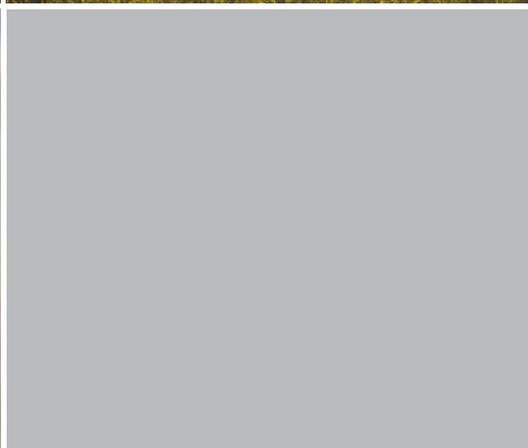


**Without
A Hitch:**



Top tips for taking
a towing caravan
holiday in Australia





For many Australians, owning a caravan represents more than an opportunity to get out and explore the stunning locations this country has to offer.

It also gives you the freedom to enjoy the outdoors while feeling you're part of a community of like-minded travellers, with a few comforts from home thrown in.

Owning a caravan is about ease. It's a simple way to have a good time on holiday, because within a few minutes of reaching your destination, you're already set up and relaxing.

However, both beginners and seasoned caravan holidaymakers alike know that

towing a caravan still requires thought and preparation. Our e-book is designed to make your trip simple and straightforward, ensuring your caravanning holiday runs smoothly.

With tips ranging from hitching up your van to packing it correctly – and dealing with tricky conditions on the road to reversing into a caravan site – we'll have you pulling out of the drive and on your way to a trouble-free holiday in no time.

Towing basics – how to tow a caravan

Safe towing is all about following the guidelines set out for you by the manufacturers of your caravan and tow vehicle.

Both are rated for **maximum loads at which they can safely operate**, and every time you plan a holiday, it's worth revisiting these figures to make sure you're still within the limits.

The caravan definitions can get a little tricky though – in this chapter we'll set them out so that they're always handy for a quick refresher prior to a trip.

Know what you can tow:

The towing capacity of cars

The reason why it's important to regularly check your towing numbers is that as you modify or refurbish your van, or upgrade the equipment you take along, the amount you're towing will vary.

Even if you travel regularly with your caravan, AL-KO Technical Manager Rob Funder recommends that you weigh what you put in. "It's easy to guess totally wrong when you just estimate the weight you're adding. This could lead to overstepping the payload, which will result in excess strain on your vehicle."

Remember to include full water and **gas tanks**, as well as any accessories fitted to the caravan that weren't included in the off-the-shelf fit-out, such as a mounted television or a weight-distribution hitch.

The number one rule in the towing game is to never exceed the lowest rating in your towing combination. This includes the towing rating of the car and tow bar, as well as the Gross Trailer Mass of the caravan. For example, your car may be rated for a towing load of 3000kg, but if your tow bar can only pull 2500kg, this is the upper limit you need to use when hitching up a caravan. And if your caravan's maximum rated capacity is, for example, 2000kg, that's all you can load your total van weight to, regardless of the car capacity or the tow bar capacity.

"My car doesn't have a tow rating"

Older cars may not have a specified tow rating. In this situation, **national law** dictates what you can tow, which is 1.5 times the mass of the unladen vehicle, assuming the caravan has brakes. If you're travelling with a small, vintage caravan, it must weigh the same – when fully packed – as the unladen vehicle.



image. Brett Goldsmith

Towing weight glossary

The following are terms you'll come across when referring to the literature on towing that accompanies both your car and caravan. It's important to note they will all have limits – set by the manufacturer – that cannot be exceeded under any circumstances.

- **Tare mass:** The weight of the empty caravan with all factory fittings.
- **Payload:** The maximum weight that can be loaded into the caravan for towing, as set by the manufacturer. This does not include the weight of people inhabiting the caravan while stationary, but does need to take into account water, gas and accessories you've added to the caravan since purchasing it.
- **Tow ball mass:** The weight placed on the tow ball of the towing vehicle by the caravan.
- **Aggregate Trailer Mass (ATM):** The tare weight of the caravan along with the payload, plus tow ball mass. This is the load that your car will have to pull.
- **Gross Trailer Mass (GTM):** ATM minus tow ball mass. This is the maximum weight of the loaded caravan that can be supported by its wheels, not counting the portion supported by the car when hitched – or the jockey wheel when parked.
- **Gross Vehicle Mass (GVM):** This is the limit on weight that the car's wheels can support – including the weight of

the car and passengers – as set by the manufacturer. GVM also includes tow ball mass when the car is hitched.

- **Tow bar rating:** As determined by the manufacturer of the tow bar, the weight that it can safely pull.
- **Gross Combination Mass (GCM):** GVM + GTM. This is a limit set by the maker of the tow vehicle on the total weight the car can safely travel with while towing.

The weight game

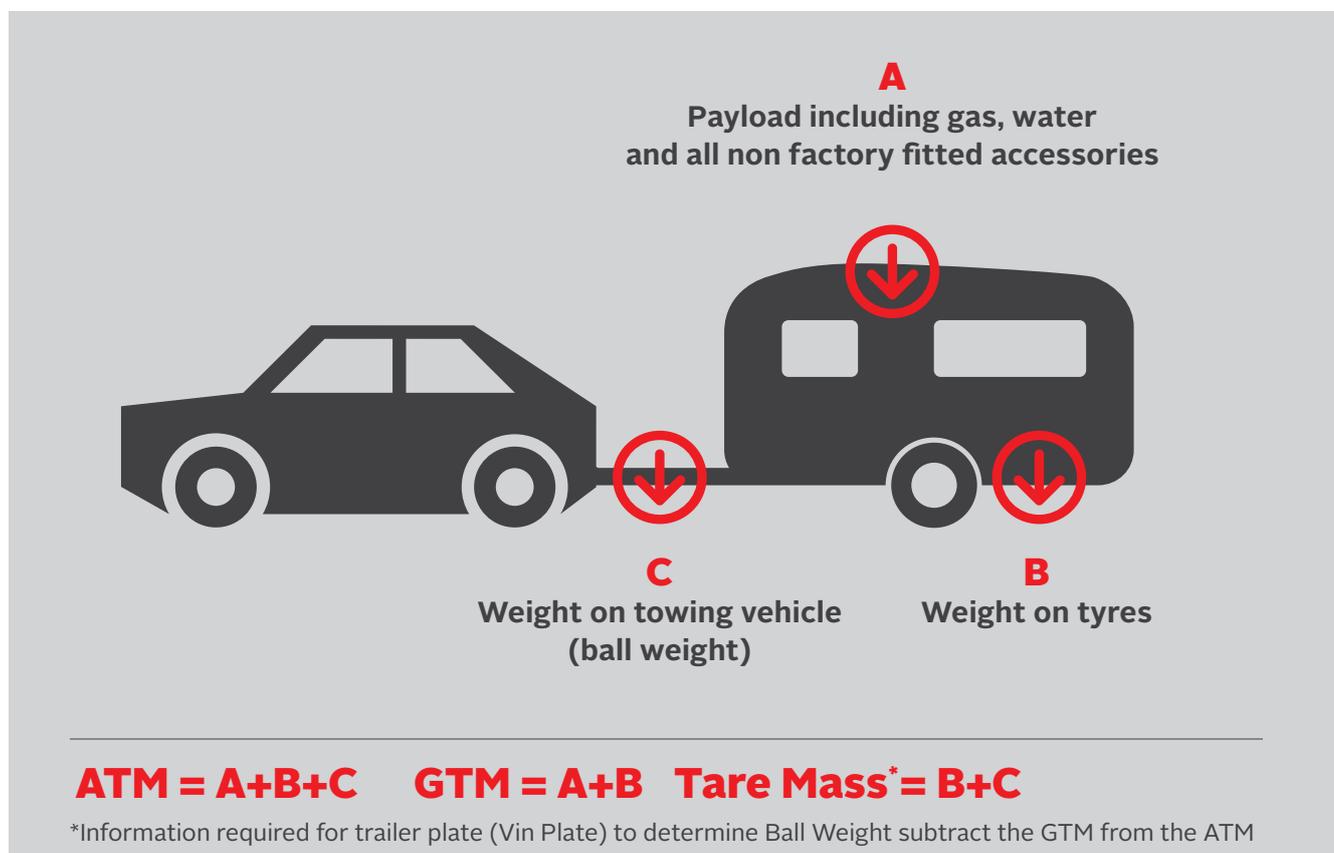
With so many figures to consider, even seasoned caravanners head to a **public weighbridge** with their fully loaded van and vehicle to check they are not exceeding any of their caravan towing capacity limits.

Some ratings are easier to measure than others though. While the GCM would obviously require you to park both the loaded car and packed caravan on the weighbridge, checking your tow ball mass is slightly trickier.

To measure this, you need to park the car so that the coupling is hovering over the weighbridge, while the caravan's wheels remain off. Then, unhitch so that your jockey wheel is firmly on the bridge, and drive the car off.

This will give you the equivalent mass as of that imposed on the tow ball, without taking into account the mass over the caravan's axles.

Alternatively, specialised tow ball scales are available to take this measurement at home.





Preparing your caravan

Unfortunately, heading off for a break in your caravan isn't quite as simple as throwing some essential items in the car and making for your favourite spot.

For safety purposes, it's good to refresh yourself on what needs to be done before you leave.

In this chapter we'll go over a must-follow hitching checklist and talk about some of the finer points for caravan preparation before a holiday.

Hitching and caravan safety checklist

The following 10-point hitching checklist is worth running through even if you tow regularly.

- Do a quick check of the coupling apparatus to ensure no corrosion has occurred while the van has been in storage.
- Remember only to hitch up on stable, level ground.
- Don't remove the load from the jockey wheel until the coupling is fully attached to the tow ball and has been double checked by pulling upwards on it. Once you are firmly hitched, ensure that the jockey wheel is safely stowed.
- Connect the 12V power cable and check the indicator and brake lights on the van.
- Attach caravan mirrors and check that you have full visibility behind the caravan.
- Connect your safety chains or cables, noting that if your caravan is over 2500kg you are required to have two chains crossed under the coupling, so that in the event of the car and caravan separating via the coupling, the front of the van will remain suspended.
- Check that the tyre pressures in both tow vehicle and caravan are at the manufacturers' specified levels for towing. Check the tyres for cracks and sufficient tread – especially if your van has been stored for a long period of time.



- Check that all registration and number plates remain visible.
- If your car is automatic, top up with extra transmission oil coolant to prepare for towing.
- Take a test drive at low speed to check that nothing is hindering your vehicle's handling, and that the caravan's brakes are working effectively.

Learn more:

[Pre-travel caravan safety checklist.](#)

[Is your caravan roadworthy?](#)

[Understanding your caravan.](#)

To lubricate or not?

If you spend time on online caravan forums, you'll notice there's a bit of confusion out there as to whether a tow ball needs lubricating before heading out on a trip.

Funder recommends using a small amount of multipurpose grease on a tow ball that's meeting a standard coupling. "However, for special purpose sway-control hitches like our **AKS range**, you don't want to lubricate the ball at all, since this will negate the effect of the friction pads, which grip the ball and resist caravan sway."

Also, if you're using an off road coupling, it may need additional lubrication in the shaft that provides rotational movement for the caravan over rocky terrain.

For example, if you're using an **off road coupling**, you should pump a small amount of grease into the nipples at the front and rear of the body, until a small amount of grease appears at each end of the shaft.

Off road preparation

If you own an **off road caravan** or camper trailer, you need to tick a few more boxes before you head off. When you're travelling to more remote locations, you should consider if you're carrying everything you require to maintain your towing combination by yourself.

At the base level, your caravan towing equipment should include a full tool kit and additional spare tyres. Consider matching the tyres on your van to those on your vehicle so that spares can be used on either.

Packing for an even load

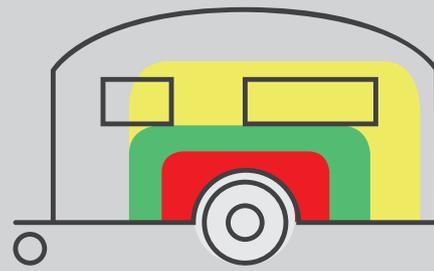
By carefully distributing the weight of your load within the caravan, you'll have a much easier time getting level hitch between the caravan and car, and you'll decrease the possibility of sway on the highway.

This is also important because if there is too much weight placed on the tow ball, the front wheels of your car will lose traction slightly, resulting in steering problems and reduced braking efficiency.

Generally speaking, pack the heaviest items at floor level around the axles of the van, so that the wheels are supporting their share of the weight, rather than distributing too much to the tow ball. Lighter items can be packed around the front and back of the caravan.

If – when you've packed your gear correctly – you still notice a dip in the coupling, you'll need to consider having a weight distribution

Weight Distribution



● Light Weight ● Heavy Weight

● Medium Weight

hitch fitted. These devices, which consist of two arms hanging below the coupling, use tension created by springs and chains to transfer some of the weight from the vehicle's rear wheels to those at the front.

Weight distribution hitches aren't suitable for all caravans though, so check with your dealer before having them installed.



Chapter 3

On the road

Towing a trailer of any description requires a new set of driving skills, as well as a heightened level of attention to conditions on the road.

If you have the time, it's a good idea to take a **caravan driving course**. Whether you're brand new to towing, or an experienced caravanner who could do with an update on towing techniques, the following chapter is for you.

Here we'll cover general towing techniques, as well as tips on handling tricky situations. We also tackle that constant topic of caravan park discussion: reversing your caravan.

Towing techniques

When you have a couple of tonnes hitched behind your car, the first thing you notice is that your vehicle handles in a vastly different way than you're used to.

Turning, accelerating and braking feel different, and for the beginner this can require some serious getting used to.

No matter how experienced you are, rather than getting straight on the highway with a fully loaded caravan, a quick test drive around the neighbourhood is a smart way to readjust to towing.

In terms of technique, make your acceleration, braking and turns as smooth as possible. Give yourself plenty of space

in traffic, allowing for the reduced braking capacity of your vehicle, which results in an increased stopping distance. And, in both manual and automatic cars, use your lower gears when descending hills so that strain on your brakes is kept to a minimum.

Plan your turns to allow for the caravan's tendency to cut through corners. Vehicle combinations over 7.5m long are legally allowed to display "do not overtake turning vehicle" signs, which makes it legal for you to move into the right-hand lane in order to make a wider turn into a sharp left-hand corner – and visa versa.

Apart from the increased effort on your car, towing also heightens strain on the driver. To avoid dangerous lapses in concentration caused by towing fatigue, it's recommended that you plan shorter days in the car and break these up with more rest stops than you normally would.

Finally, it's important to be aware of local road rules when towing. For example, although laws are standard across the country for the most part, in Western Australia, vehicles with a trailer have a 100km/h limit, while you are permitted to travel at the posted speed limit in the remaining states, assuming your combination is below 4500kg.

Learn more:

A guide to towing your caravan with ease.

Stop and check

Frequent rest stops are also a good opportunity to do a quick safety check on the caravan during the journey. Make sure that safety chains and 12V electrical cables are still firmly attached, and open up the caravan to make sure that no bumps in the road have disturbed your even packing arrangements.

To check for overheating caravan brakes and wheel bearings, feel for their approximate temperature by holding the back of your hand near the wheels, remembering that caravan brakes are hotter than car brakes.

Towing etiquette

While you're focusing on towing your caravan, it's easy to forget the other drivers you're sharing the road with. Good towing etiquette includes keeping to the left-hand lane and only overtaking when you're confident you have enough power and distance to make a move.

In your slower vehicle, keep an eye on traffic that may be building up behind you on a single lane road, and when it's safe to do so pull over in a rest bay to allow people to pass.

How to deal with caravan sway

Caravan sway occurs when the trailer starts to swing from side to side independently of the tow vehicle. It's dangerous, and even in a properly-set-up towing combination can be caused by a range of situations including:



wind gusts on open highways, passing trucks, catching a soft edge of the road with the caravan's tyres, or evasive manoeuvres to avoid potential accidents involving wildlife or other vehicles.

Having overseen many developments in anti-sway technology, Funder is an expert in this area of towing. He says that the best course of action when your caravan starts swaying is to resist the urge to apply your car's brakes. "Don't panic – sudden braking will only add to the problem. Instead, you want to keep the steering wheel steady and slowly accelerate until the sway stops. Then decelerate to a safe speed. However, the best insurance against dangerous caravan instability is to fit your vehicle with



Electronic Stability Control (ESC), which will monitor the stability of the caravan and automatically apply the van's brakes when dangerous lateral movement is detected.”

Funder says it's also important to pull over and investigate the source of the problem, which may involve an uneven load in the caravan itself.

Many aftermarket products exist to minimise sway, including ESC and **stabiliser couplings** with friction pads that grip the tow ball and dampen swaying movements.

**Learn more: Caravan safety tips:
How to handle instability.**

Changing a caravan tyre on the road

While changing a tyre on a caravan won't be too much of a challenge in itself, there

is an extra need for safety if you're unlucky enough to get a flat on a busy highway with a narrow shoulder.

In this situation:

- Never uncouple – you're going to be taking one wheel off the ground, which will allow the caravan to swivel on its remaining tyre if it's not held steady by the car.
- Wear a high-visibility safety vest to be sure that other drivers can see you.
- Depending on which side of the caravan the puncture is, and if the road has an arch, you may need to haul the problem wheel onto a block to level the van out before jacking.

Learn more: How hard could it be?

**Changing your caravan's tyre
on the road, safely.**

Reversing your caravan

Perhaps the most stressful part of towing a caravan is reversing, especially into a small site at a caravan park with plenty of onlookers.

But whether you're new to caravans or just haven't been out on the road for a while, the tips below will soon have you mastering this art to the applause of your fellow holidaymakers.

Firstly, good tow mirrors – which are compulsory in most states – are going to be very helpful, especially if your caravan is wider than your car.

Pay attention to the rear corners of the caravan – these are now leading the way and will turn in the opposite angle to your car due to the pivoting action of the coupling. As you turn your wheel to the right, the rear of the caravan will start to advance to the left, and vice versa.

A good way to reduce the confusion is to keep one hand on the six o'clock position at the bottom of the steering wheel. Now, whatever direction you move that hand, the caravan will follow. To move the caravan to the right, simply move your bottom steering hand in that direction.

Once you have direction under control, the secret to reversing a caravan is to go slowly and make only slight adjustments to your steering.

Learn more:

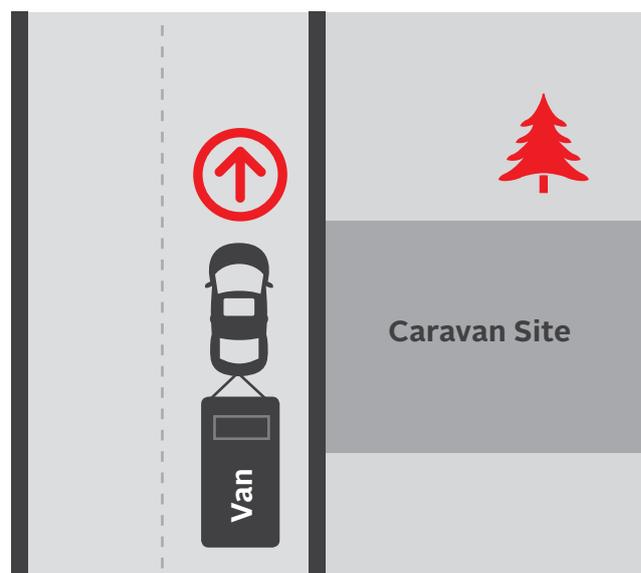
[The fundamentals to reversing a caravan.](#)

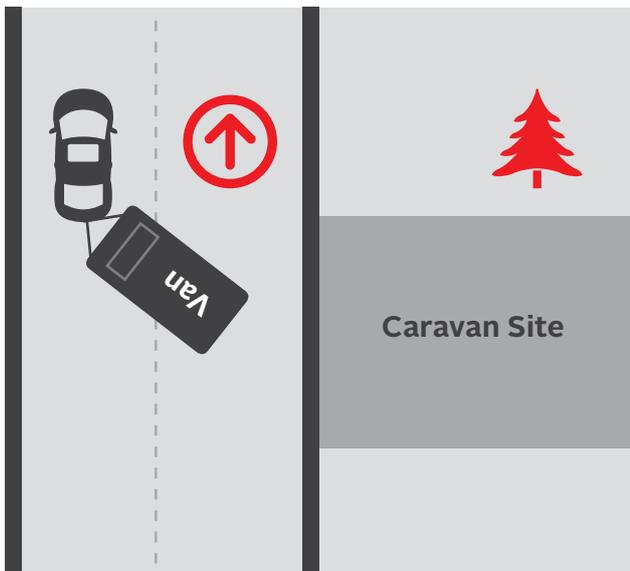
Reversing into a caravan site

Although you'll occasionally find that a site at a caravan park allows you to drive through it and park your caravan along the way, you're still going to have to reverse it into the driveway when you come home, so it's essential for everyone who tows to become confident in reversing.

Remembering the basic points covered above, here's a fail-safe method:

1. Always try to turn in from the right – this way the driver's side window will afford a good view of how things are going at the rear of the caravan.
2. Have your travelling partner stand on the opposite side of the caravan so they can keep an eye on your blind spot.
3. An easy reverse turn starts with a good set-up. Coming in on the right-hand side of the road, slowly drive your vehicle past the site and pause when the front of the caravan is midway past it. This is your reference point, which we'll talk a little more about below.





4. Now, make a slow “S” turn, first taking your car to the left, then right, so that the vehicle moves to the other side of the road and straightens up before coming to a rest. What you’re aiming to do is manoeuvre the caravan so that it’s pointing into the site on about a 45-degree angle.
5. Finally, put the car in reverse and slot the caravan into the site with a smooth right-hand turn while keeping an ear out for instructions from your lookout.

Don’t worry if it doesn’t happen the first time – if you find you haven’t quite got the angle right, it may be easier to pull out, straighten up and start again.

It’s important to note that the reference point for your towing combination won’t be the same as anyone else’s, since variations in the length of your vehicle and caravan need to be taken into account. As you practise and refine your technique, you’ll find that when setting up your turn, you may need to initially pull up a little shorter or longer than we’ve indicated.

The other tip about reversing turns is that if you’re positioning your caravan in your driveway instead of a caravan site, you’re not going to have to use the extreme sides of the road (as in the example above), since caravan park roads are generally not much wider than a single lane. But you will have to take traffic into account and be extra cautious.

Conclusion

With the vast range of picturesque locations to visit in Australia, your caravanning adventure has just begun.

And when you’re home, there’s always plenty that you can do to improve your caravan set-up and make the next holiday even more relaxing.

Check out our **Without A Hitch site** for all the latest caravanning information including: cleaning your caravan, choosing a van for off road conditions, tips on caravan maintenance, caravan refurbishment, DIY improvements and purchasing a caravan.

And, if you’re interested in finding out about the towing technologies that AL-KO produces to make your caravanning experiences safer and easier, there is a wealth of information online for solutions such as **ESC** and **replacement parts and accessories**.

Safe travels and happy towing.

AL-KO

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