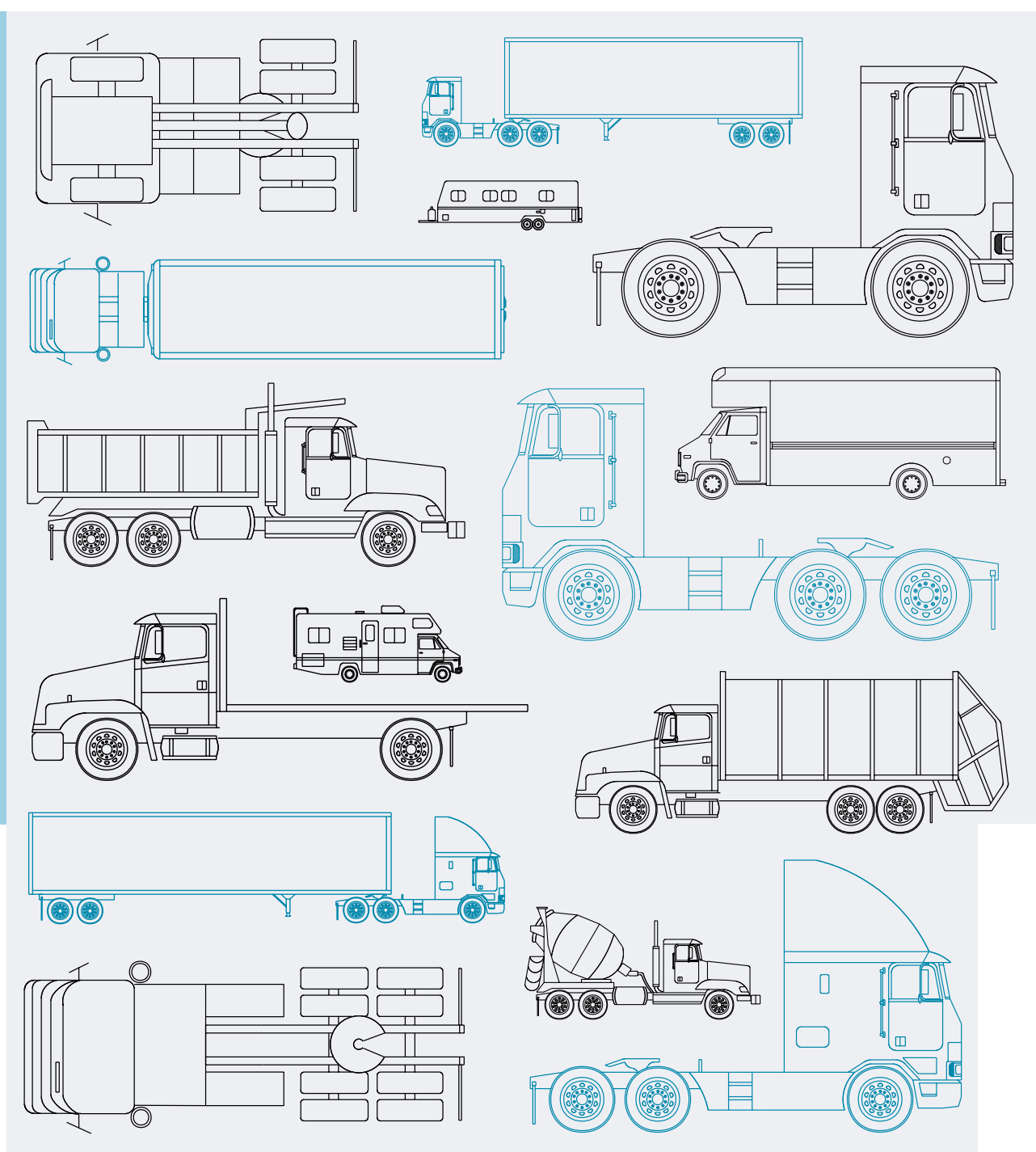


General Vehicle Mass and Dimension Limits



Introduction

Victoria has adopted the national mass and dimension limits for heavy vehicles.

This information bulletin summarises these limits for trucks and trailers in Victoria.

Vehicles within these limits may travel on roads throughout Victoria, unless there is a sign prohibiting travel.

There are other information bulletins that describe the mass and dimension limits of buses, higher productivity freight vehicles and oversize and overmass vehicles. Contact VicRoads for further information or view these bulletins online at www.vicroads.vic.gov.au.

Dimension limits

Maximum dimension limits for general access vehicles are shown below:

Height

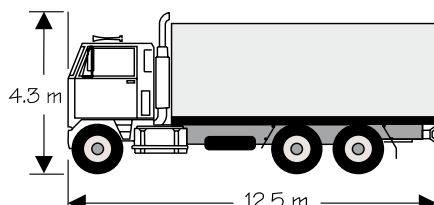
The height limit for vehicles is 4.3 metres.

Width

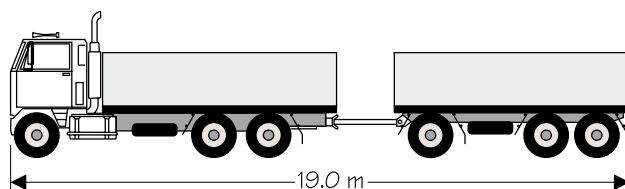
The width limit for vehicles is 2.5 metres. Vehicle width is measured without taking into account any rear vision mirrors, lights or reflectors that are mounted on the side of the vehicle and comply with the standards for registration.

Length

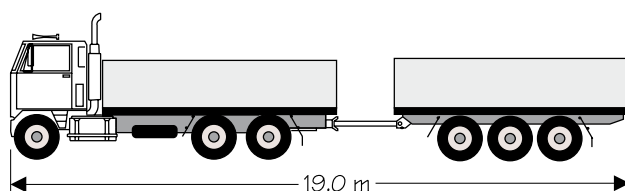
Rigid truck



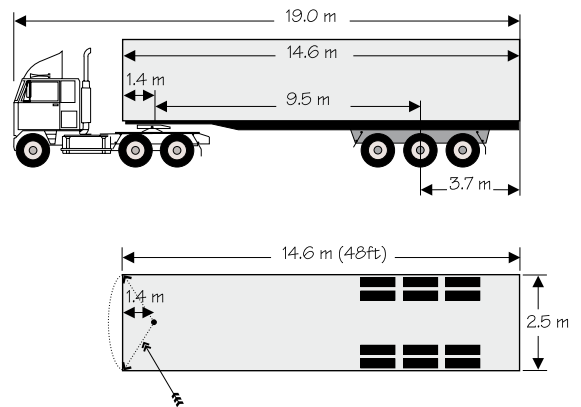
Truck towing a dog trailer



Truck towing a pig trailer



Prime mover towing a semi-trailer



The forward projection must be contained within a 1.9 metre radius from the king pin, which equates to 1.4 metres to the front of the trailer.

Projecting loads

Rear

Where a load projects more than 1.2 metres beyond the rear of a vehicle, or a projecting load may not be easily seen by other road users, the following warning devices must be attached to the rear of the load:

- During the day, a brightly coloured flag or piece of material, at least 30 centimetres by 30 centimetres must be attached to the rear of the load; and
- During the night a red light attached to the rear of the load that can be seen for at least 200 metres.

Sides

The limit for a load's projection from the outermost part of either side of a vehicle is 150 millimetres.

Front

The limit for a load's projection from the front of a motor vehicle is 1.2 metres.

Note:

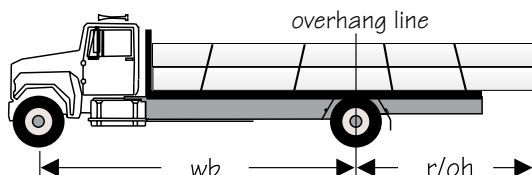
- Any load projection must be within the maximum vehicle dimensions.

Truck rear overhang

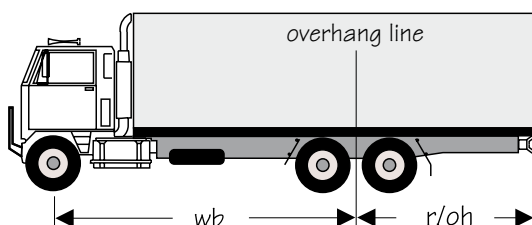
In the examples below, the allowable rear overhang (r/oh, measured from the overhang line), which includes any load, must not exceed the lesser of the following:

- 3.7 metres from the rear overhang line (generally the centreline of the rear axle or axle group); or
- 60% of the wheelbase (wb).

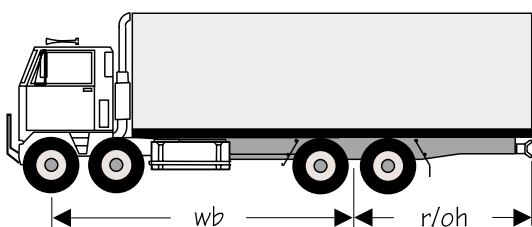
Single drive truck



Tandem drive truck

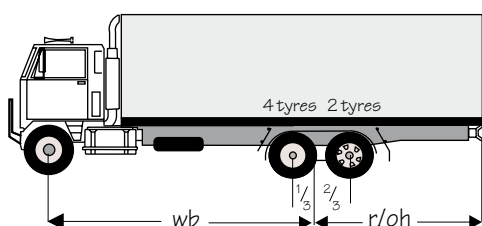


Twin-steer tandem drive truck



Specific rear overhangs for trucks and trailers

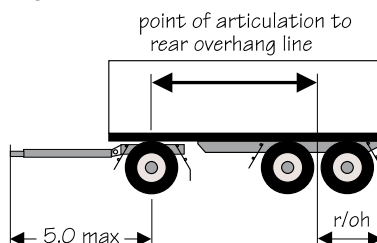
Where one axle is fitted with four tyres and the other two tyres, the rear overhang is measured from a line located one third of the way from the axle fitted with the four tyres;



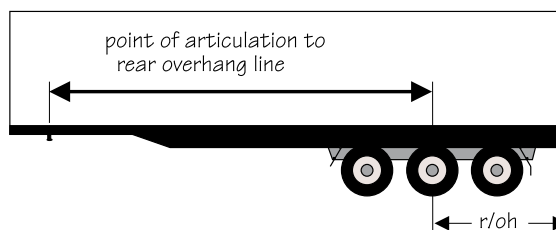
Trailer rear overhang

For dog trailers and semi-trailers, the rear overhang must not exceed the lesser of 3.7 metres or 60% of the distance from the point of articulation at the front of the trailer to the rear overhang line.

Dog trailer

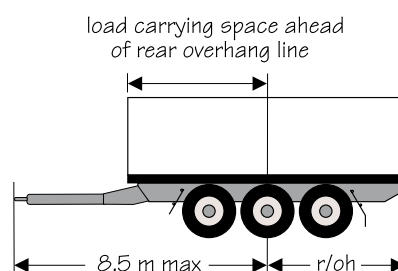


Semi-trailer

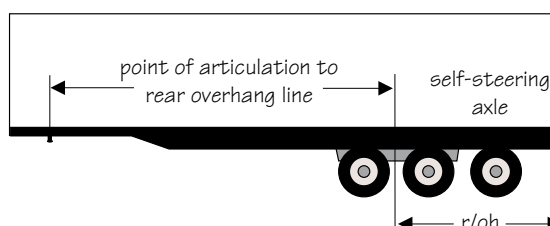


For pig trailers, the rear overhang must not exceed the lesser of 3.7 metres or the length of the load carrying area or body ahead of the rear overhang line.

Pig trailer



Where an axle group includes a steerable axle, only the non-steering axles shall be considered in determining the rear overhang.



Mass limits

The maximum laden mass of a vehicle is determined from the following four step calculations. The lowest mass recorded from the four steps is the maximum allowable vehicle mass. Use the following steps to calculate the allowable mass limits for your vehicle.

Step 1 - Manufacturer's rating

Obtain the manufacturer's rating for your vehicle and any trailer. This information should be shown on the vehicle manufacturer's compliance plate. If not, contact the manufacturer for your vehicle details.

Manufacturer's ratings are described as:

GVM - Gross Vehicle Mass of a truck;

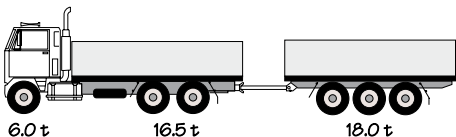
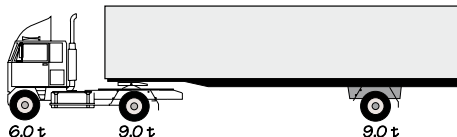
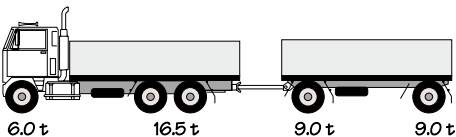
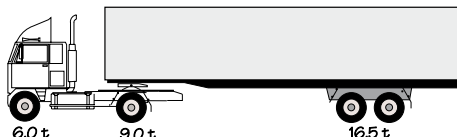
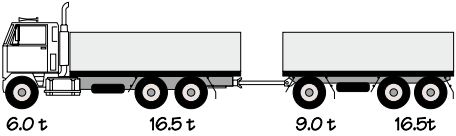
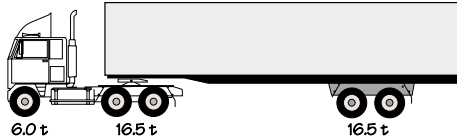
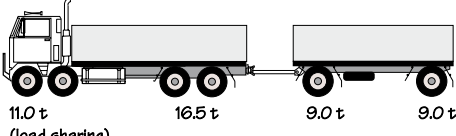

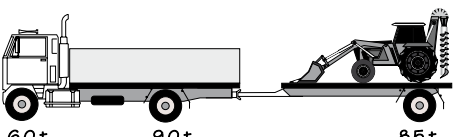
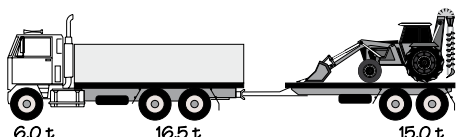
GCM - Gross Combination Mass of a motor vehicle and trailer;

GTM - Gross Trailer Mass, being the mass transmitted to the road by the trailer axles

Step 2 – Axle mass limits

Determine the axle group mass limits from Table 1 below, or from the specific axle mass limits in Table 2.



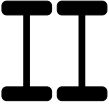
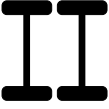
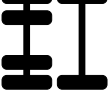
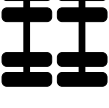
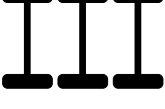

Table 1: Common Mass Limits

	Gross Vehicle Mass Limit		Gross Vehicle Mass Limit
Truck and pig trailer  6.0 t 16.5 t 18.0 t = 40.5 t		Prime mover and semi-trailer  6.0 t 9.0 t 9.0 t = 24.0 t	
Truck and dog trailer  6.0 t 16.5 t 9.0 t 9.0 t = 40.5 t		 6.0 t 9.0 t 16.5 t = 31.5 t	
Truck and dog trailer  6.0 t 16.5 t 9.0 t 16.5 t = 42.5 t		 6.0 t 16.5 t 16.5 t = 39.0 t	
Twin steer truck and dog trailer  11.0 t 16.5 t 9.0 t 9.0 t = 42.5 t (load sharing)		 6.0 t 16.5 t 20.0 t = 42.5 t	
Truck and tag trailer  6.0 t 9.0 t 8.5 t = 23.5 t		Truck and tag trailer  6.0 t 16.5 t 15.0 t = 37.5 t	

Note:

- All of the above examples have been calculated assuming each axle, other than the steer axles, has four tyres per axle.
- Dog, pig and tag trailers must not be heavier than the truck towing them.
- The maximum gross mass limit for a combination is 42.5 tonnes.
- Additional information is available from VicRoads concerning Concessional Mass Limits under the National Heavy Vehicle Accreditation Scheme, and Higher Mass Limits for buses and trucks with road friendly suspensions.

Table 2- Axle mass limits

		Comments/Tyre Section Width	Mass Limit (Tonnes)
	Single axle	Steer axle*	6.0
	Single tyres	Non steer axle, tyres less than 375 mm	6.0
		Non steer axle, tyres 375 mm to 449 mm	6.7
		Non steer axle, tyres at least 450 mm	7.0
	Single axle	Pig/tag trailer	8.5
	Dual tyres	Any other vehicle	9.0
	Twin-steer axle group	Non load-sharing suspension system	10.0
	Single tyres	Load-sharing suspension system	11.0
	Tandem axle group Single tyres	Less than 375 mm	11.0
		375 mm to 449 mm	13.3
		At least 450 mm	14.0
	Tandem axle group Dual/single tyres		13.0
	Tandem axle group Dual tyres	Pig/tag trailer	15.0
		Any other vehicle	16.5
	Tri-axle group Single tyres	Single tyres on all axles with section width less than 375mm, or single tyres on one or two axles and dual tyres on the other axle or axles	15.0
		Pig trailer with either single tyres with at least a 375 mm section width, dual tyres on all axles or a combination of those tyres	18.0
	Tri-axle group Dual tyres	Vehicle other than a pig trailer with either single tyres with at least a 375 mm section width, dual tyres on all axles or a combination of those tyres	20.0

* **Note:**

- Some trucks fitted with specified technologies, including an engine complying with ADR 80/01 (Euro 4 or equivalent engine), UN ECE front underrun protection devices and UN ECE stronger/safer cabins, are allowed 6.5 tonnes on the steer axle.

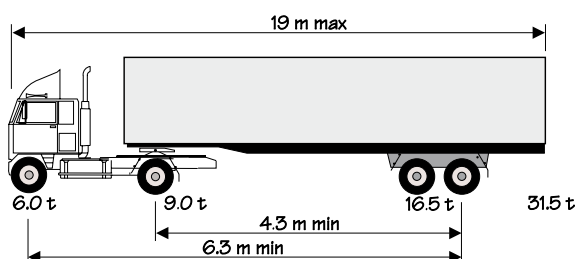
Step 3 - Mass limits relating to axle spacing

To ensure that bridges are not damaged by concentrated mass loadings caused by closely spaced axle groups, the total mass on each set of axles must not exceed the limits shown in Table 3.

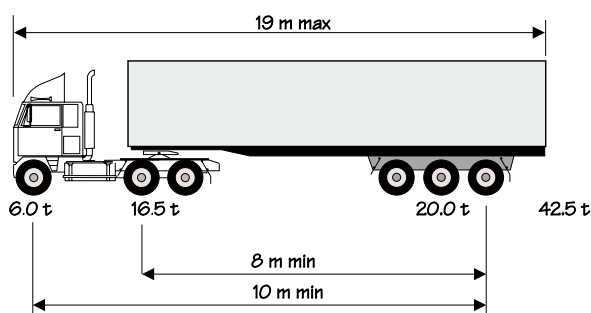
The mass limit for a set of axles is based on a minimum distance between the most widely spaced axles in the set.

As an example, the following diagrams show the minimum spacings for each vehicle to operate at its maximum permissible mass limit.

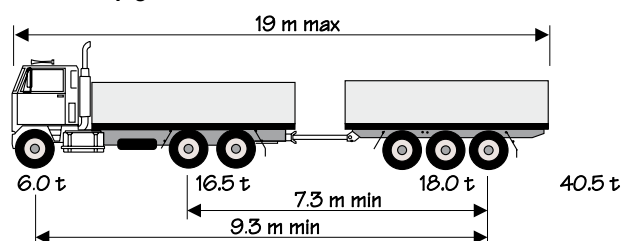
Prime mover and semi-trailer



Prime mover and semi-trailer



Truck and pig trailer



Truck and dog trailer

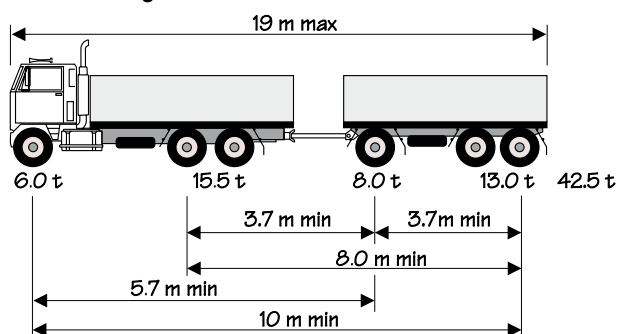


Table 3 - Mass Limits Relating to Axle Spacing

Mass limits relating to axle spacings - General Requirements		
Column 1		Column 2
Distance (metres)		Mass limit (tonnes)
minimum	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



For safety reasons, vehicles must not be loaded above the manufacturer's ratings.

Safe travel

Drivers of vehicles complying with the mass and dimension limits in this bulletin may travel on the Victorian road network. However, the vehicle's registered operator and driver are responsible for planning any journey to ensure that:

- 1) The vehicle only crosses suitable bridges and negotiates curves in a safe manner, bearing in mind that some roads and intersections may not be capable of accommodating vehicles at the dimensions in this bulletin;
- 2) The vehicle is not driven under a bridge or structure if the vehicle's height is the same as or exceeds the height limit on any sign on the bridge or structure;
- 3) The clearance to other overhead structures, cables, wires, and trees is at least 200 mm greater than the height of the vehicle and sufficient to ensure safe passage; and
- 4) The vehicle is not driven on a road, bridge or structure if it would exceed any posted mass or dimension limit.

Step 4 - Load rating of tyres

To calculate your vehicles allowable mass, add the tyre rating of each tyre.

A vehicle must not exceed the tyre manufacturer's ratings.

Step 5 - Maximum allowable gross mass

The maximum laden mass of a vehicle is determined from the previous four step calculations. The lowest mass recorded from the four steps is the maximum allowable vehicle mass.

Specifically, the maximum vehicle mass is the lowest of:

Step 1 – manufacturer's ratings,

Step 2 – sum of the allowable axle masses,

Step 3 – the allowable axle group masses relating to the distances between the axle groups,

Step 4 – sum of the tyre ratings.

Note:

- The total mass of a motor vehicle towing a trailer, including any load, must not exceed 42.5 tonnes*.
- The mass of a dog, pig or tag trailer must not exceed the mass of the truck towing the trailer.
- When calculating the allowable laden mass of a truck which is towing a trailer, use the lesser of the truck's GCM, or the total of the truck's GVM and the trailer's GTM.
- Axles in all axle groups (except for twin-steer axles and single axles) must be load sharing.

** Vehicles eligible for 6.5 tonnes steer axle mass and vehicles with a road friendly suspension may be entitled to operate at higher mass limits.*

GCM (Gross Combination Mass) of a motor vehicle is the greatest possible sum of the maximum loaded mass of the motor vehicle and of any vehicles that may lawfully be towed by it at one time as specified by the motor vehicle's manufacturer.

GTM (Gross Trailer Mass) is the mass transmitted to the ground by the axles of a trailer when the trailer is loaded to its GVM and connected to the vehicle towing it.

GVM (Gross Vehicle Mass) is the maximum loaded mass of the vehicle as specified by the vehicle's manufacturer.

Bridges may be damaged by closely spaced heavily loaded axles.



Liability

Failure to comply with the requirements in this information bulletin or associated Victorian Government Notices and permits will leave the driver and operator liable for prosecution.

Victorian law requires owners to maintain their vehicles in a roadworthy condition, and at all times comply with the standards for registration.

It is important that legal mass limits are not exceeded. Overloading causes serious damage to Victoria's road network and can endanger the safety of road users.

New provisions in the Road Safety Act 1986 mean that the chain of responsibility applies to mass and dimension limits and load restraint requirements (refer to VicRoads website for more information on Chain of Responsibility requirements).

Your responsibility

Every effort has been made to provide accurate information at the time of production of this information bulletin. However, any trip is made at the absolute risk of the registered operator and driver of the vehicle.

VicRoads contact

For further information contact VicRoads' Manager – Statewide Permits Group:

- Telephone (03) 9881 8852; or
- VicRoads website: **www.vicroads.vic.gov.au**



Drivers and operators are both responsible for the management of vehicle mass and dimensions.

For further information: Please visit www.vicroads.vic.gov.au. Telephone: 13 11 71