# Thinking of buying a touring caravan?



# Your easy guide towards caravan ownership

- Choosing & buying a caravan
- What your car can tow
- How to choose the caravan for you
- What you can put in your caravan
- What it may cost
- Where to buy it from



# Choosing and buying a caravan

If you're thinking of buying a caravan there'll be loads of questions you'd like answered. Well, we at The Caravan Club want to help you, so we've compiled here some of the basics such as what to look for ...and what to avoid.



Considering buying a touring caravan is quite a big step, with a commitment to invest a fair amount of money.

And, if you've no experience of caravans, things like "What will my car be able to tow?" and "How much can I put in it?" may seem like almost unanswerable questions. This leaflet probably won't tell you absolutely *everything* you've ever wanted to know about caravans, but we are sure it will point you in the right direction.

You can also find more detailed help on The Caravan Club website www.caravanclub.co.uk.

So, let's get you started now on your first step to caravan purchase and an enjoyable future of trouble-free touring...

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## Is it hard to tow a caravan?

• Not particularly – after all thousands do it! If you're a bit wary, we'll show you where to get DVDs and where go for manoeuvring courses.

For reassurance and advice – see page 3.

# Will my car tow the caravan I want?

• It depends on your accommodation needs – a small family car won't pull a huge twin-axle caravan safely! See page 4 and we'll guide you through the process called 'Outfit Matching'.

# How do I choose the right caravan?

• You'll need to decide what facilities you need and what you can do without – this will depend on the size of your family, where you'll stay, and what you're happy to tow. More about this on page 5. For the right interior layout take a look at pages 7-8.

# What can I put in my caravan?

• On the road, the weight you're carrying affects handling a great deal, as does how it's packed. This bit can get a bit technical, but it's important. See page 6 for information on what you can take with you.

# How to buy a caravan

• What to look for and where to go. Second hand or new, we'll tell you what you need to know on pages 9-10.

# What else will I need to go touring?

• Getting the price right for your caravan and other items you need – accessories and essentials that you'll want when you're touring. Pages 10-11.

# Looking after your caravan

• How to care for your caravan – page 11.

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# Is it hard to tow a caravan?



If you're sceptical about the ease of towing a caravan, let us reassure you straight away.

It is much easier than you might think. After all, if hundreds of thousands of owners are happily using their caravans regularly, this should give you some idea of how easy it is to tow. Apart from the additional length of the outfit, towing a caravan is no more difficult than driving solo.

You just need to take a little more care cornering, braking and accelerating smoothly, to allow the trailer to follow the direction and speed of the car.

Reversing might seem a little scary at first, but there's a simple trick to it which, once learnt, will have you expert at manoeuvring very quickly.

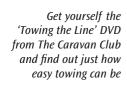
## Courses & DVDs

You could take one of The Caravan Club manoeuvring courses available to beginners, should you have any doubts at all about your capabilities. There are inexpensive courses for both caravan towing and driving motor caravans.

They're relaxed and informal, and also great fun! These can make a really enjoyable day out, and will readily instil confidence in your driving skills for almost any situation you're likely to encounter.

There are DVDs and guides available too. There's a super DVD presented by Carol Smillie from the Highways Agency, and a very useful towing guide leaflet available from The National Caravan Council, both of which are free.

www.highways.gov.uk/towing www.nationalcaravan.co.uk/home/index.asp?id=1&rcid=3





Go to caravanclub.co.uk/practical for courses and DVDs

# Will my car tow the caravan I want?

# The right balance

It's no doubt stating the obvious, but basically the heavier the car and the lighter the caravan the safer the outfit will be! Of course, life is never that simple. First, you may not wish to buy a brand new, expensive 4x4 for all sorts of good reasons, and wish to use your more modest existing hatchback.

There is a fairly straightforward guide to what you can tow, however — basically we recommend that the weight of the caravan with its contents should not exceed 85% of the car's kerb, or unladen, weight. This is called 'outfit matching'.

Simple, yes? Except do you know the weight of your car? Yes, OK – so it's in the handbook. But do you know how much a caravan weighs? And the weight of the sort of stuff an average family on holiday in a caravan might need?

# Weighty issues

Most car manufacturers tell you the maximum weight a car can tow, though this is simply it's pulling power, not a guide to outfit stability and safety.

There is no legal weight ratio requirement (except for those who first passed their test after 1 January 1997 – ask for The Club's information leaflet, 'Drivers' Licences in a Nutshell'!) but the law requires that caravans, their towing vehicles and the loads they carry must not cause danger or nuisance to other road users. Despite the lack of clear legal conditions, the Club suggests the following:

- The lower the laden weight of a trailer caravan when towed on the public highway, the safer the outfit.
- The laden weight of the caravan should never exceed the kerbside weight of the towing vehicle.
- The nearer the caravan laden weight approaches the one-to-one ratio, the more careful the driver must be.

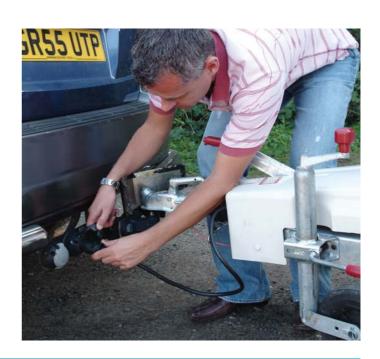
The lower the weight ratio between the car and caravan the better. This allows adequate power for overtaking and hill climbing, plus sufficient margin for safety in extreme conditions, particularly on motorways.



A laden caravan pushes down onto the car's towball. This is called the 'noseweight'. The optimum noseweight is generally **7**% of the caravan's laden weight, so before buying a caravan, check this isn't in excess of your car manufacturer's stated limit.

Even with the right noseweight, the rear of your car may dip. This can cause instability, and re-setting of the headlamps could be required. Some older cars without variable level suspension and with soft rear springs might need heavier duty springs or other rear suspension aids but the need to add rear suspension aids to modern cars is now rare (ask for the Club's leaflet on the subject).

Fortunately, there are even easier ways than doing it yourself to get an outfit match; talk to The Caravan Club to do the outfit matching for you. Now that's easy!!



# How do I choose the right caravan?



# What type of caravan should I buy?

If you buy a very old caravan, its boxy shape will increase fuel consumption and may compromise stability, but today's streamlined caravans have much improved aerodynamics.

Such issues can be avoided altogether by considering a folding caravan or trailer tent. Modern versions of folders can be very quickly erected on arrival at a site, with the cooker etc (and even full length cupboards) being hinged up into position. Fewer top lockers can be provided and generally there is less storage space. As fuel becomes more expensive the economics of towing a folding caravan may become more attractive, with its safer handling and a travelling height below that of the towing car.

## What size caravan would suit me?

There isn't really any rule of thumb relating to size and weight of a caravan. A small caravan packed to the gunnels with kit could be heavier than a larger, possibly older, caravan. Newer models have become heavier over the years.

Nearly all caravans today over 3 metres long (10ft) have a toilet room, only shorter ones not having the necessary



You might consider buying a trailer tent or folding caravan, as they're easier and more economical to tow. Setting up on site will be a bit more of a palaver though!

space to include one. If you're only going to be on sites where toilets are provided, this is less important, but if you will be staying on sites such as Caravan Club Certificated Locations, then the Caravan Code requires that you have your own facilities.

It makes sense to tow the shortest, lightest caravan that suits your needs. Consider getting a compact caravan and buying an awning for it. You'll still have enough space and you could buy a 4 metre (13 ft) caravan with an awning for considerably less money than a 5 metre (17 ft) caravan. Attached to the side of your caravan, which has an 'awning channel' built in, you can use it for extra dining

space, as an additional room for children or visitors to sleep, or a place for you to sit out on hot summer nights when the kids have gone to bed.

Consider too that a long caravan will be more awkward to manoeuvre into gateways or drives, more difficult to park on and off site, and to store too. The maximum length of caravan that may be



towed on British roads by a car (with a Gross Vehicle Weight not exceeding 3.500kg) is 7 metres (22 ft 11½ in). The maximum width is 2.3 metres (7 ft 6½ in). If touring abroad, the length will affect ferry charges. Some countries such as Switzerland have length and width restrictions because of their mountainous roads.

## Single or twin axles?

Only the very largest caravans need four wheels to bear their fully laden weight, most caravans being very adequately supported by one axle. Some caravan bodies can be fitted with either to give the buyer choice. So which is best?

In theory, two tyres on each side of the caravan give better grip than one and bring better stability. When parked, however, the twin axle caravan does not necessarily stand level and may have a heavier noseweight than that of a single axle.

The single axle scores heavily when manoeuvring on site. The twin's on-road benefit of extra grip becomes a **liability** when you have to swing the caravan to hitch up. Unless you're an expert in reversing your outfit for spot-on pitching and 100% accurate at backing up to re-connect, then stick to a single axle and spare the heaving!

Finally, an extra axle adds initial cost and weight, doubles tyre replacement costs, and requires greater care and maintenance to achieve braking balance.





Twin axles might seem a better bet, but think carefully before choosing this option.
Better grip and stability come at the expense of manoeuvrability.

## What can I carry in my caravan?

When choosing a caravan, check the amount you can carry in the caravan (payload allowance) in the handbook. With older caravans prior to the mid 1990's the quoted weight has a 5% tolerance, officially plus or minus, but in practice always plus!

From 1999 all caravans are built to a European Standard and you'll find the following information in the user's handbook. The term 'mass' means the weight:

- The maximum permissible laden mass (MTPLM) - previously known as MAW - in kilograms
- The mass in running order (MIRO), in kilograms
- The maximum user payload (MTLPLM minus MIRO) in kilograms
- The weight of the essential habitation equipment for the caravan, in kilograms.

The payload information includes:

- The essential habitation equipment
- Optional equipment
- Personal effects.

Here's a rough guide as to how much weight is allowed for such items as crockery, utensils and clothing, plus the average weights of the usual necessities. Cassette toilets and spare wheels may be included in the quoted MIRO weight, or may be part of a 'special package' which will reduce the quoted payload.

Typical item	W	eight	Typical item	Weight	
	KG	LBS*		KG	LBS
Full awning and poles	40.0	90	Heavy duty hitch lock	6.0	13
Porch awning and poles	20.0	45	Heavy duty wheel clamp	15.0	33
Jack and winding handle	2.5	5	Continental adaptor	0.3	1
60 Ampere/hour battery	16.5	36	2 x 7kg LPG cylinders	30.0	66
Spare wheel and tyre	14.0	31	Porta-Potti (empty)	5.0	11
Noseweight gauge	1.0	2	Water - per litre	1.0	2
10" portable television	8.0	18	Torque wrench	1.2	3
Portable radio/cassette	2.0	4	Set cooking pans	2.0	4
Omni-directional antenna	1.0	2	Sunlounger (metal frame)	5.0	11
Rollalong water carrier	3.2	7	Folding chair alloy/steel	1.5/3	3/7
Waste water container	1.4	3	Picnic table	6.0	13
Fire extinguisher	1.5	3	Wood levelling ramp	4.0	9
Metal step	3.0	7	Plates, cutlery (p/person)	1.0	2
Mains extension lead	3.5	8	Microwave	13.0	29
Motor Mover	30.0	68			

It is very easy to accidentally exceed the MTPLM of a caravan. This is an offence, may cause premature tyre failure, and damage the running gear. The amount of payload offered with a caravan is therefore an important consideration.

The Caravan Club recommends that you take your laden caravan to a weighbridge to ensure you are not exceeding the MTPLM/MAW.

Note: It is not recommended to travel with water container or toilet full

<sup>\*</sup>lbs are approximate (to convert kg to lb, multiply by 2.2)

# What's the best layout for me?

At first sight, the available options for the layout of the interior of a caravan are bewildering. Here we'll try to simplify the process, so you can make an informed decision.

## How many berths?

First establish how many berths are needed. This is fairly straightforward. Simply decide how many people you're likely to take on holiday with you. Not just how many children you may have, but perhaps you'll want to take relatives or friends along in the future.

Remember that you could sleep adults or children under an awning, so avoiding the need for a larger caravan and possibly a bigger tow vehicle.

Of course, it is all very simple if you're a couple who will always be touring on your own. You simply need to decide if you prefer a double or two single beds.

In the world of caravanning, one of the options is to have beds that double as seating during the day.

While seat-beds are still popular, there's a move towards fixed beds these days to avoid having to make beds up. Some people think permanent beds are a waste of living space, but it can allow for a better quality of mattress as there's no mechanism to accommodate.

Bunk beds are great for the kids; they love them! They are a common sight in larger caravans and an option well worth considering.



Dinette which converts to sleeping accommodation for the children



Make sure there's enough wardrobe space for you all, too!

A popular choice, available in newer caravans, is a fixed double bed, often right at the back of the tourer, and a dining area at the front which you can convert into sleeping quarters when needed. This arrangement could suit a couple, who might have occasional guests, or a family of four, equally well.

Use a tape measure to be certain each berth is long enough for your requirements as some berths will not be long enough for adults. Cushion depth in seating, when used as a mattress, is important if you want a good night's sleep. The way that the pieces fit together can make or mar a night's rest so don't be afraid to test any bed for length or comfort.

Two dinettes in a 4 berth is ideal if you have children. A dinette has facing seats, with a table between which lowers to make a bed base. This creates both eating and play areas. At night, screened off, one dinette becomes the children's bedroom. This layout results in a centre kitchen, which is good for balance on the road as most of the weight, fixed and portable, is carried over or near the axle.

If there isn't a double dinette, consider children reaching the toilet room from their berths at night, and the possibility of lights shining on their faces when asleep.

#### Kitchen matters

Consider the location of the food preparation and cooking area. Check that the worktop and sink are at a comfortable height and that people can get past easily without bumping into the cook! Do the cupboard and toilet room doors open without interfering with cooking? Is the doorway completely clear all the time for rapid exit in case of fire and is there adequate ventilation near the cooker?

The kitchen in a modern caravan or motorhome is usually a masterpiece of space utilisation. You'd be staggered by the amount of kit that can be fitted into them, and by how easy they are to use.



They can be arranged in one line, split across an aisle, or L-shaped. There will be kitchen units above the work surfaces, a proper, sometimes dual fuel, cooker with hob and oven, possibly a microwave as well as fridge, and a sink with a mixer tap.

End kitchens allow more room to move around in the main living area, but the doorway can be obstructed when the kitchen is in use. However, the main door will help with ventilation and the rear window allows unobstructed vision when towing.

A kitchen at the rear can mean balance is worse, but a little thought when loading, with particular attention to noseweight, is all that's needed. Too much weight at the back of the trailer can cause 'tail-wag'.

Corner kitchens offer loads of work surfaces and allow more space in the living area.

Side kitchens are most popular but can create congestion from people trying to get past the cook or when they're getting to the washroom if it's opposite the kitchen. They also may not offer much work surface. Once more, your budget may dictate your options.

Check if there's enough storage space for your needs. Is there a shelf deep enough to take a large packet of breakfast cereal? Do you have to stoop down to get at food or crockery and are there enough drawers? Do all cupboard and drawer catches really hold shut when travelling?

#### Headroom

Restricted headroom is a nuisance for tall people and some caravans offer only 1.8m (6 ft) height or less. If the caravan has a sloping front to reduce drag, the reduced height at the front should not affect easy access to a front dinette, but check to be certain. The ease of getting into the seats around the table should also be tested.

The toilet compartment will be to the side or at the end where the roof may slope downwards, so sufficient height here for showering or shaving is important.

## **Showers and loos**

Whilst on the subject of the toilet, where will it stand if it's a self-contained portable one rather than the fixed cassette type? Does it store under the basin? Wherever it is, is there comfortable space to stand upright at the wash basin? Quite often with centre kitchens the toilet is opposite the wheel arch, so this could be in the way. Is the light near the mirror or, as is sometimes the case, behind your head as you shave or make up?

Think about how you are going to use your caravan, and the others who may be using the facilities.

Some layouts only provide access to the washing facilities through the main bedroom. This may not be ideal for some, though for a couple it may suit them perfectly. You'll get more privacy, as you're not stepping from the shower straight into the living room.

# **Floor coverings**

What sort of floor covering would you prefer? Deep pile carpets are cosy, but vinyl flooring when you come in with muddy boots is more practical. Some caravans have removable carpeting – the best of both worlds!

# **Summing up**

Have a look at some typical layouts at a dealership and try to imagine yourself using them on a daily basis. You'll soon get a good idea of what's practical for your lifestyle, while suiting your budget.

# How to buy

# Do you need a 'top spec' new caravan?

If you're buying new, ask yourself whether you need every single item in the top of the range specification. Will the cook want an oven when away on holiday? You can make great meals with a simple hob and grill or microwave oven (ask for The Caravan Club's information leaflet on the subject). You may prefer to eat out and indulge in takeaways when holidaying. You don't have to cook at all!

Do you really need a shower, hot water, extra batteries etc., all items which require lifting, filling and charging? You might, but it's all extra weight and cost, and may not be needed if you'll be using full-facility sites with electric hook-ups.

# Where to buy



Buy from a local dealer if you can. Think how many miles you'll clock up if you have to return a caravan for attention then go back to collect it, if it's miles away. More trips may be necessary if it's not ready, or the work not done to your satisfaction.

Importers of caravans from the Continent, unless a well established UK official importer, tend to come and go. You could be left with a foreign make and no after-sales support. Incidentally, foreign caravans, like cars, can be more expensive to insure. Make sure such a caravan has been adapted to UK Construction and Use Regulations, and also to UK electrical, LPG and road lighting requirements.

# What to check if you're buying used

Are you going to go to a dealer or a private seller? In law you have more redress with a dealer, but in both cases 'buyer beware' applies. Try and take a caravanning friend with you if you've not been touring before. There is a

separate leaflet available from The Club with more detail on what to look for when buying a used caravan, entitled 'Good as New'.

A few pointers: don't buy a used caravan without having it checked with a moisture meter, which will warn of any problems. Look under the sink and by any pump to ensure no joints have leaked onto shelving. Inspect the mattresses and cushions, particularly underneath, for damp and staining. Ensure the bed locker lids support weight, and that the tables stand firm when in position. Check the operation of all gas equipment, even if you have to take an LPG cylinder with you.

If mains electricity is installed, ask to see the latest inspection certificate by a qualified electrical engineer. It should be inspected at regular intervals – annually if the caravan covers high mileages.

Check underneath the caravan for corrosion, the condition of springs/dampers (where fitted) and brake linkages. The tyre treads may look fine, but do the tyres look old? Five years is the maximum safe life, whatever the mileage. Sidewalls generally fail before the treads are worn. Check for cracks in the grooves as well as sidewalls. The tyres should be the right size for the wheel rims and a matching pair, suitable for the maximum weight and speed of the caravan. Higher speeds are permissible abroad and you might be touring overseas.

Lower the corner steadies to ensure they operate easily, are well maintained and not bent through misuse.

Ask to take the caravan for a trial run and note its behaviour on the road, in particular that the overrun brakes work smoothly. An overrun brake is one that



operates on the wheels of the caravan when tension on the drawbar is released, such as when you decelerate or apply the brakes of your car.

Also, ensure that the caravan is level, viewed from the front when halted and check that the handbrake works effectively.

### The Users Handbook

New or used, insist on having the Users Handbook. Almost any caravan manufactured since 1970 will have been supplied with one. If it no longer has a copy you may struggle to use the equipment. If the caravan is more than a few years old, it is doubtful the manufacturer will be able to supply a spare handbook. The devices now fitted in caravans need to be fully understood, carefully operated and maintained. If buying new, ask to see the handbook before you purchase, which must be supplied. From 1999 model year BS 4626 has been replaced with BS EN 1645, which defines the health and safety requirements for the

design of the caravan, with added information in the handbook.

You will part with a lot of money when you buy a caravan, and to be certain you obtain your money's worth, and exactly what you require, take time in making a decision. Time spent in looking is never wasted.

Club members are welcome to write in (with a stamped addressed envelope) or email to see if we have tested a particular make/model in the past, and if we have, a photocopy of the report will be sent by return. Alternatively you may be able to download a copy from The Club website.

# What to pay and what else you need

# **Getting the price right**

If you can afford a new caravan, and especially if you're not trading one in, the price may be negotiable. This may be more so in times of recession when the dealer wants money in his till, rather than tied up in caravans on display.

For secondhand caravans you might decide to offer less than the vendor suggests. However, it can be difficult to establish the going rate for a particular caravan, as so many variables are involved, such as condition, extras fitted etc. As you are unlikely to be able to consult the trade's used price guide, the best advice is to look at classified ads in caravan magazines for typical prices for the model you have in mind.

Establishing the true age of a caravan can be difficult and you could be sold a caravan with the age understated by the vendor by two, three and even more years, to obtain a higher price. Best to locate the chassis number and contact the caravan or chassis manufacturer for its construction date. If the chassis number is missing, be suspicious. Since 1992, caravans built by National Caravan Council members and some imports have car-like registration documents, so check they're in order.

# What else do I need to start touring?

The answer is – not much – but here's a rundown of the essentials and a guide to how much it'll cost.

Essentials for a caravan owner are a towbar for the car, plus one or two electrical connection sockets attached to, or adjacent to, the tow ball. This must be tested to

BS AU 114: 1979, or its International equivalent, ISO 3853: 1977. To find out how to get a tow ball fitted, go and see your local caravan dealer or visit the National Trailer & Towing Association's website.

New cars first registered from 1 August 1998 must be fitted with a towing bracket that has been given a European standard type approval number and this must be marked on the bracket.

You'll also need to attach extensions to the overtaking mirrors on your tow vehicle to allow for the extra width of the caravan. Most caravan dealers have an accessory shop, or you could check out one of the many specialist online suppliers.

As mentioned on Page 4 you might need rear suspension aids and/or a stabiliser.

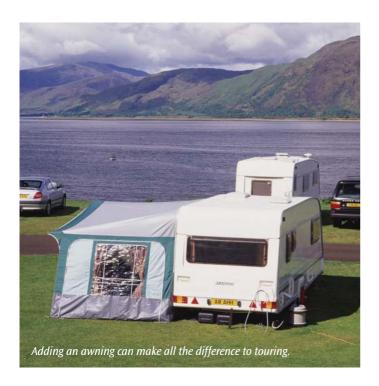
Most comprehensive car insurance policies will cover third party risks when towing a caravan but you'll probably want to insure your caravan comprehensively as well. The insurance company may well require you to fit wheel-clamps and hitch locks.

# **Anything else?**

Not much else is essential, really. For caravans or motorhomes you'll probably want an **Aquaroll**, so that you can collect water supplies easily when you're on site. This is simply a plastic barrel



with a central axle and a handle to pull it along.



You'll need a **gas cylinder** for cooking. If you plan to tour all year round, choose a propane one, as it works more efficiently at low temperatures than butane gas.

For extra accommodation it's good to buy an **awning**. Adding an awning can make all the difference to touring. It gives you extra space without you needing to tow a larger caravan.

Think of it as a 'conservatory' for your caravan. Constructed like a tent, it is attached to the caravan or motorhome's awning channel to give you extra space for the children to sleep in, more dining room, or somewhere to put boots and wet weather clothing.

You may need a **groundsheet**, too. Buy one that allows the grass to breathe – see separate Caravan Club information leaflet 'All About Awnings'. Don't forget a folding table and chairs to use outside.

You will also need a caravan 'leisure' battery, which is similar in size and weight to the one in your car.

**Levelling ramps** are useful on sloping pitches and they're usually grooved to give grip to the tyre. Level blocks and chocks of aluminium or plastic keep your caravan level on the caravan site.

#### Home comforts

You'll probably want to stock the kitchen with non-perishable foods such as soup, tinned vegetables, tea bags and so on. Of course, you'll no doubt want to buy fresh local produce when you're on your touring holidays.

If you're planning on using your caravan at every opportunity and want to make 'getting away' as easy as possible, consider stocking up on a second set of cleaning materials, toiletries and even clothes, so you can make last-minute breaks a reality without undue hassle.

For bedding, you can take along your comfy duvet and pillows from home, or alternatively kit out the 'van with sleeping bags, a second duvet set or one of the increasingly popular roll-out combination duvet sleeping bags.

That's about it. Check your driving licence covers you for the size and weight of your chosen touring outfit, and you're ready to go touring!

# Looking after your caravan

It's hard to estimate how long your caravan will last, because of the pounding it receives from travelling. A touring caravan is inevitably shorter lived than other more permanent dwellings but one can expect it to last at least 10 years, if it's well cared for and regularly checked.

Check the body annually, to ensure that it remains waterproof. If damp gets into the structure you will soon have a useless wreck on your hands that's not economic to repair.

The Club strongly recommends an annual service by a caravan workshop, which should include a damp check – contact The Club for details of your nearest.



Go to caravanclub.co.uk/leaflets for other technical leaflets

# **Glossary**

#### The Caravan:

#### Ex Works Weight (Unladen Weight)

The weight of the caravan as new with standard fixtures and fittings as stated by the caravan manufacturer. (NB: Because of the differences in the weight of materials supplied for construction of caravans, and moisture retention, variations of  $\pm$  5% of the manufacturer's figure can be expected, usually '+').

#### **Actual Laden Weight**

The total weight of the caravan and its contents when being towed.

#### Maximum Authorised Weight (Maximum Gross Weight)

The maximum weight for which the caravan is designed for normal use when being towed on a road laden and this must never be exceeded.

#### **Maximum Technically Permissible Laden Mass**

As stated by the vehicle manufacturer. This mass takes into account specific operating conditions including factors such as the strength of materials, loading capacity of the tyres etc.

#### **Mass in Running Order**

Mass of the caravan equipped to the manufacturer's standard specification.

#### **User Payload**

The difference between the Maximum Technically Permissible Laden Mass and the Mass in Running Order. Payload includes essential habitation equipment, personal effects and optional equipment.

#### **Essential Habitation Equipment**

Those items and fluids required for the safe and proper functioning of the equipment for habitation as defined by the manufacturer of the caravan.

#### **Personal Effects**

Those items which a user can choose to carry in a caravan and which are not included as essential habitation equipment or optional equipment.

#### **Optional Equipment**

Items made available by the manufacturer over and above the standard specification for the caravan.

#### **Noseweight**

Static vertical load. That part of the weight of the caravan supported by the rear of the towing vehicle.

## The Towing Vehicle:

#### **Kerb Weight**

There are two definitions for towing vehicle kerbweight. These are:

1. As defined in the Vehicle (Construction and Use Regulations 1986:

The weight of the towing vehicle as it leaves the manufacturer with a full tank of fuel, adequate fluids for normal operation (lubricants, oils, water etc) and its standard set of tools and equipment. It does not include the weight of the driver, occupants or load.

2. As defined by EU Directive 95/48/EC (issued in September 1995):

The weight of the vehicle as it leaves the manufacturer with its fuel tank 90% full, all the necessary fluids for normal operation (lubricants, oils, water etc), a nominal driver weight of 68kg and 7kg of luggage.

Vehicle manufacturers will tend to use the second definition in official documentation, since this is the one required by the regulations they have to meet to sell the vehicle Europe-wide. In publicity material and handbook, however, either definition may be found, although the first one is expected to gradually disappear.

#### **Towing Limit** (braked trailer)

A statement by the manufacturer giving the maximum weight of braked trailer the car will tow, when restarting on a gradient of, usually, 1 in 8.

#### **Gross Vehicle Weight**

The weight of the vehicle laden to its maximum, as defined by the vehicle manufacturer.

#### **Gross Train Weight**

Often the Gross Vehicle Weight plus the Towing Limit, but check the vehicle handbook.

#### VIN plate

Vehicle Identification Number Plate.

#### **Outfit Weight Ratio**

The Actual Laden Weight expressed as a percentage of the Kerb Weight, ie:  $\frac{ALW}{KW} \times 100$ 

#### **Conversion**

Kilograms divided by 50.8 = cwt Kilograms multiplied by 2.2046 = lbs

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