the chance of movement.

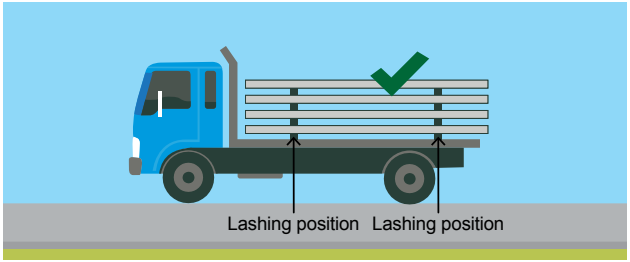
A load with substantial gaps that would allow potentially dangerous movement.

Dunnage

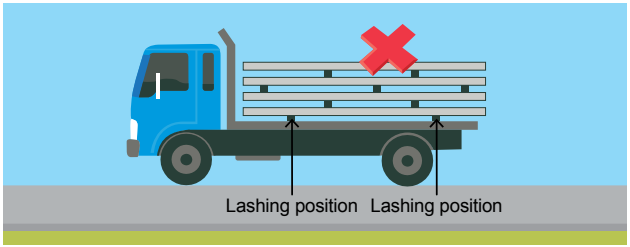
This is packing placed under or between parts of the load. It is used to allow loading and unloading with forklifts or lifting slings. It is usually made of rectangular or square hardwood or softwood and must be strong enough to support the weight of the load placed upon it.

A load with multiple layers or rows must have all dunnage placed directly above the bottom dunnage. Tie-down lashings must only be placed at these positions along the load to ensure that the lashings do not loosen or overtighten if the vehicle chassis flexes.

Long rigid loads such as large diameter steel pipes must be supported in two positions to allow the vehicle to flex. Additional dunnage (and lashings) will need to be used along the lengths of more flexible loads such as plastic pipes etc.



Dunnage needs to be vertically aligned to minimise movement when under lashings.

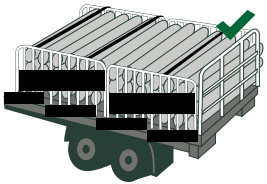


The dunnage is placed irregularly and could loosen or overtighten lashings when the vehicle is operating.

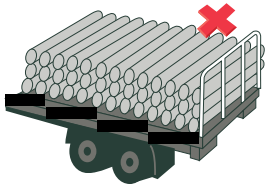
Gates/fencing

A load can also be secured with sidegates, tailgates and other blocks. The sidegates have to be strong enough not to be forced out by the weight of the load. Other blocks should be secured and braced. You should close and lock the tailgate of your vehicle unless the load is too long. Never carry any separate part of the load on the tailgate.

Where small pipes or logs are carried, suitable sidegates or other containment methods should be used to prevent sideways movement.



A load secured from sideways movement by gates and fencing.

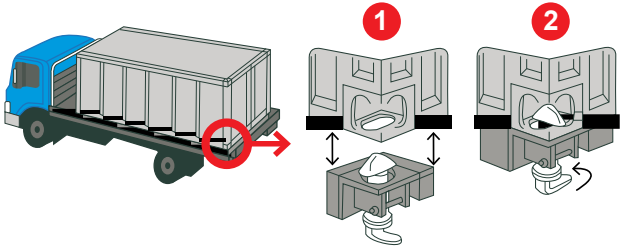


A load not secured from sideways movement.

Containers

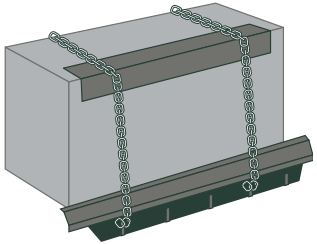
Vehicles used to carry containers should be equipped with special devices known as ‘twist locks’. Containers have special corner-pieces which fit into the twist locks on the vehicle. They can then be locked into place. Sometimes frames with twist locks can be attached to the vehicle. These frames need to be securely bolted to the chassis.

A container is not properly secured unless the twist locks are used. This applies whether the container is full or empty. A vehicle without twistlocks should not be used to carry containers. Decommissioned containers (those not carrying a load) can be chained to a vehicle for transport.



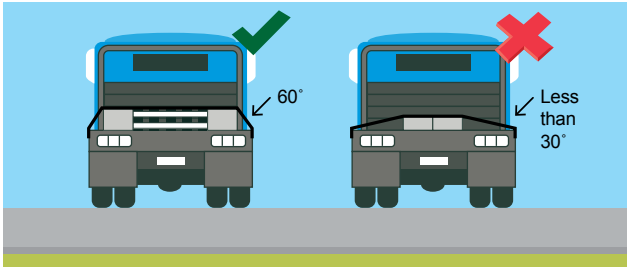
Lashings

These and other fastening devices such as dogchains, cables, clamps, load binders must be in good working condition. A chain is not good enough if even one link is deeply gouged, pitted or worn. Make sure the lashings are tight enough to stop any movement. Make sure the type of lashing you use is strong enough to fasten in place.



The lashings should be protected from any sharp edges on the load or on the vehicle. When using more than one lashing, secure them separately so if one line fails the others will hold.

A correctly lashed and fastened load.

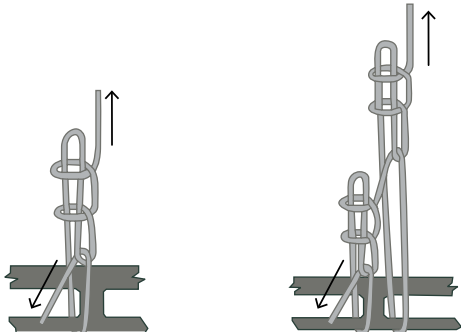


The greater the angle of the lashing to the load the greater the lashing tension will be. Angles less than 30 degrees are not recommended.

Ropes

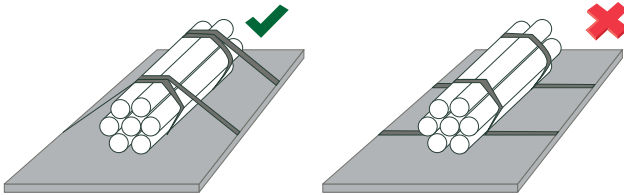
Ropes used for lashing loads should be tensioned by either a single or double 'truckies hitch'.

The greater the tie down angle of the lashing to the load, the greater the lashing tension will be on the load. Angles of less than 30 degrees are not recommended.



Belly wrapping

Belly wrapping may be used to prevent large diameter pipes or bars from rolling. When belly wrapping, the lashings must be looped over the top of the load to provide tie-down. Lashings that are looped underneath a rounded load will not prevent the load from rolling.

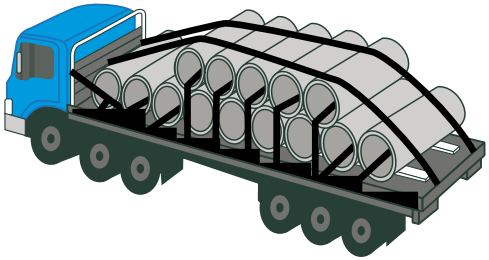


The lashings must be looped over the top to prevent rolling.

The load could roll dangerously.

Large pipe loads

When placed across the vehicle, all upper layer pipes in the load should be individually tied down so that all pipes in the load are positively clamped to prevent sideways movement.

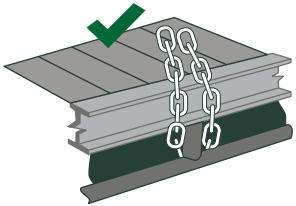


All pipes need to be clamped to prevent sideways movement.

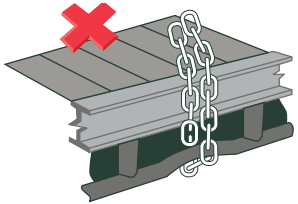
Load anchorage points

You cannot rely on traditional rope hooks or rings to hold anything other than light loads.

Vehicles should have load anchorage points fixed to the vehicle so that the main chassis frame takes the force of the load.



The chassis frame should be used as an anchorage point.



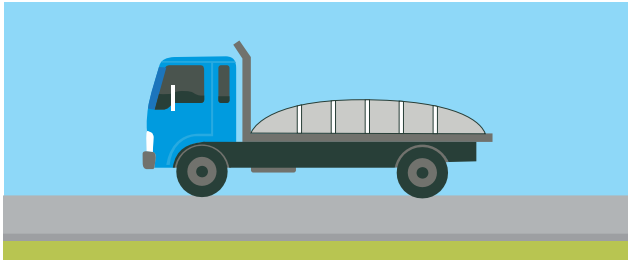
You should not rely on non anchorage points to take anything other than light loads.

Friction

Friction cannot stop your load from moving but it can be a great help. To make the best use of friction, the base of the load and the platform should be kept clean, dry and free from grease. A slippery platform surface is always dangerous.

Sheets and tarpaulins

Except in the case of very light bulk loads, sheets and tarpaulins are not strong enough to hold down loads, they only protect the load from the weather. Loose bulk loads such as sand, gravel, rocks etc. should always be covered if there is any possibility of the load becoming dislodged.



Secured sheets and tarpaulins can be used to protect loads from the weather

Dangerous goods

Any driver of a vehicle which carries more than 500 kilograms or 500 litres of dangerous goods must be licensed for that purpose. The vehicle may also be required to be licensed.

Further details on dangerous goods driver and vehicle licences can be found at worksafe.nt.gov.au.

All dangerous goods must be carried in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (the ADG Code) available from the National Transport Commission website at www.ntc.gov.au.

Dangerous goods are substances and articles that pose a risk to people, property and the environment due to their chemical or physical properties. In the NT dangerous goods are listed in Section 3.2.3 of the ADG Code.

In addition to the routine requirements when involved in a crash, as outlined in the Road Users' Handbook, In the event of a crash involving dangerous goods you must:

1. Call the police or fire brigade on 000.
2. Not touch spilled chemicals and avoid breathing fumes and dust.
3. Wash off any chemicals with plenty of water if you are splashed. Keep people away from the crash site.
4. Show the shipping documents and emergency procedure guide to the police or fire brigade when they arrive.

Risks

Many vehicles carry dangerous loads including substances which are flammable, explosive, toxic, infectious, radioactive or corrosive.

A crash, leakage or fire involving a vehicle carrying dangerous goods could cause extensive damage, death or serious injury to many people.

Vehicles carrying flammable or explosive loads must be fitted with a switch that isolates the battery and so reduces the risk of fire.

In the event of a leakage or accident follow the procedure outlined on your emergency procedure guide. The procedure varies for different materials so make sure you carry the right card.

NT WorkSafe can provide you with professional, technical and scientific information and advice. Call 1800 019 115.

Checklist for dangerous goods:

Consignment papers

Transport (shipping) documents must be readily available and located in the cabin of the vehicle in an emergency information holder and include the following:

- the consigner's name and telephone number;
- the United Nations (UN) number of the dangerous goods;
- the proper shipping name of the goods, or name that appears on the packaging;
- the class or division of the dangerous goods;

- each subsidiary risk (if any) of the dangerous goods;
- each packaging group of the dangerous goods;
- a description of each type of packaging or receptacle (i.e. drum, IBC etc);
- the number of each type of packaging; and
- the aggregate quantity of the dangerous goods.

For further information on transport documents refer to chapter 11 of the ADG Code.

Proper labelling

Make sure your vehicle is properly labelled/placarded. For bulk dangerous goods it should have:

- A hazard warning diamond (class/division diamond) at the front and rear.
- Information as required by the ADG Code which should be shown on three emergency information panels, one at the rear of the vehicle and one on each side, and should include:
  - the name of the substance
  - United Nations (UN) identification number
  - emergency action code
  - emergency telephone number
  - name and telephone number of the responsible company that can be contacted.

Carry appropriate guides

You must keep the Emergency Procedures Guide (EPG), a 'product' card which gives a guide to the emergency procedures that apply to the particular hazardous substance which you are carrying, together with the Vehicle Fire Card, on or near the inside of either cabin door (see chapter 11 of the ADG Code).

You are permitted to carry the Initial Emergency Response Guide instead of carrying both the product card and vehicle fire card as the guide provides similar information to the cards. The guide book and cards are published by Standards Australia.

Safety and emergency equipment

Safety and emergency equipment that must be carried on the vehicle includes:

- appropriate fire extinguishers for the vehicle and classes and/or divisions of dangerous goods being transported;
- three double-sided reflector signals, clean and in good condition, that comply with the requirements of Australian Standard AS 3790 Portable warning triangles for motor vehicles;
- items appropriate to the classes and/or divisions being transported as listed in Table 12.2 of the ADG Code; and
- Safety and emergency equipment must be carried in a readily accessible position in the vehicle, except for respiratory equipment required for escape purposes which must be kept in the cabin.

Fire extinguishers

Appropriate fire extinguishers must be carried on the vehicle and must be located so as to be readily accessible for use. Vehicles must be fitted with:

- one 30B dry powder fire extinguisher located in the cabin of the vehicle, near the driver's door (unless otherwise prescribed in chapter 12 of the ADG Code);
- other fire extinguishers, as appropriate for the type of vehicle and dangerous goods classes/divisions (as prescribed in Table 12.1 of the ADG Code); and
- all fire extinguishers must be mounted in quick release brackets.

Personal Protective Equipment and Safety Equipment

Carry sufficient protective clothing so that you will be able to attend to any small leaks or spillages. You may be able to stop them before they become serious problems. Chapter 12.1.3 of the ADG Code describes the minimum personal protective and safety equipment that must be carried (examples include appropriate gloves, face protection, respiratory protection equipment, eye wash kit, torch appropriate chemical resistant clothing).

Tank or load inspections

Inspect the tank, containers or the load before and after loading and frequently throughout the journey.

Hatch and valve inspections on tankers

Inspect the hatches of the tanker and make sure the seals are in good condition. Make sure that all filling or discharge points are closed. If they are not, the tank could leak significantly in a rollover. Also any vapour from an open filling point could impair your ability to drive safely. Visual inspections of any filling or discharge valve points will also alert you to any leakages. Any leakage will need immediate attention.

Load segregation

Segregation rules help minimise the risk of incompatible substances reacting dangerously if they were to come into contact with each other. Such contact might be caused by a leak, spill or vehicle accident. Segregation is particularly important to prevent foodstuffs from being contaminated.

The ADG Code has information covering segregation rules, the types of - and design tests for - segregation devices, and how to use such devices.

penalties

Under Northern Territory laws, you can be penalised for traffic offences which cause inconvenience, costs, injury or suffering to others.

Traffic offences

Penalties for breaking the traffic laws include fines, disqualification from holding or applying for a licence, licence cancellation, refusal or suspension. For a very serious offence like drink driving, you may be fined, disqualified from driving or even go to prison.

Demerit points

For certain traffic offences you will have demerit points recorded against your licence. There is a limit to the number of points you can build up before your licence is suspended.

Your licence will be suspended when you reach these limits:

- Unrestricted licence – 12 points in any three-year period
- Provisional licence – five points in any 12 month period.
- Good behaviour period – two points during the good behaviour period.

Your licence will be suspended when you reach or exceed the demerit points limit. MVR will send a Notice of Suspension to licence holders who reach or accumulate more than the number of points detailed above.

The suspension period depends on the number of points accumulated.

Good behaviour period

Licence holders can apply for a 12 month good behaviour period instead of serving the suspension. This option is not available to those already serving a good behaviour period.

Drivers who accumulate two or more demerit points while serving a good behaviour period will be suspended for double the original suspension time.

Licence holders can apply for a good behaviour period in person at a MVR office, but must do so before the date that the suspension is due to take effect.

For more information visit the nt.gov.au website.

Speeding offences

Fines, together with licence suspension or disqualification periods may apply to drivers who commit speeding offences.

Police can:

- issue a traffic infringement notice; and/or
- suspend and confiscate a licence at the roadside for certain speed related offences where the matter will be referred to a court to determine an appropriate penalty.

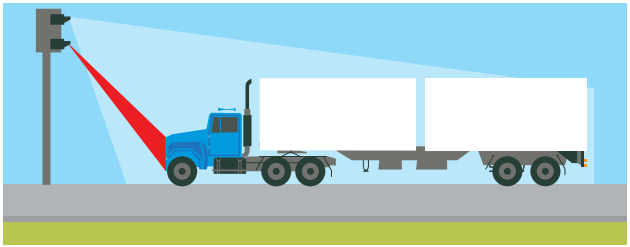
Traffic infringement notices issued for speeding offences carry demerit points.

Refusal of a licence

MVR may refuse to grant or renew the licence of drivers who have exceeded their demerit point limit or are disqualified. The period of refusal for a licence is equal to the period of suspension or disqualification.

Safe-T-Cam

Operating in some areas of Australia, the Safe-T-Cam is an automated monitoring system designed to reduce the incidence of heavy vehicle speeding and driver fatigue. It can determine if a heavy vehicle has travelled at an excessive average speed, or has travelled beyond prescribed driving hours, between two or more Safe-T-Cam sites.



Safe-T-Cam monitors speed and driver fatigue of heavy vehicle drivers

Weighbridges

Weighbridges (or heavy vehicle inspection stations) are permanent facilities, where heavy vehicles over 4.5 tonne Gross Vehicle Mass (GVM) may be stopped and inspected to see that they meet safety and roadworthiness standards and that their drivers are complying with road transport laws. This includes trucks, truck and trailer combinations, buses and motor homes that are over 4.5 tonne GVM.

Alcohol and drug offences

It is against the law to drive while under the influence of alcohol and drugs, including some prescribed medicines.

It is against the law to drive with a presence of an illicit drug. These drugs include THC (the active component of cannabis), methylamphetamine (like ice and speed) and ecstasy.

You do not have to be over the “legal” limit of the prescribed blood alcohol concentration for it to be an offence to drive. It is an offence to drive or attempt to put a motor vehicle in motion, while under the influence of alcohol (or drugs) as you will be unable to exercise effective control of the vehicle. This is known as driving under the influence (DUI) and it applies to driving under the influence of alcohol or drugs.

You must have a zero blood alcohol concentration when you drive:

- a vehicle over 15 tonne GVM
- a vehicle carrying over 12 people
- a vehicle capable of carrying over 12 people
- a vehicle carrying dangerous goods.

Defect notices

If a vehicle on a public street is unroadworthy, is considered to be a source of danger or annoyance to the public, or a source of damage to public streets, a defect notice can be issued to the driver of the vehicle by a Police Officer or Transport Inspector.

The defect notice will take the form of a notice handed to the driver, combined with a yellow defect label which will be applied to a conspicuous place on the vehicle. It is an offence for anyone apart from a Police Officer or Transport Inspector to remove this label.

Defect notices will include a direction on how and where the vehicle may be driven. This direction may be that the vehicle (if currently registered) can only be driven to a place of repair, or it may not be driven at all and recovered by tow truck (or the like) only. This means that you can no longer drive your vehicle for any other purpose. It is an offence to drive a vehicle contrary to the direction on a defect notice.

Vehicles which have been defected must pass a full roadworthy inspection done at an MVR or remote police station to have the defect cleared. The fee for this inspection must be paid prior to presenting the vehicle for inspection. If the vehicle has received the necessary repairs, it may be driven to the place of inspection.

If a defected vehicle has not been inspected and cleared within 28 days, action may be commenced to have the vehicle's registration cancelled.

For information on defect inspections and fees, please visit nt.gov.au or contact the MVR Contact Centre on 1300 654 628.

Chain of responsibility

The Northern Territory does not have specific Chain of Responsibility (CoR) provisions in transport law. Many offences are the sole responsibility of the driver, however some offences in relation to the mass, dimensions and loading of a heavy vehicle are the responsibility of the driver, and/or the person or corporation which caused or permitted to offence to occur. This means that the owner/operator of a heavy vehicle may be charged with an offence instead of, or as well as the driver if it can be proven that they caused or permitted the offence to occur.

All employers and employees who have an influence over driver fatigue management in NT carry a duty of care obligation under Work Health and Safety laws. See Section 3 of this handbook for more information.

In jurisdictions (QLD, NSW, ACT, VIC, SA and TAS) regulated under the Heavy Vehicle National Law (HVNL) if you consign, pack, load or receive goods as part of your business, you could be held legally liable for breaches of the HVNL even though you have no direct role in driving or operating a heavy vehicle. In addition, corporate entities, directors, partners and managers are accountable for the actions of people under their control. This is the CoR and applies to vehicle roadworthiness, mass, dimension and loading, and driver fatigue laws. The National Heavy Vehicle Regulator can be contacted on 1300 MYNHVR (1300 696 487) or at nhvr.gov.au for more information.

glossary

ABS

An abbreviation for anti-lock braking systems.

ADR

Australian Design Rule. A set of regulations governing vehicle design.

Aggregate mass

Maximum allowable loaded mass of a particular vehicle or combination comprising the GVM or GCM plus the overload tolerance applicable in a given state.

Aggregated trailer mass

The total mass of a trailer carrying the maximum load as specified by the trailer manufacturer. It includes the mass of the drawbar as well as the mass on the axles.

Air suspension

A suspension system in which the weight of the vehicle is supported by air bags containing compressed air and the axles are held in position longitudinally and laterally by bushed rods.

Air trip

An air-activated release catch on a tipper tailgate that is operated from the cabin.

Articulated vehicle

A vehicle with flexibly connected sections. Usually applied to a prime mover and semi-trailer as opposed to a truck and trailer and known as a combination vehicle.

Anchor point

Fitting or attachment on a vehicle or load to secure lashings.

Automatic tow coupling

The most common type of heavy trailer hitch in Australia and Europe.

Auxiliary Brakes (engine, exhaust and retarder brakes)

Auxiliary brakes are found on medium to large heavy vehicles and act on the engine or drive train and will slow but not stop a vehicle.

Auxiliary gearbox

A secondary gearbox that may be located before or after the main gearbox to provide additional overdrive or reduction ratios.

Axle group

A group of axles (or a single axle) supporting one section of a vehicle.

A-Train

Usually refers to a prime mover and semi-trailer towing a trailer.

Baffles

Barriers fitted crosswise and lengthwise inside tanks to limit surging of fluids (or loads which behave like fluids) during acceleration, braking and cornering.

Baulking

A solid object, often a large piece of timber, placed against the load and fixed securely to the vehicle to prevent movement of the load.

B-Double

An articulated vehicle with a second semi-trailer attached to the rear of the first semi-trailer by means of a turntable.

Blocking

Material, usually timber, placed between the load and the vehicle structure, to prevent movement of the load.

Bolster

A piece of steel or heavy timber firmly attached to the vehicle (often bolted to the chassis) to support the load and/or prevent it from moving.

Bulker

A container fitted with loading hatches on the roof and discharge hatches on the doors and front wall.

Bulkhead

A term sometimes applied to the gate at the front of the tray body or flat top trailer which is built heavier than side gates.

Cab chassis

A truck with only the cab fitted.

Chassis

A vehicle frame.

Chocks

Wedge shaped blocks used to prevent movement of the load.

Clutch brake

A device actuated by the last inch of clutch pedal travel which brakes the spinning gears in the transmission.

Coaming

A frame border around the outside of a vehicle's loading deck.

Combination vehicle

A rigid truck (or bus) towing one or more trailers.

Contained load

A load prevented from dislodging from the vehicle by the vehicle structure, gates, sides, racks, headboards, stanchions or other parts of the load.

Container

A box used for transporting goods in bulk. Standard lengths are 20 and 40 feet.

Converter dolly

A unit designed to convert a semi-trailer to a dog trailer. A dolly can also be a device for spreading the weight of over-dimensional loads.

Corner protectors

Material used to protect lashings and the exposed edges of loads and vehicles, and to allow lashings to slide freely when being tensioned.

Cradle

A frame shaped to support a rounded object.

Crashbox (constant mesh)

A transmission in which the ratios were changed by sliding the various gears into and out of mesh with each other.

Cribbing

A method of supporting a load on a stable column of packing of uniform thickness, stacked in pairs, with alternate layers at 90 degrees to one another.

Cross-member

A support placed crosswise below the loading deck.

Deck

The load carrying platform.

Dog

A chain tensioner incorporating an over-centre locking action with a fixed or pivoting lever.

Dog trailer

A trailer with two axle groups, the front group being steered by the drawbar coupled to a towing vehicle.

Double trailer combination

Combination of a prime mover, semi-trailer and trailer.

Drawbar length

The distance from the line of the towing pivot to the centreline of the leading axle group of the trailer.

Drawbar stand

A leg that holds a trailer drawbar at coupling height to allow for easier hook-up.

Drive shaft

See 'Tail shaft'.

Driveline

The motor, clutch, gearbox, drive shafts, diff(s) and axle(s).

Drivetrain

As for 'Driveline' but usually does not include the engine.

Dry freight container

A normal, fully enclosed container with doors at the back and occasionally on one side.

Dual wheels

A matched pair of wheels attached to each end of an axle.

Dunnage

Packing material (e.g. pieces of timber, plywood, mats) placed between the cargo and the truck platform or between items of cargo to level the load and/or increase friction so the load is less likely to move during journey. It is also used to leave a gap between a load and the load deck, or different parts of the load, to enable forklift tynes to be placed under for lifting.

Flat rack

A steel base for supporting loads fitted with receptacles for twist locks and provision for forklift operation.

Flat top

A truck, trailer or semi-trailer that has flat goods carrying area without sides.

Flush deck

A flat loading deck without a raised coaming.

Forward control vehicle

A truck with the cab mounted over the engine.

Gates

Permanent or removable vertical frames used at the front, side and rear of a vehicle's loading deck to contain its load. The front gate is usually called a loading rack or load rack.

Gross Combination Mass (GCM)

The loaded weight of an articulated vehicle or combination vehicle.

Gross Trailer Mass (GTM)

The mass on the axle(s) of a trailer when fully loaded.

Gross Vehicle Mass (GVM)

The loaded weight of a rigid vehicle.

Inter-axle differential

A differential that operates between two driven axles to allow one axle to turn at a slightly different speed to the other.

Inter-axle lock

Locks the inter-axle differential so drive is shared equally by both driven axles to reduce wheel spin and increase traction in slippery conditions.

Lane filtering (lane-filter)

Riding a motorcycle at low speed, less than 30 km/h, between vehicles that have either stopped or moving slowly and travelling in the same direction.

Lashings

Fastening devices, chains, cables, ropes or webbing used to restrain loads.

Lashing capacity (LC)

The maximum force (in kilograms) that a lashing system is designed to sustain in use.

Load Binder

A device used for tensioning a lashing.

Load capacity

The difference between the GVM or GTM of a vehicle and its tare mass.

Load limit

The maximum load that may be carried in, or on any motor vehicle upon the road.

Load mat

A sheet of material used to increase friction and protect the load.

Pallet

A portable platform or tray onto which loads are placed for mechanical handling.

Pantechnicon

A vehicle with a body enclosed by solid rigid sides and roof.

Pawl

A lever or lock which protects reverse rotation on a winch.

Pockets

Housings or slots fixed to the vehicle to locate gates, stakes or loading pegs.

Prime mover

A short wheel base truck used to tow a semi-trailer.

Primary Brake (Service Brake)

The primary brake is the footbrake, or other brake, that is fitted to a truck or bus that is normally used to slow or stop the vehicle.

Rear marker or reflector plates

Red and yellow plates which must be fitted to the rear of heavy vehicles to make them more visible when they are slow moving or parked.

Receptacle (dangerous goods)

For dangerous goods a receptacle is a containment vessels for receiving and holding substances or articles, including any means of closing. This includes vessels such as drums, IBCs, cylinders and tanks.

Road train

Either a truck hauling two or more trailers, or a prime mover and semi-trailer hauling one or more trailers (Note: this is not a B-double, which consists of a prime mover and two semi-trailers).

Rope hooks

Attachments fixed to the surrounds of the loading deck for securing of tarpaulin and tie-down ropes.

Semi-trailer

A semi-trailer has one axle group at the rear and is designed so that the front is supported by the prime mover that tows it.

Special Purpose Vehicle

Motor vehicle or trailer, other than an agricultural vehicle or a tow truck, built for a purpose other than carrying goods; or a concrete pump or fire truck.

Speed limiter

An engine management device that limits the top speed of a truck without limiting engine revs or power in the lower gears.

Shackle

A metal coupling link closed by a bolt which can be used for attaching chain fittings.

Shoring bar

Adjustable metal beam used to restrain or segregate sections of load.

Sling

A length of hemp-core rope, webbing or steel-wire rope with eyes formed at each end.

Spreader

A transverse spar or frame used to support tarpaulins and side gates.

Stanchion

A large upright fixed to the side of a vehicle for sideways restraint.

Stillage

A metal structure for containing individual items of load.

Strut

A rigid member which can support loads in the direction of its length.

Supervising Driver

A person who is an unconditional licence holder of the appropriate class who has held a licence for at least two years.

Synchromesh transmission

A transmission in which the speeds of the gears are matched or 'synchronised' by means of in-built synchronising clutches before they are meshed.

Tachograph

A trip recorder incorporating a clock, speedometer and often a rev counter that inscribes a record of a journey on circular paper graph.

Tachometer

An instrument for measuring engine revolutions.

Tare mass

The mass of a vehicle without its load.

Tarpaulin (tarp)

A waterproof sheet used to cover and protect goods from the weather.

Tie rail

A round rail which skirts the perimeter of the loading deck below the coaming rail.

Torque

The turning force or turning effort of a shaft. Engine torque is the turning force available at the crankshaft.

Trailer

A non-powered vehicle built to tow behind a motor vehicle.

Trailer coupling

The device that attaches a trailer to a towing vehicle.

Truck winch

A device used for tensioning a lashing which is normally placed under the coaming rail and may be fixed in position using the tie-rail or slide on a rack.

Twist lock

A locking device with a rotating head which normally engages a corner casting on the load.

Unladen mass

The mass of a motor vehicle without a load, but including all tools, fixed cranes, oil and fuel in the tanks.

The unladen mass of an articulated vehicle is the unladen mass of the prime mover only.

Work diary

Driver's record of hours driven and rest periods taken.

Winch

A device for tensioning lashings via a rotating spool.

MVR offices

MVR Contact Centre

The MVR Contact Centre can assist with all general enquiries. To speak to an operator, call **1300 654 628** Monday to Friday between 8am and 4pm.

Website: mvr.nt.gov.au

Email: mvr@nt.gov.au

Post: GPO Box 530 Darwin NT 0801

Office locations

For office hours, please visit nt.gov.au or phone the MVR Contact Centre on **1300 654 628**.

For more information on road safety and programs, please contact **Road Safety** on **1800 720 144** or visit the website at **www.roadsafety.nt.gov.au.**

Feedback

In the interest of all road users and to further improve this publication, the department wants your feedback. When your feedback is received it is recorded and will be considered in the next review of this publication.

Please provide your feedback in the following format:

- subject: 'Heavy Vehicle Drivers' Handbook – Feedback'
- reference to the relevant section
- feedback/suggestion

Please consider the impact on all road users when making a suggestion.

Please send via post, email or fax to:

Manager Driver Licensing

Motor Vehicle Registry Darwin

Post: GPO Box 530 Darwin NT 0801

Email: MVR.Licence@nt.gov.au

Fax: 08 8999 3103

This publication is reviewed when there has been a significant change to legislation or a number of changes are required (on average a revision is conducted every three to five years).

To check you have the most up-to-date version of this publication, please visit the nt.gov.au website.

NORTHERN TERRITORY GOVERNMENT

TOWARDS ZERO

nt.gov.au