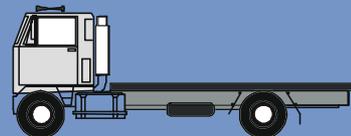


# National Heavy Vehicle Reform

## Vehicle Operations

### Heavy Vehicle Mass, Loading and Access



The information given in this brochure is a guide only and is subject to change at any time without notice.

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Roads and Traffic Authority  
[www.rta.nsw.gov.au](http://www.rta.nsw.gov.au)

## National road transport reform in New South Wales

New South Wales is an active participant in the National road transport reform process. The Roads and Traffic Authority (RTA) has helped develop national reforms and many are already in place in NSW.

## Operation of heavy vehicles in New South Wales

The national reforms provide for what are classified as “general access” and “restricted access” vehicles, related to vehicle mass, dimensions and configuration, or a combination of all three.

### “General access” vehicles

Under the national mass and loading arrangements, “general access” vehicles are those with unrestricted access to the road system. Provided these vehicles are registered and operators pay the registration charge appropriate to the vehicle configuration, no specific access restrictions apply and no additional permits are required.

“General access” vehicles are those that do not exceed the following limits.

Length	Truck	12.5 metres
	Bus	12.5 metres
	Truck & trailer	19.0 metres
	Articulated vehicle	19.0 metres

Note: The load space on livestock semi trailers must not exceed 12.5 metres long.

Height	All Vehicles	4.3 metres
Width	All Vehicles	2.5 metres
Gross Mass	Maximum	42.5 tonnes

(Depending on vehicle configuration, axle loading and axle spacing)

Note: Any vehicle or combination outside these limits is classified as “restricted access” and may only operate under specific permit or notice.

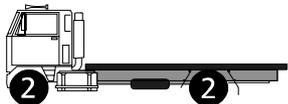
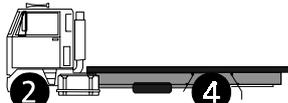
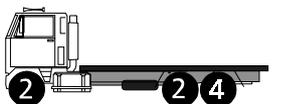
## Mass limits for “general access” heavy vehicles.

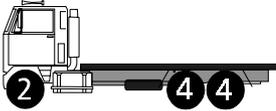
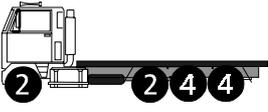
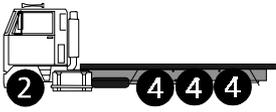
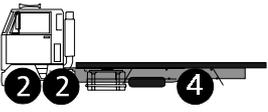
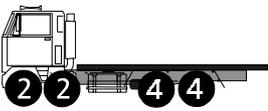
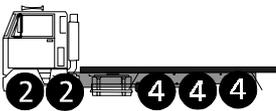
The mass limits detailed in the following tables apply for all vehicles over 4.5 tonnes gross vehicle mass (GVM). Under these limits, vehicle combinations may operate to a maximum loaded mass of 42.5 tonnes.

Vehicles must comply with the mass limit provisions set out in the Tables:

- Mass Limits for Standard Vehicles
- Mass Limits for Conforming Axle Groups; and
- Mass Limits and Axle Spacing

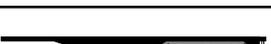
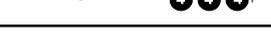
### Mass limits for Standard Vehicles Self Propelled Vehicles

Axle Configuration	Total Mass limit (tonnes)
 6t                      6t	12.0
 6t                      9t	15.0
 6t                      11t	17.0
 6t                      13t	19.0

Axle configuration		Total mass limit (tonnes)
		
6t	16.5t	22.5
		
6t	15t	21.0
		
6t	20t	26.0
		
10t or 11t	9t	19.0 or 20.0 *
		
10t or 11t	16.5t	26.5 or 27.5 *
		
10t or 11t	20t	30.0 or 31.0 *

\*The higher axle load limit applies if the front steer axle group is load sharing.

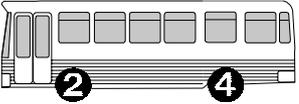
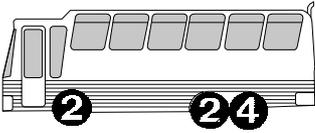
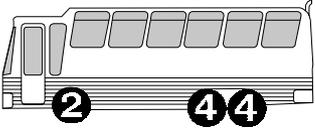
## Trailers

Axle Configuration trailers only	Load Limit (tonnes)	Pig trailers only (tonnes)
	6.0	6.0
	9.0	8.5
	11.0	10.0
	13.0	13.0
	16.5	15.0
	15.0	15.0
	15.0	15.0
	20.0	18.0
	20.0	NA
	18.0	NA
9t	9t	
		
9t	16.5t	25.5
		
16.5t	16.5	33.0
		NA

Note:

- The total mass of a combination other than a Road Train or B-double and any load must not exceed 42.5 tonnes. The loaded mass of a dog trailer or pig trailer must not exceed the loaded mass of the towing vehicle. Truck and dog trailer mass limits over 42.5 tonnes are available under Notice (General Class 3 Truck and Dog Trailer Combination Notice, 2001).

## Buses

Axle configuration	Total mass limit (tonnes)
 6t            9t 6t            10t * 6.5t #       10t # 6t ❖        11t ❖	15.0 or 16.0 * # ❖
 6t            13t 6.5t #       14t #	19.0 or 20.0 #
 6t            16.5t 6.5t #       16.5t	22.5

\* For a bus licensed to carry standing passengers.  
 # For a complying bus, which is a bus that meets the safety standards specified in Australian Design Rules 44, 59 and 68 and is equipped with an approved air suspension system.

❖ For an ultra-low floor bus, which is a bus that is:

- equipped with a stairless entry; and
- designed to be accessible by wheelchairs; and
- licensed to carry standing passengers.

## Single axles and single axle groups

Description	Axle load limit (tonnes)
Single steer axle on:	
• a complying bus #	6.5
• any other vehicle	6.0
Single axle or single axle group fitted with single tyres with section width of:	
• less than 375 mm	6.0
• at least 375 mm but less than 450 mm	6.7
• at least 450 mm	7.0
Single axle or single axle group fitted with dual tyres on:	
• a pig trailer	8.5
• a complying bus # or a bus licensed to carry standing passengers	10.0
• an ultra-low floor bus	11.0
• any other vehicle	9.0

## Twinsteer axle groups

Description	Axle load limit (tonnes)
Twinsteer axle group without load-sharing suspension	10.0
Twinsteer axle group with load-sharing suspension	11.0

## Tandem axle groups

Description	Axle load limit (tonnes)
Tandem axle group fitted with single tyres with section width:	
• less than 375 mm	11.0
• at least 375 mm but less than 450 mm	13.3
• at least 450 mm	14.0
Tandem axle group fitted with single tyres on one axle and dual tyres on the other on:	
• a complying bus#	14.0
• any other vehicle	13.0

Tandem axle group fitted with dual tyres on:	
• a pig trailer	15.0
• any other vehicle	16.5

### Tri-axle groups

Description	Axle load limit (tonnes)
Tri-axle group on a vehicle fitted with single tyres with section width of less than 375 mm on all axles, or single tyres on 1 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 mm, 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 mm, dual tyres, or a combination of those tyres	20.0

### Quad-axle groups

Description	Axle load limit (tonnes)
Quad-axle group fitted with single tyres with section width of less than 375 mm	15.0
Quad-axle group fitted with single tyres with section width of at least 375 mm or dual tyres	20.0

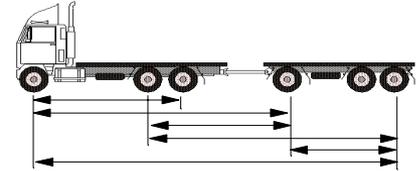
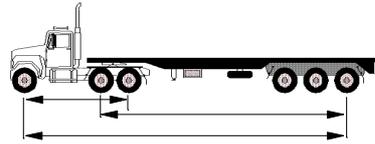
### Mass Limits and Axle Spacing

Standard or conforming vehicles must at least have the minimum axle group spacings on the table below.

Each distance in the table below refers to:

1. The distance from the centre of any single axle to the centre of another single axle; or
2. The distance from the centre of any single axle to the centre of the furthest axle in any axle group; or

3. The greatest distance between the centres of axles in any two-axle groups.



Distance between axles (metres)		Mass limit (tonnes)
Exceeding	Not exceeding	
0	3.7	23.0
3.7	3.8	23.5
3.8	4.0	24.0
4.0	4.2	24.5
4.2	4.3	25.0
4.3	4.5	25.5
4.5	4.7	26.0
4.7	4.8	26.5
4.8	5.0	27.0
5.0	5.2	27.5
5.2	5.3	28.0
5.3	5.5	28.5
5.5	5.7	29.0
5.7	5.8	29.5
5.8	6.0	30.0
6.0	6.2	30.5
6.2	6.3	31.0
6.3	6.5	31.5
6.5	6.7	32.0
6.7	6.8	32.5
6.8	7.0	33.0
7.0	7.2	33.5

7.2	7.3	34.0
7.3	7.5	34.5
7.5	7.7	35.0
7.7	7.8	35.5
7.8	8.0	36.0
8.0	8.2	36.5
8.2	8.3	37.0
8.3	8.5	37.5
8.5	8.7	38.0
8.7	8.8	38.5
8.8	9.0	39.0
9.0	9.2	39.5
9.2	9.3	40.0
9.3	9.5	40.5
9.5	9.7	41.0
9.7	9.8	41.5
9.8	10.0	42.0
10.0	-	42.5

In addition, the total loaded mass of a vehicle must not exceed the manufacturer's rating, that is the Gross Vehicle Mass (GVM) for a rigid vehicle or the Gross Combination Mass (GCM) for combinations, including the mass rating on a tyre, wheel or axle.

All axles in an axle group must be load sharing (except for non-load sharing twin steer axle groups).

### Retractable axles

NSW pioneered the reintroduction of retractable axles as "conforming" axle groups. A retractable axle can be included as part of an axle group provided that when the mass on the axle group exceeds:

- 6 tonnes for a tandem axle group; or
- 11 tonnes for a tri-axle group

the tyres on the axle are in contact with the ground and the load-sharing suspension system is operating on each axle, including the retractable axle.

If these requirements cannot be met, the mass on the axle is determined as if the retractable axle did not exist.

## "Restricted access" vehicles

"Restricted access" vehicles are all those vehicles or combinations that cannot have general access to the road system because of their size, mass or the need for special operating conditions. Any vehicle outside the "general access" limits above is classified as "restricted access", and includes:

- combination vehicles longer than 19 metres (eg B-Doubles and Road Trains);
- vehicles more than 4.3 metres high (eg livestock crates, loaded car carriers and other commodity concessions);
- vehicles carrying indivisible oversize loads; and
- special purpose vehicles exceeding "general access" mass or dimension limits (eg an SPV Type 2).

Each of these vehicle categories operates under specific arrangements in NSW.

All restricted access vehicles are categorised in one of three classes, detailed below.

### Class 1

- oversize and overmass vehicles

### Class 2

- B-Doubles
- Road Trains
- controlled access buses longer than 12.5 metres, up to 14.5 metres long
- loaded car carriers longer than 19 metres and up to 4.6 metres high
- livestock vehicles up to 4.6 metres high.

### Class 3

- restricted access vehicles not covered by Class 1 or Class 2.

## Current NSW arrangements for “restricted access” vehicles

Vehicles classified as “restricted access” are covered by specific arrangements in NSW. These are detailed below.

### B-Doubles and Road Trains

B-Doubles and Road Trains are restricted to operation on approved routes because of their size and mass. B-Doubles and Road Trains may operate in NSW under the provisions of the General B-Double Notice 1996 and the General Road Train Notice 1996.

Details of approved routes are set out in the relevant Notice and in maps of approved B-Double and Road Train routes. Copies of the relevant Notices must be carried in the vehicle and produced as requested by Police, authorised RTA Officers and authorised Council Officers.

B-Doubles that are no longer than 19.0 metres and no heavier than 50.0 tonnes may operate on all roads, except where prohibited by a load limit sign.

The Notices set out the detailed requirements for vehicle specifications, mass limits and axle spacing. Excess mass permits are no longer required for B-Doubles or Road Trains. Copies of the Notices and the maps are available from the RTA Permits Unit and RTA internet website.

### 4.6 metre high vehicles

Vehicles over 4.3 metres high are restricted to approved routes because of vertical clearance restrictions on some roads. NSW currently allows the following vehicles to operate up to 4.6 metres high on a network of approved routes:

- multi-deck livestock crates;
- loaded car carriers;
- vehicles carrying wool, hay and other primary produce; and
- vehicles carrying shipping containers;
- purpose built vehicles carrying general freight.

These vehicles may operate under the provisions of the 4.6 Metre High Vehicle Route Notice, 1999, which sets out the approved routes and specific loading conditions for each commodity.

### Oversize loads

Vehicles carrying indivisible, oversize loads are restricted to approved routes. NSW allows these vehicles to operate under the provisions of the General Overdimension Notice 1997, which sets out approved routes and all the conditions of travel.

### Overmass loads

Vehicles carrying an indivisible load on a vehicle which exceeds the standard mass limits require a specific permit from the RTA.

### Special Purpose Vehicles

A Special Purpose Vehicle (SPV) is a vehicle built for a purpose other than carrying a load. Examples include:

- graders;
- concrete pump trucks; and
- mobile cranes.

An SPV whose axle mass limits fall within standard mass limits are classified as SPV Type 1. Those that exceed standard mass limits are classified as SPV2. Details regarding SPVs are in the RTA brochure What is A Special Purpose Vehicle?

An SPV Type 2 is classified as Class 1 “restricted access” vehicle and can only travel under Notice or Permit.

Contact RTA Permits Unit for details.

### Offences and penalties

The maximum penalty for operating, or allowing to operate a vehicle above the mass and dimension limits is \$3,300.

The information in this brochure should be used as a guide only. Detailed advice is available from the RTA.

For technical issues, contact  
RTA Technical Enquiries Unit on:

RTA Sydney

Tel: (02) 9830 5555

Fax: (02) 9831 0913

RTA Hunter/Northern

Tel: 1800 049 920

Fax: (02) 4323 9905

RTA Southern

Tel: (02) 4226 7007

Fax: (02) 4225 8844

RTA Western/South Western

Tel: 1800 809 388

Fax: (02) 6861 1496

For overdimension, overmass and other permit enquiries  
contact:

RTA Special Permits Unit on:

Tel: 1300 656 371

Fax: 1300 361 570