

# Vehicle and Float Requirements

The first step to safe towing is to ensure the vehicle, trailer and load are suited. While modern vehicles are lighter and provide better service for normal motoring, some do not have the necessary characteristics for towing.

Other ways towing will affect your vehicle are:

- decreased acceleration and braking performance
- reduced vehicle control and manoeuvrability
- increased fuel consumption.

These effects become more pronounced on your vehicle as trailer size and the mass of the load increase. By understanding the limitations of your vehicle and trailer, you can help prevent crashes and both structural and mechanical damage to your vehicle.

## Legal requirements

To ensure the safety of yourself and other road users, you must abide by the laws governing the towing of trailers. These are:

- the vehicle and trailer must comply with all relevant standards for registration
- the vehicle and trailer must be in a roadworthy and safe condition

- all trailers must be fitted with a rear number plate and a registration label fixed to the left side or rear of the body, with the label facing outward
- towbars and couplings must not obscure the towing vehicle's number plate or rear lights when the trailer is not connected
- towing more than one trailer is prohibited
- people are not permitted to ride in trailers
- the speed limit for a vehicle towing a trailer is the same as for a normal vehicle

## Definitions

Aggregate Trailer Mass (ATM) is the total mass of the laden trailer when carrying the maximum load recommended by the manufacturer. This includes any mass imposed onto the drawing vehicle when the combination vehicle is resting on a horizontal supporting plane.

Gross Trailer Mass (GTM) is the mass transmitted to the ground by the axle or axles of the trailer when coupled to a drawing vehicle and carrying its maximum load approximately uniformly distributed over the load bearing area. If you are unsure about the mass of the trailer and its load, you can have it weighed at a public weighbridge.



## Towing vehicle

Ensure the vehicle is properly equipped for the type and size of trailer:

- towbars and couplings are to be of a suitable type and capacity
- electrical sockets for lighting are required
- suitable brake connections may be required
- extra mirrors are required for towing large trailers

Ensure that the maximum towing capacity of the motor vehicle as specified by the vehicle manufacturer and the capacity of the towing apparatus fitted to the vehicle is not exceeded.

Note: This information can be obtained from the owner's manual or the manufacturer.

A properly designed and fitted towbar is essential for safe towing. The load capacity of the towbar must be at least equal to the loaded mass of the trailer. As a guide to assessing this, towbars manufactured after 1 January 1992 for passenger vehicles should be marked with their load capacity and the vehicle model for which they are intended. The towbar must be fitted with attachments for connecting safety chains capable of withstanding the rated load capacity of the towbar. The safety chain attachments must be mounted adjacent to the tow coupling and arranged so as to maintain the direction of the towed vehicle in the event of coupling failure or disconnection. Towbars, including towbar tongues, must not protrude dangerously or have sharp corners.

## Couplings

Typical approved couplings for light trailers are:

- 50 mm ball couplings for trailers with an ATM up to 2300 kg
- heavy duty 50 mm ball couplings for trailers with an ATM up to 3500 kg
- pintle hook couplings for trailers with an ATM up to 4500 kg

Couplings should be marked with their load capacity and the manufacturer's name or trademark. Trailers must meet all registration requirements. Check with your Dept. of Transport. Minimum trailer brake requirements are as follows:

- trailers not over 2000 kg GTM must have an efficient braking system operating on the wheels on at least one axle trailers up to and including 2000 kg GTM are permitted to have over-ride brakes
- brakes (other than over-ride) must be able to be operated from the driver's seated position

- trailers over 2000 kg GTM require a brake system (breakaway brakes) that automatically applies if the trailer becomes detached from the towing vehicle
- trailers over 2000 kg GTM must have brakes operating on *all wheels*.

## Safety chains

Safety chains are required on trailers that do not have breakaway brakes. The number and type of safety chains required when towing is determined by the trailer's ATM.

- Trailers with an ATM of 2500 kg or less, must have at least one safety chain that complies with Australian Standard 4177.4-1994 connected to the towing vehicle
- Trailers greater than 2500 kg and up to 3500 kg, must have two safety chains that comply with Australian Standard 4177.4-1994 connected to the towing vehicle
- Trailers greater than 3500 kg and up to 4500 kg, must have a safety chain that complies with Australian Standard 2321-1979 connected to the towing vehicle

The length of the safety chain/s must prevent the trailer's drawbar hitting the ground if the trailer is detached from the towing vehicle. The safety chains must be properly connected to the tow bar with attachments capable of withstanding the specified breaking load of each chain. Do not use padlocks.

## Load equalizers

Many people, particularly those towing horse floats, use load equalisers. This device transfers some of the load imposed on the towbar ball to the front and rear suspension of the towing vehicle. This retains vehicle ride height and effective steering control. Heavy duty towbars and attachments should be used with equalisers. Consult the towbar manufacturer or float dealer before using this equipment as it may overload the towbar and its components.

If you make sure all your vehicle and load requirements are safe, the only thing left is to drive safely. See our fact sheet on

***Towing –  
Driver Responsibilities  
See you at the next competition!***