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## **CARAVAN TOWING GUIDE**



CARAVAN SAFETY & SECURITY GROUP

This guide has been written to help both experienced and novice caravanners to tow their caravans safely and legally.

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The guide applies to all trailer caravans:

- with a maximum laden weight not exceeding 3,500kg
- overall width not exceeding 2.55m
- overall body length not exceeding 7m, excluding drawbar and coupling.

This is the maximum size of caravan that can be legally towed by a motor vehicle whose maximum gross vehicle weight is no more than 3,500kg.

Although there are caravans in use whose length is greater than 7m, these can only be towed by vehicles with a weight greater than 3,500kg, typically commercial vehicles.

Please note for the purposes of this code, *mass* and *weight* are interchangeable terms.

In this guide, we provide simple, easily understood advice on:

- the safe matching of caravans to cars
- the calculation of the ratio of caravan weight to car weight for safe towing
- what you need to take into account before towing a caravan
- good driving techniques so you can tow with confidence
- the legal aspects to towing a caravan.



The NCC would like to thank: The Camping and Caravanning Club (CCC), The Caravan and Motorhome Club (CAMC) and Caravan Safety and Security Group (CSSG) for their support in compiling the content within this document.

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Find out more about touring caravan payloads at [www.tourerinfo.co.uk/payloads](http://www.tourerinfo.co.uk/payloads)

The masses defined below are in accordance with European Regulations for masses and dimensions of vehicles and will generally be stated in a caravan's owner's manual.

*(Alternative/previous names of terms are shown in italics).*



## Maximum Technically Permissible Laden Mass (MTPLM)

*(Maximum Authorised Mass)*

Stated by the caravan manufacturer on the caravan weight plate (normally mounted close to the entrance door but can be mounted anywhere on the external skin – some manufacturers are now mounting them inside the gas locker).

MTPLM is the absolute maximum weight that the caravan must not exceed to be legal on the road and it includes allowances for the user payload, all fluids (water etc.) and personal belongings that you may wish to carry (clothes, food etc.).

## Mass in Running Order (MRO)

*(Unladen weight)*

Mass of the caravan equipped to the manufacturer's standard specification stated on the caravan weight plate. From 2011, an NCC Approved caravan will have an allowance in the MRO for basic equipment such as gas bottles

and the electrical hook-up cable. In older caravans, the equipment included in the **MRO** will be different, so check your handbook for what is included.

The weight of your leisure battery is only included in the caravans **MRO** if it was supplied by the caravan manufacturer. Where the leisure battery is supplied by your retailer then the weight of the battery must be taken into account within your payload allowance.

From 2015 the rules changed again so that manufacturers can now specify how much fresh water they have included in their **MRO** calculation. This applies not just to storage tanks but to water heaters and associated pipework too. Most manufacturers have elected to choose zero water to be included in their **MRO**.

Your caravan's handbook may tell you how the **MRO** has been calculated.

## User payload

*(Caravan Allowable Payload)*

Payload relates to the weights of all items carried in a caravan and is the allowance you have for: equipment, including any equipment fitted by the dealer – see optional equipment below and personal effects. The total of the allowances represents the difference between the **MTPLM** and the **MRO**.

## Optional equipment

Items made available by the manufacturer over and above the standard specification of the caravan, e.g. spare wheel, air conditioning, motor movers etc.

## Personal effects

Those items which you carry in a caravan and which are not included in the MRO or optional equipment (e.g. leisure battery, clothes, crockery, cooking utensils, bedding, portable TV, portable radio, footwear, books, awning and food).

In the UK the caravan minimum personal effects payload for NCC approved caravans is calculated from the following formula. **10L + 10N + 50**.

Where:

**L** is the body length of the caravan in metres and

**N** is the number of berths.

The **+ 50** is to take account of items such as cooking equipment, plates and the leisure battery.

**Note:** Non NCC Approved caravans may not have the additional + 50kgs added to their payload.

## Actual laden weight

The actual weight of the caravan when you use it including its optional equipment and your personal effects. You need to know this weight because it will determine whether you are legally or illegally towing, and also within your caravan towing experience. Later in this guide we tell you how you can calculate or otherwise determine the actual weight of your caravan.

## Hitch limit

The maximum vertical static load that the towing coupling can bear, stamped on a plate on the coupling. See also the caravan drawbar limit, sometimes printed in the owner's manual.

## Hitch height

The height of the centre of the coupling hitch should lie in the range of 385mm to 455mm above ground level with the caravan laden and floor level front to back.

## Noseweight

The downforce that the caravan's coupling head imposes on a car's towball, measured by a noseweight gauge - when stationary it should never be greater than the towbar /ball or hitch limit values, whichever is the lower.

The towing vehicle in this guide is assumed to be a car. The masses defined below will generally be stated in a car owner's manual.

## VIN plate

A plate fitted by the car manufacturer to identify the vehicle and stating the vehicle's masses.

## Kerb Weight (KW)

Car manufacturers' definitions vary but in general terms it is the weight of the car in working order (with fuel and fluids). Depending upon the exact definition used by the car manufacturer, this may include a 68kg allowance for the weight of a driver and a 7kg allowance for his luggage, but will not include a weight allowance for passengers or their luggage. Most car manufacturers now include the driver in their KW.

## Gross Vehicle Weight (GVW)

*(Maximum Permissible Weight (MPW) or Maximum Authorised Mass (MAM))*

The maximum allowable weight of the car when fully loaded, when towing, this will include the noseweight of the caravan as stated on the car's VIN plate.

## Maximum Towing limit (MTL)

*(Maximum Permissible Towing Mass (MPTM), Manufacturer's Braked Towing Limit)*

The maximum weight of a braked trailer that the car is allowed to tow.

## Gross Train Weight (GTW)

The maximum permitted combined mass of the car and trailer as specified by the car manufacturer as stated on the car's VIN plate. Usually the sum of the Gross Vehicle Weight and Towing Load limit. However, the car manufacturer sometimes restricts the car's capability to carry payload within it (e.g. 7 occupants, perhaps) while simultaneously towing a heavy trailer or caravan in such cases, the **GTW** may be less than the sum of **GVW** and **MTL**. The **GTW** must not be exceeded.

## Noseweight Limit

*(S-value, Tongue Weight, Tongue Load, Nose Load or Towbar load Limit)*

The maximum vertical static load that the towbar can support through the towball. Published by the towbar manufacturer and shown on a plate on the towbar. This may also be known as the noseweight.

The car manufacturer will also define a limit for maximum vertical static load that the car can tolerate (and this will usually be quoted in the Owner's Manual). This figure can differ

from that marked on the towbar, in which case the lowest value is the limit that must be observed.

## Towball height

The height of the centre of the towball should lie in the range of 350mm to 420mm above ground level when the car is on level ground and laden. Most manufacturers define this height with the car at full load, which can mean the towball will sit above this height range at more normal loading conditions. Note that for cars with dynamic ride height adjustment, the suspension must be at the normal running level before taking a measurement of

towball height. Some 4x4 vehicles can be exempt from this requirement. You are advised to check with the 4x4 vehicle manufacturer.



The mass of the personal effects required for two people to go caravanning is approximately 100kg.

This may include bedding, clothing, cooking utensils, crockery, cutlery, food and external water carrier. A further 25kg for each additional person should be allowed for items such as books, drinks, and other non-essentials.

You can:

- a) weigh each item before it is placed in the caravan and add the total to the **MRO** or
- b) take the fully loaded caravan to a public weighbridge or
- c) use a portable weighing scale designed for use with trailers. These typically weigh one wheel at a time and then add up the weights.

**Remember:** The weight of the battery, gas cylinders and any manufacturer or dealer options must always be considered. Note an allowance for gas, fluids and the hook up cable is included in the **MRO** for caravans manufactured after 2011. For caravans manufactured prior to 2011 these items need to be included within your payload. From the 2015 model year, the allowance for water may be set at zero.

Weighbridges can be found at the following website:

[www.gov.uk/find-weighbridge](http://www.gov.uk/find-weighbridge)

**Note:** Although regularly checked, weigh bridges may give varying results as they are calibrated for much heavier vehicles. A public weigh bridge operator will give you a written or printed record for each weighing.

This ratio is the actual laden weight of the caravan expressed as a percentage of the KW of the car, i.e:

$$\frac{\text{The MTPLM of the caravan}}{\text{KW of the car}} \times 100\%$$

### Why is this ratio important?

It is used to ensure your fully loaded caravan is appropriate for your towing experience as it has a major influence on towing stability.

### The caravan industry recommends:

For a novice caravanner, ideally, this ratio should not exceed 85%. For an experienced caravanner the maximum recommended ratio is 100%.

**Remember:** The weight of your personal effects and the optional equipment you have fitted will affect the result: Keep the caravan as light as possible - the lower the weight, the better the match and, provided items are stowed properly, the safer it is to tow.

**Note:** Care must always be taken not to exceed the car's loading and towing limits including the combined MAM which takes preference over the weight ratios as mentioned above.



1. Check your driving licence is suitable for your car and caravan combination. (see page 31)
2. Stay safe and legal.

To ensure that the combination of car and caravan is legal for use on the public highway you must ensure that:

- your car's **GVW** is not exceeded.
- your caravan's **MTPLM** is not exceeded.
- the combined laden weight of your car and caravan does not exceed the car's **GTW**. This figure should also be within the limit specified by your driving licence.

When determining the noseweight, ensure that that the lowest load limit of these four elements is not exceeded:

- the car's towbar and ball, and the car's own noseweight limit
- the caravan's drawbar limit
- the caravan hitch coupling.

These limits can usually be found stamped on the towbar and hitch themselves.

Then make sure that the caravan noseweight is within the 5% to 7% range of the caravan's laden weight or **MTPLM** if the laden weight is not known (see page 4).

Information on car and caravan limits may be found in the manufacturer's handbook.

### Car / caravan matching

*"Can my car tow this caravan safely?"*

Dealers and Clubs have their own matching systems and can assist with the matching process if you need help.

### There is also the industry's premier online tool **TowCheck**

NCC's TowCheck is an easy-to-use online service that checks your car and caravan combination is safe and, that whilst towing, you remain lawful. Each car and caravan match are produced by a weight calculation that takes into consideration relevant driving licence restrictions and is based on towing expertise.

[www.towcheck.co.uk](http://www.towcheck.co.uk)

# ncc Tow-Check

Match a car and caravan safely & legally

### Important guidelines:

#### Never exceed the MTPLM

Remember that the weight of any optional extras that you may have added will need to be considered in your overall weight calculations, e.g. a caravan mover.

In general, the higher the noseweight, the better the stability of the combination.

Experience shows that noseweight in the region of 5% to 7% of the actual laden weight of the caravan is safe and normally achievable. More noseweight is safer still but only if the characteristics of your outfit permit it. Adequate noseweight is essential to ensure good stability for the combination at speeds especially above 50mph.

The way in which the caravan is loaded is critical and will affect your caravan's noseweight. The positioning of items within your caravan may affect its stability and noseweight applied to the towing vehicle - heavy items placed at the front and rear or stored at height could destabilise the caravan under tow. The safest course is to place



heavy items directly on the floor, close to the caravan axle, which will allow you to achieve the correct noseweight. All loads should be restrained, as loose items within a caravan can move and create an unstable condition.

When loading a **twain axle caravan**, consideration should be given to the load carried by each axle.

Stability enhancement devices such as a mechanical stabiliser or electronic stability control system should never be used as a remedial measure when a caravan/car combination has poor stability. However, such aids can make a well-balanced caravan/car combination easier to handle on poor roads and in windy conditions.



*Mechanical Stabiliser*



*Electronic stabiliser*

### Follow these simple steps before each trip:

1. Ensure that the handbrake of your caravan is fully engaged, the wheels are chocked, and the corner steadies are down.
2. Weigh items before loading to ensure that you remain within your payload allowance.
3. Load location:
  - Heavy items (e.g. your awning) on the floor directly over the axle/s.
  - Medium weight items, e.g. external furniture, barbecue, water carrier should be placed on the floor, close to the axle.
  - Only light items should be stored in the overhead lockers.
4. Remember:
  - Fixed beds - if your caravan has a rear fixed bed, do not fill the base with heavy items.
  - Fluids - empty water tanks or containers and the toilet cassette before moving off.
5. Ensure that all items are secured to prevent them moving about in transit.
6. When all items are loaded safely, raise the corner steadies, remove any chocks from the wheels and check the noseweight. Use a proprietary noseweight gauge, follow the maker's instruction and ensure that the measurement is made at the tow hitch connection point.
7. If the noseweight is not correct, then adjust the position of the items within the caravan until you achieve the correct value. (You might need to take some items out.) Avoid moving heavy items to the front or rear of the caravan to achieve this. Concentrate the load above the axle/s.

**Note:** Carry a small container of water in the fridge for en-route drinks rather than a part full on-board tank.

Finally, be mindful that the weight is distributed evenly in the caravan to ensure that each wheel carries approximately the same load.

You are now ready to connect to the car.



Care must be taken when matching the towball type to the coupling head. Generally, it is best to use the towball supplied with the towbar (if the ball is not integrated into the design, as in the case of a swan neck or detachable bar). However, some caravan coupling heads, e.g. those fitted with AL-KO AKS stabilisers, MUST be used with a compatible towball. These are special AL-KO bolt-on towballs which are available from AL-KO or reputable towbar fitters, or with a fixed or removable swan neck type towbar.

This ensures that these relatively large coupling heads can articulate freely without interfering with the neck of the towball. Failure to use the correct towball in these circumstances can lead to towball and coupling damage and potentially cause inadvertent detachment.



### Very important for detachable towballs

If your car is fitted with a detachable towball and you have removed the towball from the connecting socket, you should ensure that it is fully engaged, and the lock mechanism has worked correctly when you replace it. Ensure that the lock is 'set' and key removed

Ensure that any road dirt or debris is cleaned thoroughly from the engagement receptacle prior to refitting and always follow the manufacturer's assembly instructions precisely. Check that the ball has fully locked home after refitting. Failure to follow the towball manufacturer's instructions could result in the towball disengaging unexpectedly.



## WHEN HITTING TO THE CAR

1. **Engage**  
the caravan handbrake



2. **Chock**  
the caravan wheels  
(particularly, if on a slope)



3. **Raise**  
the corner steadies



4. **Lift**  
the caravan front on the  
jockey wheel if necessary  
and check the nose weight



5. **Reverse**  
the car (with assistance)  
up to the caravan and engage  
the car's handbrake  
**Note:** For your safety, you  
are strongly advised not to  
stand between the  
car and the caravan



6. **Connect**  
the breakaway cable.  
Fixing to designated  
mounting point – or loop  
to cable where no point  
provided





## WHEN HITCHING TO THE CAR

### 7. Align

hitch head and lower onto ball



### 8. Check connection

Check the safety indicators on hitch



### 9. Secure the stabiliser



### 10. Raise hitch assembly to check connection

Check the coupling engagement by raising the caravan coupling up using the jockey wheel - the hitch should stay firmly attached to the towball



### 11. Wind up

Wind the handle upwards until the wheel assembly sits into the cut out of the shaft



### 12. Clamp

Raise the jockey wheel and lock with its clamp, ensure it does not interfere with the braking system



## WHEN HITCHING TO THE CAR

### 13. Check

Take the electrical connection cable and check that the plug is clean on the inside



### 14. Connect

Connect the electrical lead to the towcar socket. This may require an adaptor if using the older 12N/12S standard cable connectors



### 15. Check

Check all lights, indicators, reversing lights etc. on the car and the caravan are working correctly. If necessary, seek assistance to confirm



### 16. Recheck

Re-check the coupling, breakaway cable and electrical connection(s), before the caravan brake lever is released. If using the Al-Ko ATC system check the indicator light is showing green



### 17. Collect

Check the pitch and collect any chocks and corner steady pads



### 18. Fit your towing mirrors before going out onto the road

Fit your towing mirrors to both sides of the towcar. The law requires you to be able to see 20m to the rear and 4m width to the rear of the caravan



### And – just before you leave – always check...

Walk all around the caravan to ensure that all the doors, windows, lockers and roof lights are closed and locked and the TV aerial mast is retracted, check that any mains hook up is disconnected and the gas supply is turned off at the cylinder shut off valve. Return to the coupling and CHECK AGAIN that the hitch is fully secured, and that the breakaway cable is correctly attached.

**You can now release the caravan handbrake!**

## WHEN UNHITCHING FROM THE CAR

**Note:** If the ground is uneven you may need to level the caravan from side to side using a spirit level or level indicator as a guide. The corner steadies are not intended to level the caravan, and any substantial cross slope may have to be countered using a ramped block under the wheel/s.

1. **Engage** the hand brake on the car and turn off the car's engine
2. **Engage** the caravan's handbrake and disengage the stabiliser if fitted
3. **Lower** the caravan jockey wheel
4. **Clamp** the shaft of the jockey wheel
5. **Chock** the caravan wheels, particularly if on a slope
6. **Disconnect** the electrical system (make sure that the cable is not left to trail on the ground)
7. **Raise** the front of the caravan on the jockey wheel whilst releasing the coupling clear of the hitch ball
8. **Unclip** the breakaway cable and stow carefully (tripping hazard)
9. **Drive** the car away from the caravan (or MOVE the caravan away from the towball)
10. **Use** the jockey wheel to level the caravan front to back
11. **Lower** the corner steadies, using pads if the ground is not firm.
12. **Remove** the towing mirrors if the car is to be driven without towing.

## CARAVAN ELECTRICAL CONNECTIONS

Caravans from 2009 are usually fitted with a single 13-pin plug. Earlier caravans may be fitted with two 7-pin plugs (12N & 12S) for attachment to the car.

**The important difference** with the 13-pin plug, when compared to the old 12N/S type, is that the plug has an inner ring assembly that is independent from the outer body.

To remove the 13-pin plug, it is important to rotate the outer body a full 90 degrees anti-clockwise, again until a click is heard or felt before withdrawing the plug from the socket. This will ensure that the inner and outer parts of the plug are returned to a locked condition.



**You may need an adaptor**, depending on the electrical connectors fitted to your car and caravan. Ensure that the cables at the front of the caravan are not so loose as to be able to catch or rub on the ground, nor so tight that they become taut when the car and caravan are at an extreme angle to each other. If possible, align the cable/s so that they are about 30cm (12") longer than the front of the coupling head on the caravan before attachment.





All trailers with an **MTPLM** greater than 750kg must be fitted with brakes. Above this limit and below 3,500kg MTPLM, all trailers must also be fitted with a safety device to provide protection in the event of the separation of the main coupling when in motion. A device referred to as a breakaway cable fulfils this requirement and, when fitted to a trailer, its use is mandatory.

The purpose of a breakaway cable is to apply the trailer's brakes on accidental disconnection of the trailer from the towing vehicle, and having done so, to break. This allows the trailer to come to a halt away from the towing vehicle.

**Important:** only use a breakaway cable that is manufactured to the original chassis maker's specification and purchased from a reputable dealer. It is generally constructed using a thin steel cable, normally plastic coated and fitted with a means of connection to the towing vehicle.

The cable and clip(s) should be regularly checked for damage and should be routed directly to the car without loops or kinks and through any guides in the caravan drawbar. Always replace any damaged cable with one of the correct designs to ensure

correct function. It should then be determined whether or not the towbar has a designated attachment point (i.e. a part specifically designated by its manufacturer for a breakaway cable).

Caravans manufactured after 1 January 2018 will be fitted with a breakaway cable designed to be positively attached to the tow bar and not looped around the tow ball. Additionally, these cables can be looped around the tow ball and back onto itself when no attachment point is available.

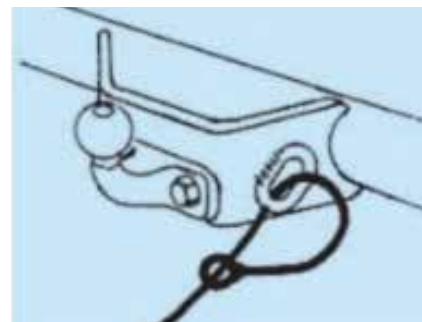


Figure 1



Figure 2



Figure 3



Figure 4

Where a designated attachment point is provided, either pass the cable through the attachment point and clip it back on itself (Figure 1) or, if the clip is designed to be used in this way and this method is permitted by the trailer manufacturer, attach it directly to the designated point (Figure 2). Only attach cables directly to the attachment point that are designed for this purpose.

Where no designated attachment point is provided, the cable should be looped back around the neck of the towball using a single loop only, as shown in Figure 3.

In some instances, it may be possible to attach the cable assembly either to a permanent part of the towbar structure, as long as this meets the approval of the towbar manufacturer/supplier, or to an accessory sold for the specific purpose of breakaway cable attachment as shown in Figure 4.



## CABLE NOT DESIGNED FOR DIRECT ATTACHMENT

This type of clip must not be directly attached to the tow bar.



When the breakaway cable is attached, it must not snag in use on the trailer coupling head, jockey wheel or any accessories, e.g. a stabiliser, bumper shield, cycle carrier, etc. There should also be sufficient slack in the cable to allow the towing vehicle and trailer to articulate fully without applying tension to the cable which could otherwise cause the trailer brakes to be inadvertently applied.

The cable must not be allowed to drag on the ground. If there is too much slack, the cable might drag on the ground and be weakened so that it has insufficient strength to apply the brakes in the event of the trailer becoming detached when in motion. Excess slack may also lead to the cable being caught on an obstacle when in motion, leading to inadvertent application of the trailer brakes.

Care must also be taken to ensure that the cable cannot be entangled with the electrical cable.

## TOWING MIRRORS

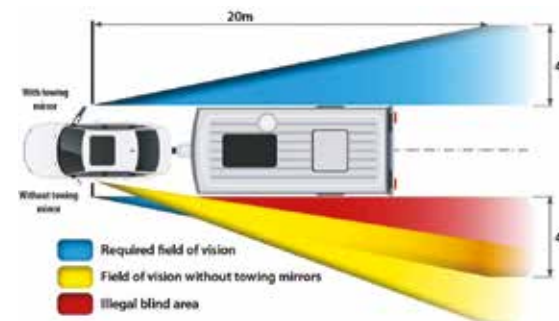
The law demands that a motor vehicle must have at least two functional rear-view mirrors. There must be one on the offside and one internally, the internal one must have a clear view as defined below through the caravan, if not a nearside mirror must be fitted.

**Note:** When towing a caravan, the law requires the driver to have a clear view down both sides of the trailer and 4m either side at a distance of 20m behind the driver. This not only means that a nearside mirror is necessary, it also means that, when towing a caravan, towing extension mirrors are almost certainly necessary as most caravans are wider than the towing car.

Unless you are certain that your vision meets the legal criteria, extension towing mirrors should always be used for legality and safety when your caravan is coupled up. Remember to remove them when not towing. There will be some combinations of car and caravan which can satisfy this requirement without extension towing mirrors. However, these are likely to be the exception rather than the rule and most combinations will need extension towing mirrors.

Ensure that the extension towing mirrors project no more than 250mm\* beyond the widest part of the caravan. It is desirable that the offside extension towing mirror contains a plain flat mirror so that you can judge speed and distance correctly. Also, ensure that they have safety glass and/or are e-marked, if required. Towing mirrors fitted to cars registered from 26 January 2010 must carry 'E' markings showing compliance with European Directives 2003/97 or 2005/27 or ECE Regulation 46.02. Amongst other things this signifies that the glass will not break into large pieces if shattered. Even when 'E' marked mirrors are not mandatory, they are the best choice, as the approval process should confirm many aspects of the quality of their design and performance. Other mirrors may well be a false economy.

\* For non 'E' marked mirrors this limit is 200mm



Experience in towing is not essential for taking up caravanning. Any driver should soon find that towing a caravan is both rewarding and pleasurable. If you are at all unsure, the Caravan and Motorhome Club and The Camping & Caravanning Club offer towing and manoeuvring courses.

Caravans should always be towed either level or slightly nose down. You should always build up speed gradually to get used to the different handling and braking characteristics when towing. A caravan will alter the performance of the car and the driver will need to anticipate potential hazards much earlier. Experience will help the driver to minimise sudden changes in speed or direction, which might otherwise lead to a towing combination becoming unstable and help to create a calmer and safer driving environment.

The speed at which a caravan is towed is very important. The aerodynamic forces that act on the caravan at speed may tend to reduce the noseweight, especially as road speed increases. At a critical speed, any loss of noseweight can cause instability and this could occur at a lower speed when driving into a head wind. Gusting cross winds, exposed bridge sections, valleys and proximity to large goods vehicles may also initiate aerodynamic instability. Slow down, but do not brake, to return to stability.



## National speed limits mph (km/h)

Type of Vehicle	Built-up areas	Single carriageways	Dual carriageways
Cars, motorcycles, car-derived vans and dual purpose vehicles	30 (48)	60 (96)	70 (112)
Cars, motorcycles, car-derived vans and dual purpose vehicles when towing caravans or trailers	30 (48)	50 (80)	60 (96)

Additionally, caravans must not be towed in the outside lane of a three or more-lane motorway, unless this is unavoidable due to roadworks, accident or obstruction. They may be towed in the outside lane of a dual carriageway with three or more lanes. A good reserve of power is necessary for towing up gradients at altitude. When going uphill, change gear in good time. If your car is running short of power or is behind a slower vehicle, keep well into the nearside and out of the way of other vehicles. Remember that some hills which can be ascended with relative ease often pose an unexpected challenge if you come to a standstill in traffic and then must re-start from scratch.

When going downhill, take extra care to ensure you do not gain speed. This can be avoided by changing down a gear and reducing speed as you approach the slope. Don't leave this gear change too late. Using low gears throughout the descent will reduce the strain on the car's brakes. For

automatics, you may need to manually change to a lower gear in anticipation of the effect caused by the gradient change.

**Note:** If you plan to tow in countries where long, high altitude climbs can be anticipated, you should seek expert advice on the suitability of your car for such journeys. Further experience and training should be gained before tackling some of the more difficult elements of towing (mountain passes, difficult terrain, etc.).

## Reversing

Reversing competently comes with practice. Watch for slopes, cambers, potholes and other irregularities that can cause the caravan to deviate.

As with all maneuvers, the secret is to do things smoothly and at low speed. At night, additional lighting and/or a second pair of eyes may be needed.

Steering a caravan in reverse is counter-intuitive:

1. To cause the rear of the caravan to turn one way, the top of the steering wheel must be moved initially in the opposite direction from how you would normally steer the car.
2. One technique is to simply move the bottom of the steering wheel in the direction you wish the caravan to go
3. Once the initial turn is established be prepared to ease the steering wheel back again to prevent jack-knifing.

## Road lights

All the road lights fitted on a caravan (including reversing lights) must be clearly visible and in working order. The car must also have an audible and/or visual warning device linked to the wiring leading to the caravan indicators.

The warning device will indicate whether the caravan direction indicators are working or not. On many modern cars, this function is integrated into the bulb failure warning system.

If you are towing with towing covers fitted you must ensure that the road lights are not obstructed.

Attention should be paid to the road lights when the caravan's road lights are LED to ensure they are compatible with the towing vehicle.

If you are going abroad, remember to check the local motoring regulations and obtain headlight beam adaptors where necessary. Further information may be obtained from the car manufacturer or the user clubs.

## Carrying passengers

It is illegal to carry passengers in a caravan when it is being towed.

## Rear number plate requirement

It is a legal requirement to have an approved rear number plate attached to the caravan that matches the towing vehicle, which must be in the space provided by the caravan manufacturer for such a plate.



Tyres with higher inflation pressures (50 psi and above) may deteriorate faster therefore check them closely, looking for any bulges or signs of cracking. Take care when replacing tyres. It is important to ensure that the replacement tyres have at least the same load rating as the originals. Tyres suitable for cars may not be suitable for all caravans.

Tyre pressures and wheel nuts or bolts on both the car and caravan should be checked regularly to comply with the manufacturer's recommendations.

Car manufacturers provide recommendations for increased tyre pressures when towing or under heavier loading. Incorrectly inflated car and caravan tyres can initiate instability and premature tyre failure.

**Note:** To get an accurate reading, ONLY check pressure when a tyre is cold.

## Wheels and tyres

The condition of a caravan's tyres is too often overlooked, particularly the spare. Caravan tyres rarely wear out though the same legal tread depth limit of 1.6mm applies. You should check the tyre sidewalls and treads regularly for cracks, cuts and bulges.

Replace the tyres, including the spare, in accordance with the caravan industry's recommendation: This advises that caravan tyres should ideally be replaced at five years old and should never be used beyond seven years old.

**Note:** It is advisable to cover the wheels with breathable material when the caravan is not in regular use. This will help to protect them from the harmful effects of sunlight.

## Understanding the tyre markings



### Tyre Pressure Monitoring Systems (TPMS)

TPMS is mandatory on cars from 2014 and it is worth considering such a system for a caravan as this could significantly reduce the risk of having a tyre related incident on the road. They are able to give early warning of a problem either pressure or temperature related to a tyre before they become an issue giving the driver time to stop safely.

They can give early warning of:

- rapid tyre deflation including blow outs
- tyre wall failure
- brake binding/bearing failure
- ATC/IDC causing excessive dampening due to unstable unit and overloading causing excessive heat to be generated.

The sensor can be mounted internally as part of the valve or fitted externally. Some insurance providers will offer a discount for direct reading TPMS use. Wheel nuts or bolts should be checked with a torque wrench. If under-tightened, a wheel fixing can shake loose, but if it is over-tightened it can deform the seating (i.e. recess) on the wheel itself, and again, it can shake loose.

A torque wrench ensures that the correct tightness is achieved every time. Consult your owner's manual. Mark a line or use reusable indicators to aid detection of bolt movement.

When replacing a wheel, torque the wheel nuts up in the correct sequence

and re-torque after the recommended bedding in distance, typically 30 miles.

If the car suffers a puncture and you do not have a normal size spare, refer to the manufacturer's instructions for the suitability of towing with the compact size spare or run-flat tyre supplied – you may find that speed and distance may have to be reduced.

If you must change a wheel at the roadside, position the car and caravan as clear of the carriageway as possible and ensure the hazard warning lights are operating. Do not put yourself at risk, especially if the deflated tyre is on the offside. In many European countries, it is also obligatory to wear a high visibility safety jacket or waistcoat. This is strongly recommended even if it is not a legal requirement in the UK.



### Driving licence information

#### What licence do I need to tow a caravan?

Rest assured there is a leisure vehicle that will suit your car and your capabilities, see below for our handy guidance.

You need to consider whether your driving licence will allow you to tow or drive the leisure vehicle you want. After December 2021 the UK Government changed the Category B driving licence in the UK to grant you an entitlement to drive any practical combination of car and caravan, by granting the B+E category licence without any further testing of training, subject only to a generous combined maximum allowable mass (MAM) of the combination of 7,500kg (covering most large cars/4x4s towing caravans).

When the initial licence expires at age 70, you must make sure that you tick all of the Categories which you

are currently entitled to, and wish to continue with – if you don't – then the entitlement will be lost, and can only be re-instated by the holder taking a new test under current qualification rules.

On a Category B licence, you can drive a motor vehicle with a MAM of up to 3,500 kg and tow a trailer with that vehicle up to a maximum combined mass of 7,500kg.

There is training readily available from specialist driving schools to assist you in undertaking towing of larger trailers and TowCheck would recommend that you undertake some training for yours and other road users safety.

#### How large a caravan can I tow legally in the UK?

A touring caravan with: a maximum laden weight not exceeding 3,500 kg, overall width not exceeding 2.55 metres and overall body length not exceeding 7 metres (excluding drawbar and coupling) is the maximum size that can be legally towed by a motor vehicle whose maximum gross vehicle weight is less than 3,500 kg (so most 4x4s and even small/medium sized commercial van are not allowed to tow caravans that exceed the above dimensions). There are very few such large caravans in the UK, but it is as well to be aware of this.



### Touring caravan weight ranges

There is a wide range of caravan models available into the UK and these will have a very varied maximum technical permissible laden mass (MTPLM). You are strongly advised to be aware of the exact weight data for any caravan when considering licence entitlement. This information should be available from your caravan dealer. It will also be found on a plate either next to the caravan entrance door or within the gas cylinder compartment. Please note that it is the MTPLM that must be considered when matching a caravan to a towing vehicle.

In many cases, caravans towed by cars should be within the category B threshold, however it is recommended that you should always check your eligibility for any given combination using the information from the manufacturer's VIN plate or handbook. Please note when considering driving licence entitlement, you must consider the caravan's MTPLM and the car's gross vehicle weight (GVW).

### Caravan storage

When your caravan is not in use then it will need to be stored securely. Many keepers are unable to store their caravans at their homes, so a number of storage providers have established facilities that offer a 'storage solution'. When considering the right storage solution for you then it is important to consider the following items, does your insurance provider offer an insurance benefit for using the site you are considering?

- What level of security does the site offer?
- How easy is it for you, as the legal keeper, to collect the caravan/motorhome?
- Are there security systems in place? CCTV, recording good quality images?
- A robust boundary fencing system and an equally robust entry/exit gate system?

Does the 'operator' register you as a customer and record your caravan/motorhome and contact details? Do they check that you are the registered keeper of the caravan?

Does the site have any history of thefts – visit: [www.police.uk](http://www.police.uk) - this allows a check of the postcode area for any crimes that have been reported. The storage site operator cannot check your caravan/motorhome every day whilst it is in storage. If you have an after-theft recovery device/alarm system fitted, then make sure that you

do not remove the battery whilst in storage.

Regular checks to the storage site can reassure you that all is well and that there have been no weather-related incidents that may affect the condition of your caravan/motorhome.

### Caravan security

Your caravan will be the one of the biggest investments you make in your lifetime. It is essential that you ensure that you protect your investment with security devices that reassure you that you have protected the caravan, to a good standard, and that you have at least met the requirements of any insurance standard.

When your caravan is either parked, at home, or stored on a secure storage site, you should ensure that security devices are in place to keep your investment safe.

The Caravan Safety and Security Group (CSSG) recommends that, at least, the following additional security devices should be used to give your investment greater protection:

- A good quality, proprietary brand, hitch lock at least complying with Sold Secure Gold Standard
- Wheel Clamp(s) complying with at least the Sold Secure Gold Standard, or for wheel immobilisers the Sold Secure Diamond Standard
- the fitting of a proactive - inertia / movement sensor device, monitored by an approved monitoring provider (minimum 12-month subscription)

In addition, you may also consider:

- An after-theft recovery device, linked to the inertia / movement sensor - alarm system. These systems communicate with an 'Approved' monitoring station that will liaise with Police / Law Enforcement; they can locate the position of the caravan using a variety of technologies.

Your insurer may advise you with regard to systems / devices that would qualify for an insurance benefit with them - not all Insurers recognise the same products for such a benefit! For an up-to-date listing of Sold Secure approved products see:

[www.soldsecure.com](http://www.soldsecure.com)

### Caravan registration

Some insurers may require that you register as the keeper of your caravan, but there is no legal requirement to register caravans in the UK. However, since 1992 all new caravans manufactured by members of the National Caravan Council have been registered with the Central Registration and Identification Scheme (CRIS) and will therefore have the caravan VIN marked on the caravan windows and the caravan chassis.

The 2016 model year saw the introduction of the VIN Chip system. New tamper evident labels replaced the original dot matrix window markings and additional secure electronic RFID 'chips' were placed within the structure which, when scanned, will also read

your caravan VIN. A 'smart' window label also allows for the caravan's details to be 'read' using the QR code system.

The CRIS system holds information about the current keeper, outstanding finance, theft records and reports where insurers have 'written off' a caravan.

It is strongly recommended that, when considering buying a pre-owned caravan, you check with CRIS to ensure the person selling the caravan has the right to do so.

Contact CRIS:

[www.cris.co.uk](http://www.cris.co.uk)

TEL: 0203 282 1000

NCC CRIS, PO Box 445, Aldershot,  
GU11 9FS

Email: [info@cris.co.uk](mailto:info@cris.co.uk)



## ncc Tow-Check

Match a car and caravan safely & legally



**Buying a touring caravan?  
Make sure you know what  
you can tow.**

Visit the TowCheck stand today  
[www.towcheck.co.uk](http://www.towcheck.co.uk)



**Not just any old caravan  
It's an NCC APPROVED  
touring caravan**

The NCC Badge of Approval on the outside of a touring caravan, with the certificate in the user's handbook, is a symbol of a manufacturer's commitment to the safety of its products and its customers.

It means the tourer – its gas and electrical installations, furnishings, cooking equipment, ventilation provision and much more – meets the requirements of British and European Standards.

**Be safe – buy the badge.**

## Acknowledgements

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[www.camc.com](http://www.camc.com)



[www.campingandcaravanningclub.co.uk](http://www.campingandcaravanningclub.co.uk)



Invest in security, register your caravan with CRiS today.

Don't get caught out, CRiS check before you buy!

[www.cris.co.uk](http://www.cris.co.uk)



Easy to use service, matching car & caravan combinations.

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