

A-Frame Towing

This information bulletin details the requirements for flat-towing a motor vehicle that is connected to the towing vehicle by a triangular frame commonly known as an A-frame.

At all times the regulatory requirements take precedence over the information provided here.

An A-frame is a triangular frame that connects the towed vehicle to the towing vehicle and is used to tow without lifting the towed vehicle.

Towing more than one vehicle at time is not permitted.

The use of “Dolly, Gypsy or Buddy” trailers is not permitted unless moving a disabled motor vehicle to the nearest safe place.

Towing Capacity of Towing Vehicle;

The loaded mass of the towed vehicle must not exceed the towing capacity of any component in the combination including;

- The towing capacity of the towing vehicle as specified by the vehicle manufacturer.
- The rated capacity of the tow bar.
- The rated capacity of the tow coupling.
- The rated capacity of the “A”-frame and connection hardware.

Having regard to the above limits the combination shall have a towed mass of at least 3.5:1. This means the mass of the towing vehicle is 3.5 times the mass of the loaded towed vehicle. This ratio is to provide adequate levels of vehicle stability, handling and braking performance.

Many vehicle manufacturers specify a maximum un-braked towing capacity. This means regardless of the above 3.5:1 ratio if the towed vehicle’s mass is greater than the towing vehicles manufacturers un-braked towing capacity the brakes of the towed vehicle must be operational whilst being towed.

Dimension Requirements;

The combination of towing vehicle and towed vehicle must not exceed 19 metres in length.

The distance between vehicles must not exceed 4 metres.

If the distance between the vehicles exceeds 2 metres a distinctive brightly coloured warning device at least 300mm square must be fitted at the mid-way point of the A-frame and visible from either side.

Lighting Requirements;

The following lights must be fitted to the rear of the towed vehicle and operational whilst under tow, securely fitting a separate light bar is acceptable in place of the towed vehicles originally fitted lights.

- An amber turn signal indicator on each side,
- A red stop light each side,
- A red tail light each side,
- A number plate light to illuminate the rear registration plate.

The above lights may be separate assemblies or within a single lamp assembly fitted to each side.

Certification;

An A-frame must meet the requirements of [Australian Design Rule 62 \(ADR62\)](#).

The frame must be marked with the following;

If it is a proprietary item;

- Manufacturers name or Trade Mark and
- Make and Model of vehicle it is to be connected to and
- Rated capacity of the frame and connection hardware.

Custom or Homemade A-frames;

The frame must be;

- Certified by an [Approved Vehicle Certifier](#), (AVC)
 - The AVC is to provide the Department with their report so a Modification Plate can be produced,
- Fitted with a Modification Plate,
- Stamped with the Vehicle Identification Number (VIN) of the towed vehicle and
- The Manufacturers name and
- Rated capacity of the frame and connection hardware.

NOTE: a custom or homemade A-frame cannot be changed from the certified vehicle to another vehicle unless re-certified for the other vehicle.

Safety Chains and Shackles;

ADR 62 specifies the standard required for safety chains that are used to secure a trailer to a tow vehicle. Use the following table as a guide for the sizes acceptable;

Safety chains may be attached to the towbar attachment points with a bow, D or pin shackles. As they are considered integral with the towbar, safety chain attachment points on the towbar that include a pin shackle or bolt for attaching the chain are subject to performance requirements as per ADR62/01 or 02 – Mechanical Couplings between Vehicles.

Shackles used to attach safety chains to towbar attachment points should at a minimum exceed the required rating of the safety chain, as determined by the ATM of the road trailer. Additionally, the shackle should be fit for purpose and compatible with the safety chain in terms of strength and size.

This may be fulfilled by:

- a) The use of a shackle that is compatible with the safety chain and complying with AS2741. In this case, the shackle must have the appropriate markings, as identified below:
 - Manufacturers Identification, and
 - Quality or Grade as M or 4, or S or 6, and
 - Working Load Limit (WLL), the maximum load that may be applied to the shackle,
 - Identification marking to correlate the shackle to test certificate.

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Shackle Selection:

Trailer ATM (kg)	Chain Size Classification AS4177.4 - 2004	Chain Marking AS4177.4 - 2004	Minimum size of Shackles (Body diameter not pin size). For Bow or D-shackles complying with AS2741		
			Grade M (or 4) D Shackle	Grade S (or 6) D Shackle	Grade S (or 6) Bow Shackle
Up to 1000Kg	1000	4177-10	6mm WLL 250kg	6mm WLL 250kg	5mm WLL 250kg
1001 to 1600Kg	1600	4177-16	10mm WLL 400kg	6mm WLL 400kg	6mm WLL 400kg
1601 to 2500Kg	2500	4177-25	13mm WLL 625kg	8mm WLL 625kg	8mm WLL 625kg
2501 to 3500Kg	3500	4177-35	16mm WLL 875kg	10mm WLL 875kg	10mm WLL 875kg

b) Alternatively the use of a shackle that is compatible with the safety chain and is of a reputable brand. In this case the shackle will have appropriate markings to show the brand and or part identification sufficient to trace its brand and strength back to the original manufacturer.

The original document produced by the Australian Government and further information can be found here: https://infrastructure.gov.au/vehicles/administrators_circulars/index.aspx

Web Links;

AVC's can be located at the following link; http://www.transport.tas.gov.au/vehicles/vehicle_inspections

The [Australian Standards](#) can be purchased from; infostore.saiglobal.com/

The [ADRs](#) can be accessed at the following; www.infrastructure.gov.au/roads/motor/design/adr_online.aspx

For more information contact:

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