



Government of South Australia

Department for Transport,
Energy and Infrastructure

MR417 06/11

**Operating conditions
when driving on roads in South Australia**

**This Code of Practice should be read in conjunction with the Information Guide for Road
Trains**

Code of Practice for Road Trains



June 2011

This booklet is a legal document. You must comply with the conditions contained in it when operating Road Trains in South Australia.

Contents

	PAGE
What the terms mean	1
Introduction	3
1 What is a Code of Practice?	3
2 What is a Road Train?.....	3
Using this Code	4
3. When do you use this Code?	4
4. What documentation must you carry?.....	4
Route Networks	5
5. The Road System in South Australia	5
6. Approved routes	5
7. Damage to roads and works.....	5
8. Roads and infrastructure	5
9. Operating between Port Augusta and Northern Adelaide	6
10. Operating on routes other than between Port Augusta and Northern Adelaide.....	6
11. General route conditions	7
Operating Conditions	9
12. Headlights	9
13. Road Speed Limiting	9
14. Speed limits	9
15. Driver health	9
Dimension Limits	10
16. Length of Combination	10
17. Width of Combination	11
18. Height of Combination	11
19. Other dimension limits	13
Warning Other Road Users	14
20. Warning signs	14
21. Sign size	14
22. Warning sign material.....	14
23. Sign wording	14
Transporting Dangerous Goods	15
24. Transporting Dangerous Goods	15
Couplings	15
25. Tow couplings and drawbar eyes	15
26. Fifth wheel assemblies and king pins	15
27. Rear Coupling Height on Road Train Trailers	15
Permitted Configurations	16
28. Rating 2: Double Road Trains (at General Mass Limits).....	16
29. Rating 3: Triple Road Trains (at General Mass Limits)	16

Mass Limits	17
30 Axle mass limits and spacing requirements	17
31 Drive axle on prime mover.....	17
Maintenance, Accreditation and Inspections	17
32 Vehicles that are registered in South Australia or Victoria	17
33 Vehicles that are registered in other States or Territories.....	18
34 Labels and Ratings.....	18
Higher Mass Limits	19
35 Configuration eligibility.....	19
36 Road Friendly Suspension	19
37 Axle mass limits.....	19
38 Coupling requirements	20
39 Routes	20
40 Mass Management Accreditation	20
41 Operation.....	21
Articulated Vehicles Towing Converter Dollies	22
42 General Conditions.....	22
43 Mass Limits.....	22
44 Braking System Conditions	22
45 Routes	22
Turning Requirements	23
46 Turning Requirement Rules.....	23

What the terms mean

Approved Intelligent Transport System means an intelligent transport system approved for the purposes of the IAP by Transport Certification Australia Limited (TCA).

Approved Route Network is a network system published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website that show the approved routes that road trains can travel on when operating at either General Access Mass Limits or at Higher Mass Limits, or on Commodity routes.

Built-up Area means an area in which there are buildings on land next to the road, or there is street lighting, at intervals not over 100 metres for a distance of at least 500 metres or, if the road is shorter than 500 metres, for the whole road.

Depot means a private property that abuts and has driveway access to and from a road.

Explanatory Note contains information that does not form part of the conditions of this Code of Practice and is provided for explanation purposes only.

Converter Dolly means a trailer with one tandem axle group and a fifth wheel coupling, designed to convert a semi-trailer into a dog trailer.

General Access Dimension Limits means the:

- dimension limits as specified in Division 2 – Dimensions of Part 7 Vehicle Configurations and Dimensions of the *Road Traffic (Vehicle Standards) Regulations 1999*
- but does not include any dimensions specified for a Controlled Access Bus, Road Train or B-Double or any other combination over 19.0m long or over 4.3m high.

General Access Vehicle (GAV) is a vehicle that operates within the:

- axle mass limits specified in Table 1 of the *Road Traffic (Mass and Loading Requirements) Regulations 1999*; and
- mass limits relating to axle spacing in Section 3, Table 2, *Road Traffic (Mass and Loading Requirements) Regulations 1999*, and does not exceed:
 - a height of 4.3 metres
 - a length of 19 metres or
 - a total mass of 42.5 tonnes; and
- is not a Controlled Access Bus.

General Mass Limits (GML) means the:

- defined axle mass limits in Table 1 of the *Road Traffic (Mass and Loading Requirements) Regulations*;
- mass limits relating to axle spacing in Section 3, Table 2 of the *Road Traffic (Mass and Loading Requirements) Regulations 1999*

Higher Mass Limits (HML) means axle group mass limits that are higher than the General Mass Limits (GML) specified in the *Road Traffic (Mass and Loading Requirements) Regulations 1999*, at which approved vehicle combinations can operate, if fitted with certified Road Friendly Suspensions.

What the terms mean (Continued)

Intelligent Access Program (IAP) means a program to allow heavy vehicles to have access, or improved access, to the road network in return for monitoring, by an approved intelligent transport system of their compliance with specified access conditions.

Maintenance Management Scheme (MMS) means a scheme that is recognised by the Department for Transport, Energy and Infrastructure (DTEI) as meeting the requirement of the maintenance management module (including audit requirements) of the National Heavy Vehicle Accreditation Scheme (NHVAS).

Mass Management Scheme means a scheme that is recognised by DTEI as meeting the requirements of the mass management module of the National Heavy Vehicle Accreditation Scheme (NHVAS).

National Heavy Vehicle Accreditation Scheme (NHVAS) is the comprehensive accreditation package that has been developed by the National Road Transport Commission (now known as the National Transport Commission) and approved by the Australian Transport Council on 14 November 1997.

Restricted Access Vehicle (RAV) means a vehicle that exceeds either the General Mass Limits or General Access Dimension Limits contained in the Road Traffic Act 1961 and Regulations and can only travel on approved routes.

RAVnet Online Mapping System is an interactive online map system, managed by DTEI, that displays approved heavy vehicle route networks available in South Australia. Restrictions associated with specific route networks are also included.

Road Friendly Suspension means a suspension system that has been certified as meeting the performance criteria set out in the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government (DITRDLG, formerly DOTARS) *Vehicle Standards Bulletin 11 – ‘Certification of Road Friendly Suspension Systems, July 2004.’*

Valid National Heavy Accreditation Scheme label means a label:

- issued to a scheme member (whose accreditation status has not been suspended or cancelled); and
- that is legible and displayed on the nominated vehicle for which the label was issued by the accrediting authority.

Explanatory Note

For further information relating to Higher Mass Limits, refer to the 'Higher Mass Limits' section of this Code of Practice.

Introduction

1 What is a Code of Practice?

- 1.1 This Code of Practice for Road Trains is a legal document issued by the Department for Transport, Energy and Infrastructure (DTEI) under a Notice of Approval and Exemption in the South Australian Government Gazette entitled "Operation of Road Train Vehicles in South Australia".
- 1.2 This Code sets out all the requirements, in addition to the Road Traffic Act, that you, as an owner, driver or operator of a Road Train must comply with when you are operating the vehicle on South Australian roads.
- 1.3 It is your responsibility to make sure that your vehicle is operating under the current Notice and Code.

Explanatory Note

For a full understanding of how to operate Road Trains in South Australia, you should read this Code of Practice in conjunction with the "*Information Guide for Road Trains*".

2 What is a Road Train?

- 2.1 For the purposes of this Code of Practice, a Road Train is a vehicle combination consisting of a prime mover towing:
 - 2.1.1 a semi trailer and a converter dolly; or
 - 2.1.2 two trailers, where a converter dolly supporting a semi trailer is counted as a single trailer (double road train); or
 - 2.1.3 two trailers as described in 2.1.2 (double road train) and an additional converter dolly (considered to be a triple road train); or
 - 2.1.4 three trailers, where a converter dolly supporting a semi trailer is counted as a single trailer (triple road train).

Explanatory Note

This Code of Practice does not replace the responsibility that you have as the owner, operator or driver, to comply with the *Road Traffic Act 1961* and Rules and Regulations and Local Government by-laws.

You commit an offence if you do not comply with this Code, or the *Road Traffic Act 1961* and Rules and Regulations.

For clarification and advice, contact the DTEI's Vehicle Permit Section on 1300 882 249.

Using this Code

3. When do you use this Code?

- 3.1 You must use this Code at all times when you are operating a Road Train on roads within South Australia.

4. What documentation must you carry?

- 4.1 From 1st July 2011, when operating under this Code, you must carry a legible, current and complete copy of the relevant Road Train Gazette Notice(s) either in hardcopy or in an electronic format so that it can be read from a device having a visual display (e.g. smart phone, tablet or laptop PC, in vehicle unit) that is carried within the vehicle and that is accessible, to a DTEI Authorised Officer appointed under the *Road Traffic Act 1961* or a Police Officer, from outside the vehicle.
- 4.2 If you operate on routes between Port Augusta West on National Highway 1 and Northern Adelaide, including Northern Adelaide routes and depots, you are also required to carry your current and valid medical certificate, or a legible copy (see Section 15). You must produce this document if you are requested by a DTEI Authorised Officer, or a Police Officer.
- 4.3 You are not required to carry a copy of this Code.

Explanatory Note

Copies of the Gazette Notice, Code of Practice, Information Guide, and Approved GML, HML and Commodity Route Network Maps for Road Train Vehicles are available on DTEI's website. The website can be found at:
www.sa.gov.au/heavyvehicles

Route Networks

5. The Road System in South Australia

The standard of the road system in South Australia varies significantly from area to area. Some roads, such as main highways and key arterial roads have been designed to carry large and heavy vehicles while other roads provide access to residential areas and are generally only designed for light vehicles.

The *Road Traffic Act 1961* provides two categories for the operation of heavy vehicles on South Australian Roads. The two categories are:

- General Access Vehicles; and
- Restricted Access Vehicles.

General Access Vehicles (GAVs) are vehicles that operate within specified mass and dimension limits. These limits provide general protection for the whole of the road system in South Australia and allows these vehicles to operate on the road network without any route or time restrictions other than locally imposed controls, such as load limits on bridges.

The Restricted Access Vehicle (RAV) category allows larger and heavier vehicles to operate on South Australia's road system, but restricts access to approved routes that have been designed with the strength and capacity to cater for this size of vehicle. Road Trains are classified as RAVs.

6. Approved routes

- 6.1 Road Trains operating at General Mass Limits can only operate on the approved route network(s) published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website titled '*Route Network for Road Trains General Mass Limits*'
- 6.2 Road Trains operating at Higher Mass Limits can only operate on the approved route network(s) published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website titled '*Route Network for Road Trains Higher Mass Limits*'.
- 6.3 Road Trains that are a prime mover and semi trailer towing a converter dolly operating at General Mass Limits can only operate on the approved route network(s) published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website titled '*Converter Dolly Route Network General Mass Limits*'
- 6.4 Road Trains that are a prime mover and semi trailer towing a converter dolly can only operate on the approved route network(s) published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website '*Converter Dolly Route Network Higher Mass Limits*'.
- 6.5 If carrying a defined commodity, you may operate at General Mass Limits on the approved route network published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website titled '*Commodity Routes for Road Trains*'.
- 6.6 On the PDF maps published via the DTEI website towns enclosed by a circle on the abovementioned maps, a separate town map is available to clearly designate the vehicle route through that town. For other towns the route is straight forward and automatically follows the main road.
- 6.7 PDF Maps are available on DTEI's website at www.sa.gov.au/heavyvehicles at this time, however the RAVnet Online Mapping System will replace this existing system and eventually PDF maps will no longer be made available.

7. Damage to roads and works

- 7.1 You must make sure that there is enough side and overhead clearance on the routes that you intend to use.

8. Roads and infrastructure

- 8.1 The conditions set out in this document may be overridden at any time by a limitation sign fixed on a bridge, culvert, causeway, road or road ferry.

Route Networks (Continued)

Explanatory Note

Some parts of the road system, such as bridges, overhead services and wires, roadside furniture (signs, traffic lights etc.) and vegetation may not allow sufficient clearance for a vehicle and load travelling under this Code.

Section 107 of the *Road Traffic Act 1961* (Damage to Road Infrastructure) requires you to notify the Police, DTEI or local Council if you cause damage to roads, bridges and culverts or if you interfere with roadside furniture through unreasonable use.

If you cause anything to fall on the road that may hinder or injure other road users (traffic signs, tree branches etc.), Australian Road Rule 293 requires you to remove it, or take action to have it removed.

9 Operating between Port Augusta and Northern Adelaide

9.1 If you operate any Road Train between Port Augusta West and Northern Adelaide you must:

- 9.1.1 operate under an approved Maintenance Management Scheme; and
- 9.1.2 display a valid label on all units in the combination that identifies accreditation and the Scheme membership; and
- 9.1.3 carry your current and valid medical certificate (see section 15); and
- 9.1.4 not be under suspension from the accreditation scheme.

Explanatory Note

The routes between Port Augusta West and Northern Adelaide include National Highway 1 and any other approved Road Train routes in Northern Adelaide.

10. Operating on routes other than between Port Augusta and Northern Adelaide

10.1 If you operate any South Australian or Victorian registered Road Train combination you must either:

- 10.1.1 operate under an approved Maintenance Management Scheme; and
- 10.1.2 display a valid label on all units in the combination that identifies accreditation and the Scheme membership; and
- 10.1.3 not be under suspension from the accreditation scheme;

or

- 10.1.4 have your vehicle inspected annually; and
- 10.1.5 display the appropriate current South Australian inspection label on all units of the combination.

10.2 If you operate a Road Train that is registered in the Northern Territory, you must either:

- 10.2.1 operate under an approved Maintenance Management Scheme; and
- 10.2.2 display a valid label on all units of the combination that identifies the Scheme membership; and
- 10.2.3 not be under suspension from the accreditation scheme;

or

- 10.2.4 have your vehicle inspected annually; and
- 10.2.5 display the appropriate current South Australian inspection label on all units of the combination;

or

- 10.2.6 display Northern Territory inspection and rating labels.

Route Networks (Continued)

10.3 If you operate a Road Train that is registered in New South Wales, Queensland, Western Australia and the Australian Capital Territory, you are not required to undergo inspections over and above those which are required in your home State or operate under an approved Maintenance Accreditation Scheme to operate on routes North of Port Augusta.

However, you must either;

10.3.1 comply with your home State Road Train requirements.

or

10.3.2 have your vehicle inspected annually; and

10.3.3 display the appropriate current South Australian inspection label on all units of the combination.

Explanatory Note

For more information on the requirements of Mass Management Accreditation Schemes, see Page 17 in this Code.

11. General route conditions

11.1 A Road Train can only operate on the routes that have been approved for a Road Train.

11.2 You must not assemble or disassemble your Road-Train on any approved route except under the following circumstances:

11.2.1 if broken down; or

11.2.2 in order to proceed on a temporary by-pass around a road blockage; or

11.2.3 as reasonably required to remedy a breach of mass, dimension or load restraint requirement identified by a DTEI Authorised Officer or a Police Officer.

11.3 If you intend using a roadside parking area you can only stop in a parking area showing a 'Rest Area' sign or a 'Truck Parking Area' sign. Parking areas can only be used for rest purposes or vehicle checks but not for assembly or disassembly purposes except in accordance with 11.2.

11.4 Road Train vehicles are prohibited from using rest areas indicated with the 'Unsuitable for Trucks' sign. This sign displays a symbolic articulated vehicle with a diagonal 'Ban' slash across the vehicle. All signs display white symbols and letters on a blue background.

11.5 Entry into or exit from private property or depot driveways is permitted in accordance with the diagrams shown under the heading "Driveway/Depot Entry Exit Rules"

11.6 Where turning manoeuvres into or out of depots cannot be undertaken safely in accordance with the diagrams the operator/driver shall not use the driveway or depot entrances until such time as the entrances have been made suitable for use by this combination vehicle.

11.7 Turning manoeuvres at intersections or T-junctions shall comply with the guidelines shown in the diagrams under the heading "Turning Requirement Rules".

11.8 All right turn manoeuvres across National Highway 1 are prohibited except where it is indicated they are allowed on the approved route network for Road Trains.

Route Networks (Continued)

- 11.9 The transport of dangerous goods in bulk is not permitted on the following routes that are under the care and control of the City of Port Adelaide Enfield.
- 11.9.1 Mildred Terrace, Elder Road (Stirling Street to Willochra Street), Bedford Street (North of Eastern Parade only), Wing Street, Raffety Street, South Terrace (South Road to Wing Street), Francis Road (to Goodfellow's Depot access) Johansson Road, Senna Road, Lafitte Road, Rosberg Road, Dunstan Road, Streiff Road, Grand Junction Service Road, Duncan Road and Acorn Road
- 11.9.2 The carriage of dangerous goods by Road Trains on the routes listed above is only allowed by the issue of an individual permit by DTEI.

Operating Conditions

12 Headlights

- 12.1 The headlights of the prime mover, when operating as a Road Train, are to be alight at all times.

13 Road Speed Limiting

- 13.1 The prime mover must be fitted with a Road Speed Limiting system that restricts the maximum road speed of the combination to 100 kilometres per hour, or be 'gear-bound' such that it is unable to exceed 100 kilometres per hour. This requirement does not override the maximum speed limit of 90 kilometres per hour that applies to all Road Trains travelling on roads in South Australia.

14. Speed limits

- 14.1 You must not exceed 90 kilometres per hour, or any posted speed limit – whichever is the lesser. Exceeding 90 kilometres per hour in a Road Train is an offence under the *South Australian Road Traffic (Road Rules – Ancillary and Miscellaneous Provisions) Regulations 1999*.

- 14.2 If there is no posted speed limit on a length of road in a built-up area, the speed limit is 50 kilometres per hour.

Note: 'Built-up Area' means an area in which there are buildings on land next to the road, or there is street lighting, at intervals not over 100 metres for a distance of at least 500 metres or, if the road is shorter than 500 metres, for the whole road.

- 14.3 Notwithstanding 14.1 above, Road Trains shall not exceed the lesser of 40km/h or the posted limit within the following localities;

- 14.3.1 a 50 or 60km/h limit zone in Caltowie;
- 14.3.2 a 50 or 60km/h limit zone in Gladstone;
- 14.3.3 a 50 or 60km/h limit zone in Jamestown;
- 14.3.4 a 50 or 60km/h limit zone in Orroroo;
- 14.3.5 a 50 or 60km/h limit zone in Peterborough;
- 14.3.6 a 50 or 60km/h limit zone in Port Augusta;
- 14.3.7 a 50 or 60km/h limit zone in Port Pirie;
- 14.3.8 a 50 or 60km/h limit zone in Whyalla;
- 14.3.9 a 50 or 60km/h limit zone in Yongala;
- 14.3.10 within 200m of the Peterborough - Mannanarie Road junction.

15 Driver health

- 15.1 If you operate a Road Train on a route between Port Augusta West and Northern Adelaide, you must undergo and pass a medical examination in accordance with the national standards for commercial vehicle drivers as set out in 'Assessing Fitness to Drive 2003' published by Austroads.

- 15.2 If you are a Road Train driver up to and including 49 years of age, your medical certificate is valid for a period not exceeding 3 years from the date of the examination, providing there has been no change in your medical condition in that time.

- 15.3 If you are a Road Train driver aged 50 years or over, your medical certificate is valid for a period not exceeding 12 months from the date of the examination, providing there has been no change in your medical condition in that time.

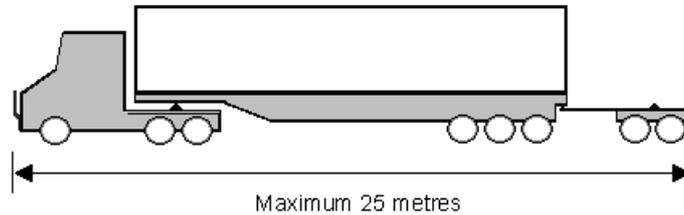
Explanatory Note

The routes between Port Augusta West and Northern Adelaide include National Highway 1, and any other approved Road Train routes and depots in Northern Adelaide.

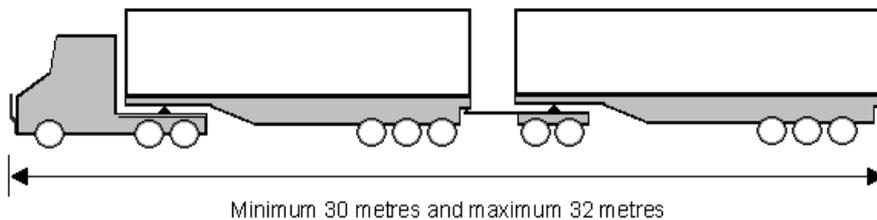
Dimension Limits

16. Length of Combination

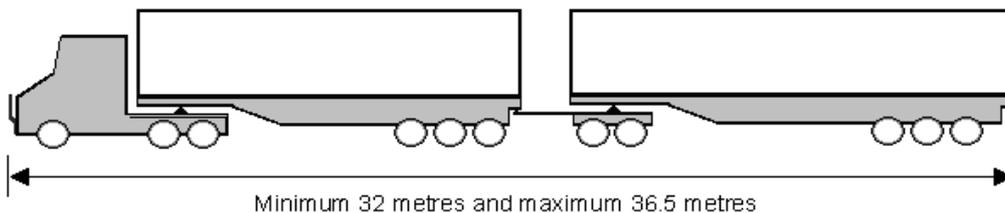
- 16.1 A prime mover and semi trailer towing a converter dolly must not exceed 25.0 metres in length.



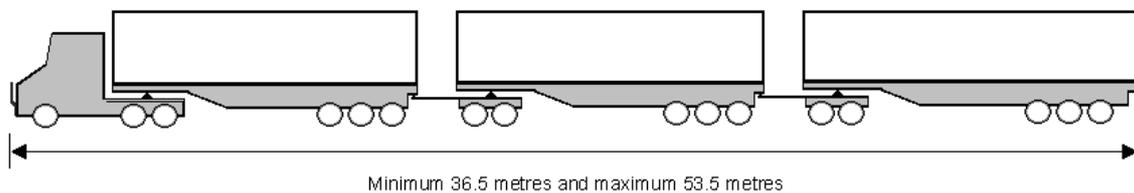
- 16.2 A short double Road Train has an overall length of at least 30.0 metres, but must not exceed 32.0 metres in length.



- 16.3 A double Road Train has an overall length of at least 32.0 metres, but must not exceed 36.5 metres in length.



- 16.4 A triple Road Train has an overall length of at least 36.5 metres, but must not exceed 53.5 metres in length.



Explanatory Note

Research over recent years into the dynamic stability of vehicle combinations indicates that as vehicles become shorter in overall length they become less stable. Under this Code, Road Trains less than 30 metres in overall length are therefore not permitted. Anyone wanting to operate Road Trains less than 30 metres in overall length is required to seek specific approval from DTEI, which may include an assessment of the vehicle dynamic stability under the Performance Based Standards (PBS) regime.

Dimension Limits (Continued)

17. Width of Combination

The maximum overall width of your Road Train, including any load, must not exceed 2.5 metres except under conditions as specified in clause 18.5 of this Code.

18. Height of Combination

The maximum overall height of the combination including any load must not exceed 4.3 metres except under the following conditions:

18.1 Transporting vehicles as a load to a height of 4.6 metres

You can carry vehicles up to an overall height of 4.6 metres provided:

- 18.1.1 the load is made up solely of vehicles; and
- 18.1.2 vehicles are not loaded on the upper deck unless each deck below is fully loaded; and
- 18.1.3 the road train is constructed as a multiple deck vehicle transporter and does not exceed a constructed height of 4.3 metres.

Explanatory Note

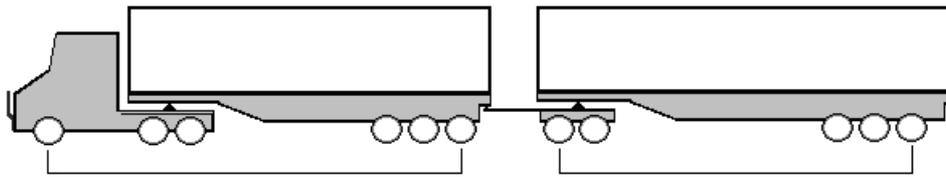
Where your load is made up of non-vehicle items, then the maximum overall height including the non-vehicle items must not exceed 4.3 metres.

18.2 Semi-trailers built to a fixed height up to 4.6 metres (for carrying low density freight).

If your semi-trailer is a pantechon van fitted with solid or canvas sides or of similar design it may be built to a fixed overall height of 4.6 metres providing:

- 18.2.1 at least 50% of the deck of each semi-trailer is no more than 1.2 metres above the ground; and
- 18.2.2 each semi trailer and converter dolly has an air suspension system; and
- 18.2.3 the gross mass of the prime mover and the 1st semi trailer combination must not be more than 90% of the gross mass limit that applies to that combination, based on statutory gross and/or axle mass limits; and
- 18.2.4 the gross mass of the 2nd and/or 3rd semi trailer must not be more than the 90% of the gross mass limit that applies to that combination, based on statutory gross and/or axle mass limits that apply to those semi trailers.

Dimension Limits (Continued)



The statutory mass limit for the prime mover and first semi trailer is 42.5 tonnes

The statutory mass limit for the second (and third if applicable) semi trailer is 36.5 tonnes

The mass limit for fixed height of 4.6 metres is 38.25 tonnes

The mass limit for fixed height of 4.6 metres is 32.85 tonnes

Explanatory Note

If your semi trailer was built after 1 July 1988, you must obtain approval from the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government (formerly DOTARS) in order for it to be constructed above 4.3 metres.

The Australian Design Rule Compliance Plate must be marked with the approval number.

18.3 Transporting Livestock at General Mass Limits

- 18.3.1 You can carry livestock on your Road Train, providing you meet all of the following requirements:
- 18.3.2 the height of your vehicle and load does not exceed 4.6 metres;
- 18.3.3 the prime mover has a tandem drive axle group;
- 18.3.4 the first semi-trailer has a tri-axle group towards the rear and the second semi-trailer has either a tandem or tri-axle group towards the rear;
- 18.3.5 your load is made up only of livestock, these being cattle, sheep, pigs or goats.
- 18.3.6 if any decks on your vehicle are not fully loaded, the animals must be confined in a full width compartment that is fully loaded;
- 18.3.7 you do not load animals on an upper deck until each deck below is fully loaded.

Explanatory Note

If your semi trailer was built after 1 July 1988, you must obtain approval from the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government (formerly DOTARS) in order for it to be constructed above 4.3 metres.

The Australian Design Rule Compliance Plate must be marked with the approval number.

18.4 Transporting baled wool

You can carry baled wool on your Road Train provided:

- 18.4.1 the baled wool is not loaded more than 4 layers high; and
- 18.4.2 the maximum overall height of your vehicle, including the baled wool, does not exceed 4.6 metres; and
- 18.4.3 the overall width of the axles or axle groups of the vehicle that carries the load (excluding the front axle or axle group) must not be less than 2.1 metres, when measured between two vertical parallel planes located at the outermost point of the tyres.

Dimension Limits (Continued)

18.5 Transporting indivisible items

You can transport indivisible items that exceed 2.5 metres in width and/or 4.3 metres in height on your Road Train providing:

18.5.1 you only travel:

- (i) between Port Augusta West and the South Australia/Northern Territory border via Old Woomera Road, Madland Street, Stuart Highway; and
- (ii) from the Stuart Highway to Olympic Dam Mine via the Pimba/Olympic Dam Road and Olympic way;

18.5.2 the maximum width of any item you carry on a triple Road Train must not exceed 3.1 metres; and

18.5.3 the maximum width of any item you carry on a double Road Train or a prime mover and semi trailer towing a converter dolly must not exceed 3.5 metres; and

18.5.4 the overall height of your vehicle and load must not exceed 4.6 metres, except for a transportable building where the maximum overall height of the vehicle and transportable building do not exceed 4.85 metres; and

18.5.5 you do not travel during periods of low visibility; and

18.5.6 you display an "OVERSIZE" sign on the front and rear of the Road Train, as well as the required "ROAD TRAIN" signs (see Page 14 for further information); and

18.5.7 if you are carrying loads of varying widths, the widest load must always be carried on the forward trailer; and

18.5.8 you fit rear vision mirrors to the prime mover that ensures drivers have a clear reflected view of traffic to the rear and sides of the Road Train; and

18.5.9 you travel only between the hours of sunrise and sunset.

Explanatory Note

For further information about carrying indivisible items as a load, refer to the latest "*Code of Practice for the Transport of Indivisible Items in South Australia*" published by DTEI.

The hours of sunrise and sunset is specified in the *Proof of Sunrise and Sunset Act, 1923* as amended, and published in the South Australian Government Gazette.

Sunrise and sunset times are available on DTEI's website at: www.sa.gov.au

19 Other dimension limits

19.1 You must meet all other dimension requirements that are set out in the *Road Traffic (Vehicle Standards) Rules 1999*, Part 7, Division 2.

Explanatory Note

The "*Information Guide for Road Trains*" summarises the mass, dimensions and axle spacing requirements relating to the operation of Road Trains.

The *Road Traffic Act 1961* and Rules and Regulations contain full details.

You will need to refer to either the Information Guide or the legislation for further information.

Warning Other Road Users

20 Warning signs

- 20.1 If the Road Train has an overall length of 22.0 metres or greater, you must display a "ROAD TRAIN" warning sign that:
- 20.1.1 can be clearly seen by other road users.
 - 20.1.2 Is fitted horizontally to the front and rear of the combination.
 - 20.1.3 The top of the sign is not more than 1.8 metres from ground level; and
 - 20.1.4 The bottom of the sign is not less than 500 millimetres from ground level.
 - 20.1.5 If the warning sign is in two parts, the parts must be fitted horizontally to your Road Train, at the same height.

21 Sign size

- 21.1 The "ROAD TRAIN" warning sign on your Road Train must be at least 1.2 metres wide and 250 millimetres high.

22 Warning sign material

- 22.1 Your Road Train warning sign must:
- 22.1.1 be made from 1 or 2 parts of sheet steel or a similar material that is 0.8 millimetres thick; and
 - 22.1.2 be coated with yellow Class 1 or 2 retro-reflective material that meets Australian Standard AS1906 - *Retro-Reflective Materials and Devices for Road Traffic Control Purposes*; and
 - 22.1.3 have a black border; and
 - 22.1.4 show the sign maker's name or logo and the class of retro-reflective material in block letters that should be not more than 10 millimetres high.

23 Sign wording

- 23.1 The warning sign on your Road Train must show the words:
- 23.1.1 "ROAD TRAIN" in black capital letters at least 180 millimetres high; and
 - 23.1.2 be written in a typeface Series B (N) that complies with Australian Standard AS1744 - *Forms of Letters and Numerals for Road Signs*.
- 23.2 If your warning sign is in two (2) parts, "ROAD" must be on one part of the sign and "TRAIN" on the other part.

Transporting Dangerous Goods

24 Transporting Dangerous Goods

- 24.1 The transportation of dangerous goods by road is regulated by the *Australian Code for the Transport of Dangerous Goods* by Road and Rail, also known as the ADG Code. It is the responsibility of the owner/operator to ensure that they are complying with the legal requirements detailed in this Code.

Couplings

25 Tow couplings and drawbar eyes

- 25.1 All tow couplings and drawbar eyes in a road train combination operating at GML must have a "D" rating of at least 19.0 tonnes.

26 Fifth wheel assemblies and king pins

- 26.1 All fifth wheel assemblies and king pins in a road train combination operating at GML must have a "D" rating of at least 162 kilo newtons.

Explanatory Note

D-Rating – in general terms is the capacity of the towing device.

For Fifth Wheel Assemblies – is the horizontal force between the towing vehicle and trailer (unit = kilo newtons)

For Kingpins – is the rating based upon the dynamic longitudinal force experienced by the kingpin for a particular vehicle combination and load. (unit = kilo newtons)

For Pin-Type Couplings and Drawbar Eyes –is the horizontal load capacity of a coupling or drawbar eye (unit = tonnes)

27 Rear Coupling Height on Road Train Trailers

- 27.1 Unless complying with 27.2 below, the rear coupling height on a Road-Train trailer must be at least 800 millimetres, but not over 950 millimetres, when the road train is unladen and parked on level ground.

- 27.2 The rear coupling height on a road train trailer may be less than 800 millimetres where:

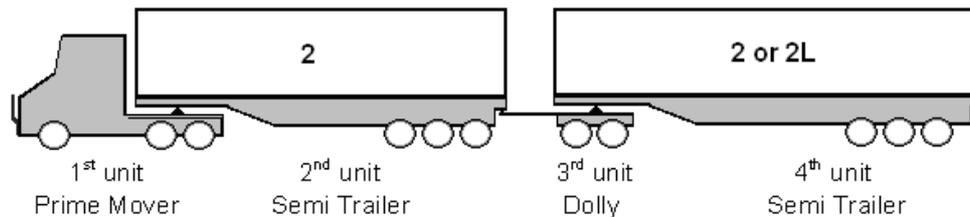
27.2.1 The vertical distance from the ground to the centre of the coupling on the rear of the trailer is not less than 600mm; and

27.2.2 The trailer is only coupled to a converter dolly that has a vertical distance from the ground to the centreline of the draw-bar pivot dimension equivalent to the coupling height plus or minus 50mm.

Permitted Configurations

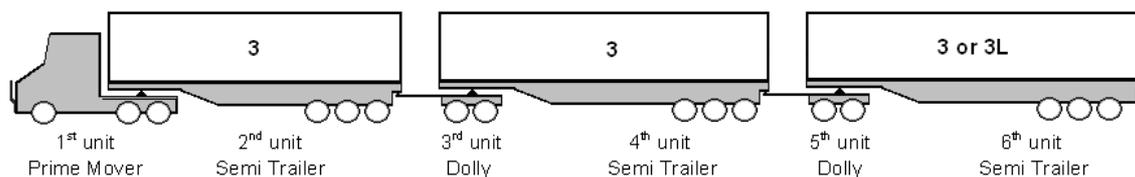
28 Rating 2: Double Road Trains (at General Mass Limits)

28.1 You can operate up to a Gross Combination Mass (GCM) of 79.7 tonnes if the steer axle is rated at 6.7 tonnes or greater, or a GCM up to 79 tonnes if the steer axle is rated at 6 tonnes or greater but less than 6.7 tonnes, and the overall length is more than 30 metres but not more than 36.5 metres.



29 Rating 3: Triple Road Trains (at General Mass Limits)

29.1 You can operate up to a Gross Combination Mass (GCM) of 116.2 tonnes if the steer axle is rated at 6.7 tonnes or greater, or a GCM up to 115.5 tonnes if the steer axle is rated at 6 tonnes or greater but less than 6.7 tonnes, and the overall length is more than 36.5 metres but not more than 53.5 metres.



Explanatory Note

You can operate a higher rated unit in a lower rated position: eg a rated 3 unit can be used in a rating 2 configuration, a rated 3L trailer can be used in a 2L position.

A Semi Trailer rated as 2L or 3L can only be used as the last unit in the appropriate road train configuration

Mass Limits

30 Axle mass limits and spacing requirements

- 30.1 Your Road Train must comply with the general access axle spacing requirements that are set out in the *Road Traffic (Mass and Loading Requirements) Regulations 1999*, Schedule 1, Part 1, Table 1 and Table 3.
- 30.2 You can, however, operate your prime mover at 6.7 tonnes on a single steer axle providing:
- 30.2.1 the front axle and tyres have sufficient rated capacity for 6.7 tonnes or better; and
 - 30.2.2 the front axle is fitted with tyres having a section width of 375mm or greater; and
 - 30.2.3 the prime mover is registered with a registration configuration code of LP3 or an equivalent or higher configuration code.

Explanatory Note

The "*Information Guide for Road Trains*" summarises the mass, dimensions and other spacing requirements relating to the operation of Road Trains. The *Road Traffic Act 1961* and Rules and Regulations contain full details.

The *Motor Vehicles Act 1959* specifies registration categories.

You will need to refer to the Information Guide or the legislation for further information.

31 Drive axle on prime mover

- 31.1 If you operate your Road Train at a gross mass greater than 42.5 tonnes, the prime mover must be fitted with a tandem drive rear axle group.
- 31.2 If inter-axle differentials are fitted, they must be of the positive locking type.

Maintenance, Accreditation and Inspections

All road trains must operate under a Maintenance Management Scheme or undergo annual inspections as follows:

32 Vehicles that are registered in South Australia or Victoria

- 32.1 Where your Road Train combination is registered in South Australia or Victoria, you are required to either:
- 32.1.1 operate under a Maintenance Management Scheme – each vehicle unit is then required to show a valid label that clearly states accreditation and scheme membership;
- or
- 32.1.2 complete an annual inspection - each vehicle unit must then show the appropriate current DTEI inspection label that clearly states:
 - (i) the type of vehicle configuration; and
 - (ii) the inspection expiry date (month and year).

Maintenance, Accreditation and Inspections (Continued)

33 Vehicles that are registered in other States or Territories

- 33.1 If your Road Train is registered in New South Wales, Queensland, Western Australia or the Australian Capital Territory, you do not need to show South Australian labels or undergo inspections that are over and above those required in your home state. The road train however, must be in Maintenance Management to travel south of Port Augusta.
- 33.2 If your Road Train is registered in the Northern Territory, you must either:
- 33.2.1 display valid South Australian inspection labels; or
 - 33.2.2 display valid Northern Territory inspection and rating labels; or
 - 33.2.3 be accredited under a Maintenance Management Scheme (NHVAS) and show a valid accreditation label.

Explanatory Note

Where your Road Train is registered in the Northern Territory, displaying Northern Territory inspection and rating labels or South Australian inspection labels upholds the Mutual Recognition Agreement between South Australia and Northern Territory.

34 Labels and Ratings

- 34.1 Where you are required to display South Australian inspection labels, each vehicle unit (prime mover, dolly, or semi-trailer) must display a DTEI numerical label that specifies the Road Train configuration, and the position of each unit in the combination.
- 34.2 Where required, a South Australian inspection label must be attached to each unit of your Road Train combination and specify:
- 34.2.1 the type of Road Train configuration by number
 - 34.2.2 the inspection expiry date (month and year); and
 - 34.2.3 the allowed position of the unit in your assembled Road Train (unit rating)

Explanatory Note

The label on each unit of your Road Train shows that the vehicle has satisfactorily completed an appropriate specification and roadworthiness inspection by DTEI.

It is your responsibility to make sure that all the vehicle units of your Road Train combination display a current, clean and legible inspection label.

You can find the unit and corresponding rating and configuration on Page 15.

Higher Mass Limits

35 Configuration eligibility

35.1 To be eligible for Higher Mass Limits (HML), your Road Train must have:

- 35.1.1 a prime mover that is fitted with a tandem drive axle group; and
- 35.1.2 semi trailers that are fitted with either a tandem or tri-axle group;
- 35.1.3 converter dollies that are fitted with tandem axle groups; and
- 35.1.4 certified Road Friendly Suspensions fitted to all axle groups operating at HML..

Explanatory Note

Higher Mass Limits (HML) refers to the scheme where approved vehicle combinations can operate at axle Group limits higher than those specified in the *Road Traffic (Mass and Loading Requirements) Regulations 1999*, provided the axle groups have been fitted with a certified Road Friendly Suspension.

36 Road Friendly Suspension

36.1 Vehicles eligible for HML must be fitted with certified Road Friendly Suspensions to all axle groups operating at the Higher Mass Limits.

37 Axle mass limits

37.1 The overall mass on the axle or axle group of your road train must not exceed the limits listed in the table below. These limits only apply to axle groups fitted with Road Friendly Suspension.

Table 1

Axle or axle group configuration	Higher Mass Limit (tonnes)
Tandem axle groups fitted with dual tyres (8 tyres)	17.0
Tri-axle group fitted with dual tyres (12 tyres)	22.5

37.2 When operating your road train at HML, the overall mass on any axle group not fitted with Road Friendly Suspension must not exceed the Concessional Mass limits listed in Table 2 below.

Table 2

Axle or axle group configuration	Concessional Mass Limit (tonnes)
Tandem axle groups fitted with dual tyres (8 tyres)	17.0
Tri-axle group fitted with dual tyres (12 tyres)	21.0

37.3 A vehicle with an axle group not fitted with Road Friendly Suspension must not be loaded in excess of:

- (i) the manufacturers rating for axle, suspension, tyre or coupling capacities; or
- (ii) the manufacturer's gross vehicle mass and gross combination mass ratings; or
- (iii) the Gross Vehicle mass and/or Gross Combination Mass as shown on the certificate of registration for that vehicle.

Higher Mass Limits (Continued)

37.4 You may operate a single steer axle of a road train prime-mover at a mass of 6.7 tonnes providing:

37.4.1 the front axle and tyres have sufficient rated capacity for 6.7 tonnes or better; and

37.4.2 the front axle is fitted with tyres with a section width of 375mm or greater; and

37.4.3 the prime mover is registered with a registration configuration code of LP3 or an equivalent or higher configuration code

38 Coupling requirements

38.1 If you operate your road train at HML, you must fit fifth wheel couplings and king pins with a “D” rating equal to or greater than the ratings detailed below:

Higher Mass Limits		
	‘D’ Rating 5 th Wheel Coupling and King Pin	‘D’ Rating Tow Coupling and Drawbar Eyes
Double and Triple Road Train	≥ 173 Kn	≥ 19.0 tonnes

39 Routes

39.1 Where you are operating a Road Train at HML, you must only operate on the approved route network(s) published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website titled titled ‘*Route Network for Road Train Vehicles Higher Mass Limits*’.

39.2 Where you are operating a Road Train that is a prime mover and semi trailer towing a converter dolly at HML, you must only operate on the approved route network(s) published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website titled ‘*Converter Dolly Route Network Higher Mass Limits*’

39.3 The PDF maps are available on DTEI’s website at www.sa.gov.au/heavyvehicles at this time, however the RAVnet Online Mapping System will replaced this existing system and eventually PDF maps will no longer be made available.

40 Mass Management Accreditation

40.1 Where the trailer in your Road Train combination is fitted with a tri-axle group and certified Road Friendly Suspension, you can operate it at HML provided the road train combination is accredited in a Mass Management Scheme and displays a valid mass accreditation label, where this is a requirement of the accrediting agency.

40.2 If your Road Train prime mover is hauling a tri-axle trailer that is fitted with certified Road Friendly Suspension and is operating at HML, regardless of the State or Territory it is registered in, it must be nominated as part of a Mass Management Scheme and display a valid mass management label.

40.3 For operation under HML, the prime mover must display a valid National Heavy Vehicle Accreditation Scheme (Mass Module) label.

Higher Mass Limits (Continued)

Explanatory Note

Where your road train is only fitted with tandem axle groups, you can operate at Higher Mass Limits and are not required to be in a Mass Management Scheme, provided the combination is fitted with certified Road Friendly Suspension.

Axle groups not fitted with certified Road Friendly Suspension are not eligible to operate at Higher Mass Limits.

- 40.4 If your prime mover is accredited in South Australia as part of the Mass Module of the National Heavy Vehicle Accreditation Scheme, and you are **not** operating under the IAP you must carry evidence of route planning that shows a Road Train HML route is available for the entire journey being undertaken.

Explanatory Note

The requirement for you to carry documentation is set out in Standard 4 of the National Mass Management Scheme.

Full details of the National Mass Management Scheme can be found on the DTEI website at:

www.sa.gov.au/heavyvehicles

- 40.5 Where your Road Train is accredited in any other state or territory, as part of the Mass Module of the National Heavy Vehicle Accreditation Scheme operating at HML, and **not** operating under the IAP you must complete and carry the DTEI Higher Mass Limits Route Compliance Certificate.

41 Operation

- 41.1 If your vehicle is accredited in another State or Territory as part of a mass management scheme, you may operate in South Australia provided you:

41.1.1 have referred to the approved route network(s) published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website titled '*Route Network for Road Train Vehicles Higher Mass Limits*' or '*Converter Dolly Route Network Higher Mass Limits*' (as appropriate) and determined that that a HML route is available; and

41.1.2 have met the requirements detailed in this Code of Practice, and

41.1.3 if **not** operating under the IAP;

- (i) have recorded the route details on a Higher Mass Limits Route Compliance Certificate and signed the Certificate; and
- (ii) carry the Higher Mass Limits Route Compliance Certificate in the vehicle when you are operating at HML; and
- (iii) produce the Certificate if you are asked by a DTEI Authorised Officer or Police Officer; and
- (iv) keep the original copy of the Certificate for a period of not less than 12 months from the date it is signed for auditing purposes.

Explanatory Note

Vehicles that are accredited in other states are eligible to operate in South Australia under the Code of Practice.

Semi Trailers Towing Converter Dollies

42 General Conditions

- 42.1 An articulated vehicle towing a converter dolly that exceeds 22.0 metres in length must display either a road train warning sign (refer to page 14 for further detail), or a long vehicle sign, complying with the *Road Traffic (Vehicle Standards) Rules 1999*.
- 42.2 All South Australian and Victorian registered vehicle units (prime movers, converter dollies and semi-trailers) must either:
- a) be accredited under a Maintenance Management Scheme and display a valid National Heavy Vehicle Accreditation Maintenance Module label; or
 - b) be inspected and display a current inspection label issued by DTEI.
- 42.3 Vehicles registered in New South Wales, Queensland, Western Australia and the Australian Capital Territory must comply with specified inspection and accreditation requirements of their home state or territory.
- 42.4 Vehicles registered in Northern Territory must display either a current South Australian or Northern Territory Inspection Label, or be accredited under a Maintenance Management Scheme and display a National Heavy Vehicle Accreditation Maintenance Module label.

Explanatory Note

This section is only applicable to a Road Train that is configured as a prime mover and semi trailer towing a converter dolly as an extension of road Train operation.

A double Road Train towing a converter dolly is considered to be a triple Road Train.

43 Mass Limits

- 43.1 The gross combination mass of the vehicle shall not exceed 45.8 tonnes GML or 48.8 tonnes HML.

44 Braking System Conditions

- 44.1 A converter dolly towed as a separate unit (without the loading of a semi-trailer superimposed on it) may be towed with its braking control system disconnected.
- 44.2 When operated in this manner an air supply must be maintained in the converter dolly braking system to ensure that in the event that the dolly becomes disconnected from the towing vehicle the brakes on the dolly will be fully applied and remain fully applied for a period of not less than fifteen minutes.

45 Routes

- 45.1 Road Trains that are a prime mover and semi trailer towing a converter dolly operating at General Mass Limits can only operate on the approved route network(s) published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website titled '*Converter Dolly Route Network General Mass Limits*'.
- 45.2 Road Trains that are a prime mover and semi trailer towing a converter dolly operating at Higher Mass Limits can only operate on the approved route network(s) published via the DTEI RAVnet Online Mapping System or PDF maps published via the DTEI website titled '*Converter Dolly Route Network Higher Mass Limits*'.
- 45.3 On the PDF maps published via the DTEI website towns enclosed by a circle on the abovementioned maps, a separate town map is available to clearly designate the vehicle route through that town. For other towns the route is straight forward and automatically follows the main road.

Semi Trailers Towing Converter Dollies (Continued)

- 45.4 PDF Maps are available on DTEI's website at www.sa.gov.au/heavyvehicles at this time, however the RAVnet Online Mapping System will replace this existing system and eventually PDF maps will no longer be made available.
- 45.5 Turning manoeuvres at intersections or T-junctions shall comply with the guidelines shown in the diagrams under the "Turning Requirements" section.
- 45.6 Entry into or exit from private property or depot driveways is permitted in accordance with the diagrams shown under the heading "Driveways and Depots" in the "Turning Requirements" section.
- 45.7 Where turning manoeuvres into or out of depots cannot be undertaken safely in accordance with the diagrams the operator/driver shall not use the driveway or depot entrances until such time as the entrances have been made suitable for use by this combination vehicle.

Turning Requirements

46 Turning Requirement Rules

46.1 Turning Rules

46.1.1 The arrows shown on the following diagrams indicate that:

You **must** wherever practicable, turn in the direction shown in the diagrams by the continuous arrows

You **must not** turn in the direction shown on the diagrams by the broken line arrows unless it is impracticable to do otherwise, and only if it is safe to do so at the time.

46.2 Intersections & Junctions

46.2.1 Laned Roads

At **intersections** and junctions where lane lines are marked on the road, arrows may indicate the correct lane to be used, for the particular direction you intend to take.

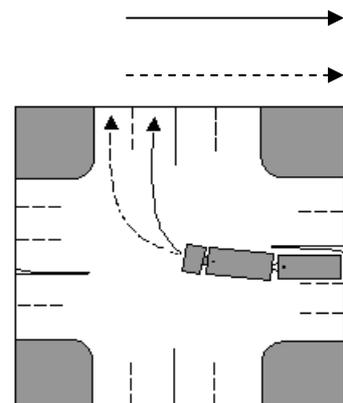


Fig 1

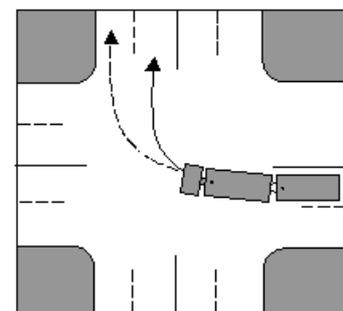


Fig 2

Fig 1.

- You **must** turn only in the direction of the arrow on the road.

Fig 2.

- When turning right **from** a laned road not marked with arrows, you **must** commence your turn from the lane which is just left of the centre of the road.

Fig 3.

- When turning right **into** a laned road from a laned road not marked with arrows you **must** where practicable enter the lane nearest the centre of the road.
- When turning left **from** a laned road not marked with arrows, you **must** commence your turn from the lane which is as near as practicable to the left side of the road.

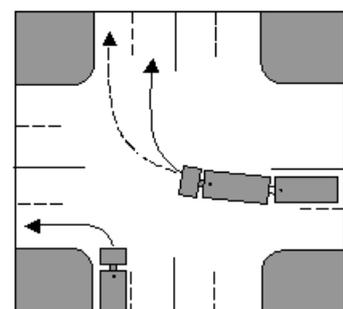


Fig 3

Turning Requirements (Continued)

Fig 4.

When turning left **into** a laned road you **must**:

- turn the vehicle wholly within the left lane ie no travel on the opposite side of the road.
- When turning right into a laned road you must:
- approach the intersection or junction to the left of, parallel to and as near as practicable to the centre of the road;
 - where practicable pass to the right of the centre of the intersection; and
 - enter the other road as near as practicable to the left of the lane in order to minimise the amount of travel of the road train over the centre line.

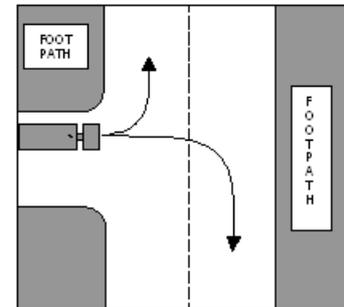


Fig 4

46.2.2 Unlaned Roads

Fig 5.

When turning right from a two way road to a two way road you **must**:

- Approach the intersection or junction to the left of, parallel to and as near as practicable to the centre of the road.
- Where practicable pass to the right of the centre of the intersection; and
- Enter the other road as near as practicable to and just left of the centre of the road.

You **must not**:

- Stand your vehicle in such a position that will **obstruct traffic** coming from the **opposite** direction.

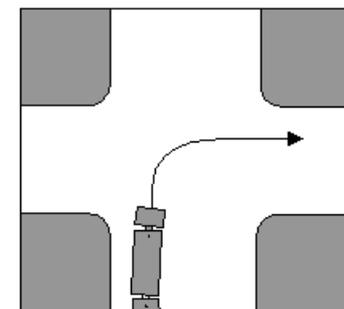


Fig 5

Fig 6.

- When turning left from a two way road to a two way road, **you must as far as practicable** keep close to the left kerb.

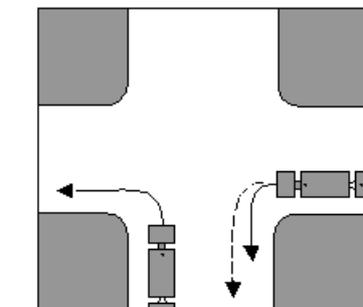


Fig 6

46.3 Driveways And Depots

46.3.1 Entering and Exiting Depots

- Road Train vehicles must be driven forward when entering or exiting roadways and depots.

46.3.2 To and from laned roads

Fig 7.

- When turning left into depots you **must** turn from a position which is wholly within the left lane.
- When turning right **into** depots you **must** turn from the lane nearest to the centre of the road.

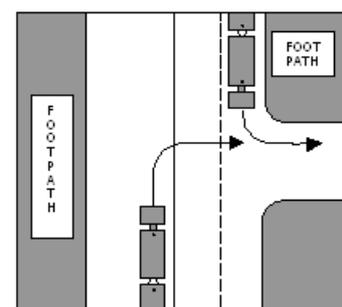


Fig 7

Turning Requirements (Continued)

Fig 8.

- When turning left **out of** depots you **must** where practicable enter the lane nearest the left kerb.
- When turning right out of depots you must where practicable enter the lane nearest to the centre of the road.

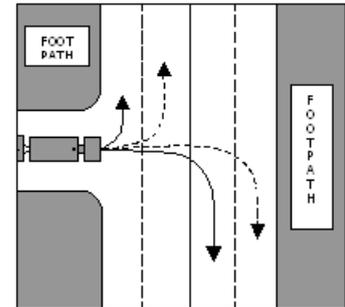


Fig 8

46.3.3 To and from unlaned roads

Fig 9.

- When turning left into and out of depots you must keep as near as practicable to the left kerb.

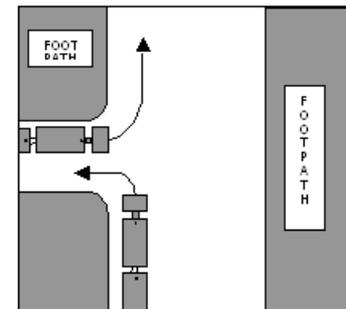


Fig 9

Fig 10.

- When turning right **into** depots you **must approach** the depot entrance to the left of, parallel to, and as near as practicable to the centre of the road.
- When turning right out of depots you must enter the road by moving to the left of the centre of the road.

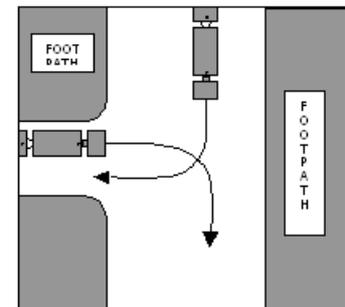


Fig 10