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Guide to...

WINTERISING YOUR CARAVAN

Laying up your tourer for the colder months? Here's how to ensure that come the spring, it will be in tiptop condition, ready to hit the road

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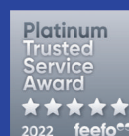
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WINTERISING YOUR CARAVAN

If you want to keep your tourer in perfect condition and minimise the risk of expensive problems, it really pays to winterise it when it's not being used. Peter Rosenthal shows you how





MANY CARAVANNERS ONLY use their tourer for three seasons in the UK, and will often park them up over the winter period. While you'd think that not using a caravan would be straightforward, it can actually create problems in spring if you don't lay it up correctly.

Simply pitching up your caravan and leaving it from October until March is a surefire way to give yourself potential headaches. So how can you prevent this?

Use it all year

Resting a caravan over winter never does it a huge amount of good – the vehicle's rubber components, including the tyres, sit in one position, which can result in problems such as flat spots. Happily, there's an easy solution: use it!

Take advantage of the quieter sites, thanks to children going back to school, and discover the joys of touring out of season. A weekend away each month will help to stop the tyres resting in one position for long periods of time.

Pack winter essentials

If you do decide to use your caravan throughout the colder months, it's wise to pack a few winter essentials to ensure you can stay safe. As well as your usual bedding, food and drink, make sure you have a full tank of fuel in your tow car and a fresh gas cylinder on board.

It's also advisable to carry a selection of basic tools and spares, to avoid being stranded anywhere – the average call-out time for a breakdown in winter is over

1.5 hours, so it really pays to carry the essentials. As well as a socket set, always pack some spare fuses, jump leads or a lithium battery starter pack, a hi-vis jacket, a torch and a first-aid kit.

However, the most important thing to take is your mobile and charging lead – these can be an absolute lifesaver in an emergency situation.

It's worth putting the app 'what3words' on your phone – this divides the entire world into three-metre squares, each of which is denoted by three words (for example, 'banana cricket cheesecake').

It's used by all of the emergency services and saves you having to mess about with complicated longitude and latitude co-ordinates. It makes you far easier to locate if you've broken down and don't know where you are. It's free: put it on your phone now.

Some people also like to pack a snow shovel when they tour in winter, but if you're having to resort to digging out a heavy car and caravan, you really are in trouble. Unless you're built like Charles Atlas, save your payload, put the heating on, make a brew and ring for help...

For more information about staying warm if you choose to tour in the winter, here in the UK or abroad, see p78.

Water woes

If you decide to lay up your caravan for any length of time, you'll need to drain the water out of the plumbing system.

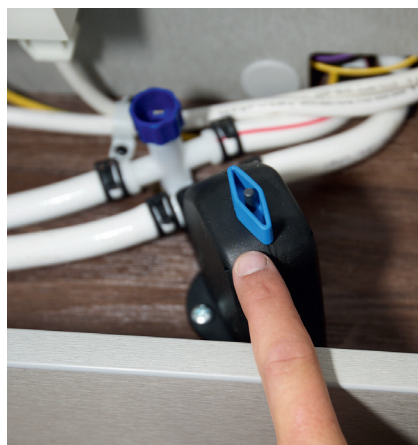
This is because trapped water can freeze and as we all remember from school science lessons, water has the



Regular winter tours will keep your caravan in tiptop condition

annoying property of expanding in volume as it turns to ice. It's one of the few liquids that does this and can crack almost any vessel containing it if it's trapped. Boilers, pipes, taps, pumps and filters are all at risk if you don't drain down the system over winter.

Happily, caravan manufacturers have your back here and have built automatic valves into the boiler, to prevent less experienced users from inadvertently causing such damage.



It's essential to completely drain down your water system before cold weather hits



When you're draining down the water system, don't forget the shower head



Truma uses an automatic valve that triggers at 4°C and won't reset until the vehicle's interior is heated to 8°C.

Some people put a clothes peg around this valve to prevent it dumping the water in winter – don't do this, because you'll invariably forget to remove it and end up damaging something.

The later designs of the Truma valve are the electric FrostControl twist type and can't be held shut.

To drain your water system down fully, open up the boiler valve (if you have an onboard water tank, you'll need to open this up to empty it, too) and disconnect any Aquaroll or similar container.

Then open up all the taps (switch off the water pump) and leave them in the 'on' position. Remove water filters.

To remove all traces of water in the system, you can buy drain-down kits, such as Floë (keepfloeing.com), which use compressed air to push the water out of the plumbing. You need to make



Disconnect the Aquaroll before you begin to drain down the water system

sure that all diverter valves (if fitted) are set to open, any onboard tank is drained and the water pump is off.

Floë offers a manual system that links to a tyre compressor, while its newer all-in-one Induratec model (for around £220), which has a built-in compressor, can be left permanently fitted to the water and electrical system to make drain-down quicker and easier.

To recommission your water system after winter drain-down, shut the valves on any water tank and boiler, reconnect to a water supply and shut the taps. Refit the water filter. Switch on the pump and open the tap furthest from the fresh-water tap. Water will start dribbling out of the tap, then begin to spit a little.

Wait until the water flows freely, then shut off the tap. Repeat this process with all other taps in the vehicle (don't forget the shower tap). You might need to make a couple of laps of opening and closing taps until water flows freely from all of them.

'If you decide to lay up your caravan for any length of time, you'll need to drain the water out of the plumbing system'

Battery bother

According to the AA, a quarter of all its call-outs in winter are for flat batteries (flat tyres come in second at 16%). >>



Propane is more reliable than butane for winter touring

This is largely because battery capacity is reduced in colder temperatures and cold engines can be harder to crank.

Some people mistakenly think that this is because engine oil is thicker when it's cold: it's not, and modern multigrade oil actually gets thicker as it heats up. What does get thicker and harder to vaporise at low temperatures is the diesel fuel, which is why some engines use glowplugs or starter burners, or alter the timing during cold starts.

But don't think this reduced battery capacity only affects fossil fuel vehicles – cold weather also impacts on electric vehicles and will reduce their range.

Many electric vehicle makers add heating circuits to their battery banks, but this heat doesn't come for free and will still impinge on range.

As well as your tow car's battery being affected by the temperature, the leisure battery (or batteries – more are always wise) is, too. All caravan systems – lights, heating, fridge, oven, water pump, toilet flush and so on – are powered from your leisure battery, so this is a major issue.

While some caravans have solar panels, which help to trickle-charge the leisure batteries during the summer, in winter, the angle of the sun, the intensity of the light and the reduced daylight hours all conspire to make them far less effective.

In my own outfit, I've measured output from its 150W solar panel drop from 8A in summer to as little as 0.8A during the winter. That is barely going to tickle a large leisure battery.

So it's simple: in winter, plug your caravan into a mains hook-up at home. Some vans have chargers that can be left



permanently plugged in and will keep the batteries healthy (check with your van manufacturer or read the charger's spec in the handbook).

If your charging system isn't designed to be left plugged in, fit an additional battery conditioner. CTEK offers a wide range of these – just pick one to suit the capacity of your battery bank.

Alternatively, unless it's connected to your alarm system, remove the battery and charge it periodically at home.

If your caravan uses lead-acid batteries, they might need topping up from time to time – check them every six months or so. If it has removable covers on each of the cells, or a removable panel, it will

need to be checked. The cell covers are usually unscrewed with a coin (a 2p is ideal) and the acid level checked – the liquid should cover the lead plates. If not, you'll need to add deionised water (not tap water – the minerals will damage the battery), which is inexpensive and available from any motor factor.

When dealing with lead-acid batteries, always wear gloves and eye protection: sulphuric acid is nasty stuff.

It's a gas!

If you want to use your caravan all year round and you are using butane (usually denoted by blue bottles), it might be wise

All caravan systems are powered from your leisure batteries, so keeping them topped up is essential



Remove all valuables
if you plan to lay up
your van for winter

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to switch to propane (usually red/orange bottles). This is because your van draws the fuel out of the gas bottle from the top as a vapour. The regulator then sets the pressure and the gas will flow to the appliance needing it – be that the fridge, the hob or the heating.

The ability for any liquid to ‘gas’ is determined by its boiling temperature – for butane, this is minus 2°C, while propane boils at minus 42°C.

In other words, if the temperature is below minus 2°C (for example, in a Scottish winter), butane isn’t going to work in your appliances. If you want heating in winter, switch to propane.

Interior damage

If you’ve ever walked into a used caravan and caught the distinctive smell of wet dog, you’ll know what mould and mildew smell like. Sometimes, this can be caused by water damage, from external leaks or burst plumbing, and it must be nipped in the bud and fixed rapidly.

Assuming your caravan isn’t leaking and you have shut all the windows, you don’t really need to do a great deal to preserve the interior. Some people like to open the cupboard doors and prop



Inflate tyres to the maximum for lay-up, but remember to reset before towing

up the cushions to allow air to circulate, but so long as vents around the rooflights (mandatory for gas regulations) are not blocked, air should circulate well.

An excellent idea is to use gel or drying crystals to help remove moisture from the air, or even run a mains-powered dehumidifier (not the most appealing product at current energy prices).

Some caravanners like to place a small heater in the interior of the van, but this isn’t a particularly good plan.

Aside from the additional energy use, doing this can actually promote the growth of mould and mildew, especially if there’s any moisture in the air. If your caravan has a water leak and you don’t spot it, operating a heater will simply accelerate the damage from mould.

For more advice about dealing with damp in your caravan, see p75.

Tyre advice

Before you put away your caravan for winter lay-up, inflate the tyres to the maximum pressures indicated on the sidewalls and leave a note somewhere in clear view to remind you to reset the correct pressure before towing.

Alternatively, simply move the van every couple of weeks during the winter (much easier if you have a motor mover), to prevent any potential damage from flat-spotting. Leaving leisure vehicles for long periods with the tyres in one position can result in damage to the tyre structure and premature failure.

Some flat spots will come out after moving the van for a short period. One way is to get the tyres warm, then lift the van up in the air while they’re warm, to help them reshape. This doesn’t always work and really isn’t practical on a van, so your best bet is to inflate the tyres to the maximum, or tow the van regularly. >>

‘Assuming your caravan isn’t leaking and you have shut the windows, you don’t really need to do a great deal to preserve the interior’



LAY-UP HINTS AND TIPS

- > Inspect and clean the caravan-to-car 13-pin socket, and coat it with a water-inhibiting product, such as petroleum jelly.
- > Remove all valuables that are kept in the caravan, including TVs, radios and so on.
- > Spread out and clean your awning in a dry area. Try removing any stains and spots with an appropriate cleaning product. Always store your awning in a dry place for the winter.
- > Empty and flush through your toilet waste tank and apply a little olive oil to the opening blades, then leave them in the open position.
- > Empty the fridge, clean it with a solution of bicarbonate of soda or similar, and then leave the door ajar, so air can circulate freely.
- > If you're planning to use a caravan cover, first clean the exterior bodywork using the appropriate cleaning products for the walls and plastic windows. If you do opt for a cover, make sure it's made of a breathable material, otherwise condensation and mould can grow underneath.
- > Remove all soft furnishings and store them in a warm, dry place wherever possible. Remember, seat cushions in particular are very expensive to replace, and a caravan without them is far less attractive to a potential thief.
- > Make sure all blinds and flyscreens are fully retracted, to avoid damage to fabric or springs within the mechanism (if applicable) PC



Inspect the 13-pin socket and coat it with a water-inhibiting product



Clean the bodywork before you cover your caravan for the winter



It's best not to leave blinds up when storing your van for the winter



HOW TO DEAL WITH DAMP

Damp is the caravanner's enemy all year round, but it's especially important to keep an eye on it in winter. Peter Byrne outlines what you need to know

YOUR CARAVAN SHOULD be a place for making wonderful memories, but keeping your eyes peeled for signs of damp will be a key part of extending the longevity of your tourer.

Moist air in a caravan can be created by a number of different factors, such as condensation – caused by cooking and showering – and water ingress, where rain can get in through gaps. Knowing what to look for is important here, whether you're checking your own van or looking to buy a pre-owned one.

Moisture traps

Shane Malpass from We Buy Any Motorcaravan explains: "Dampness is what happens when moist air gets trapped in a small or confined space. As caravans are confined living spaces by nature, they are the perfect trap for moist air. The UK and Ireland are rainy countries with wet climates, so there is always plenty of moist air that can easily get trapped inside."

"Older caravans are more likely to suffer from severe damp. While many of the newer models have been designed with the intention of preventing water ingress, they are not totally immune."

To help you protect your caravan, We Buy Any Motorcaravan offers some



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Alamy

sensible habits to get into when you're cleaning your van, to help you check for signs of damp, particularly in the winter.

➤ Look carefully around the seals and sealant found by the windows, seals and doors, along with anywhere you have drilled to fit any equipment (for example, aerial points or bike racks) and accessories into the main body.

- Examine the sealant for any signs of damage – this includes looking for cracks, peeling and knocks. If there's recently been a heavy downpour, this could make it much simpler to spot any water entry points.
- Internally, check if any of the cushions, curtains or similar have a musty smell.
- Make sure the wallboards are showing no signs of pimpling, by running your hands over them; you're checking for anywhere on the surface that feels wet or has a spongy texture.
- Check the walls for discolouration, which can include black spots or marks. They could also go a blue or pinkish colour, which will typically occur near windows and lockers.
- Do the floors feel spongy or creak? Either of these could be a sign of water ingress or damp.
- When water is entering your tourer, it can sometimes 'hitchhike' on channels and pipes. This means that it dumps water in random parts of your caravan, making it much harder to identify where the original entry point might be – this is something to bear in mind when you are checking for ingress.
- Check the internal screws for rust.



It's very important to inspect seals around windows and doors



STAYING SAFE OVER WINTER

If you've decided to lay up your caravan for the colder months, a few simple precautions can help you to keep it secure

ANY SECURITY IS BETTER than none, but an experienced thief can remove a budget lock in seconds, so it pays to buy wisely. Follow our guide to the top 10 security measures for your caravan, and you will be making life as difficult as possible for any intruders when you put your van into storage over the winter.

1 WHEEL LOCKS

Wheel locks come in all shapes and sizes, but the one that some insurance companies appear to favour is the Al-Ko Secure wheel lock.

This device is smaller and lighter than most other wheel locks on the market, so it's easier to transport. The receiver is also fixed to the caravan chassis, making it a more secure option.

Some caravans are sold with the entire locking mechanism supplied, but many just come with the receiver, and you buy the mechanism yourself.

These days, a wide range of wheel locks is available, from brands such as Milenco, Bulldog, Maypole and Fullstop.

These don't require a prefitted receiver, are often cheaper, and if you have a twin-axle, will be much easier to fit – aligning two wheels to the perfect spoke position can be quite tricky with an Al-Ko Secure lock.



2 TRACKERS

Buy wisely and you'll find the latest trackers very effective. The best are part of an integrated alarm and tracker set-up, so if your van is broken into, or moved, tilted or lifted, while the alarm is set, a suite of defences is triggered.

The alarm sounds immediately and the system contacts the security firm's tracking centre. They then call you to find out if the system has been triggered accidentally, or if the van is actually being attacked or stolen. This happens within a minute. After that, the local police can be contacted if required.

3 SECURITY POSTS

Security posts are a cheap and relatively effective defence or deterrent against 'tow-away' thefts for caravans stored at home.

Position your van on the driveway and lock the post in place behind it. They're very quick to use, although the professional thief can also remove them pretty rapidly. But they might convince an opportunist to try elsewhere.

Security posts tend to come in either bolt-down or concrete-in designs, the first option obviously being easier to install, but arguably less secure.

'Make life as difficult as possible for any intruders when you store your van in winter'



4 STORAGE FACILITIES

According to insurance company figures (premiums are based almost entirely on probability), 57% of tourers are stolen from outside the owner's home, while just 3% go from secure storage facilities.

This vast difference is reflected in the discounts – some insurers offer up to 25% lower premiums if you store your van in a secure facility.

Many people keep their caravans at farms or similarly remote spots

when they're not in use. These sites tend to be cheaper, but some places are so secluded that a thief who does discover a caravan in storage there will have all the time in the world to defeat any security measures.

For ultimate levels of security, you should consider using a facility registered with the Caravan Storage Site Owners' Association (CaSSOA), and in particular, one that has been rated Silver, Gold or Platinum.



5 CCTV

CCTV has become more affordable in recent years, and many systems only require a power supply – they don't need hardwiring into a video feed with cables running around your property.

Cleverly, the latest designs will also link easily to your home Wi-Fi, and the footage can be stored on a hard drive or in the cloud. Be sure to fit cameras

out of reach or out of view, while clearly overlooking your stored caravan.

Systems are available from well under £100, but generally you will tend to find that the more you pay, the better the camera quality is going to be.

If your CCTV records images beyond your property's boundaries, you must use it in line with data protection laws.

6 HITCHLOCKS

Caravan hitchlocks are a compact and fairly lightweight security device, and like wheel locks, are now considered the bare minimum provision by many insurance companies.

Using one is simple – the hitchlock clamps and locks securely around the caravan hitch-head, preventing a towball from being inserted into the hitch.

They are quick and straightforward to fit, and easy to store in a front locker, so they're always on hand.

Along with a hitchlock, it's also now considered advisable to fit a wheel lock where it's highly visible, on the offside of the caravan. In fact, the rule of thumb is, the more deterrents, the better.

Note, too, that not having a wheel lock and hitchlock fitted at all times when your caravan is unhitched may invalidate your insurance cover.

7 ALARMS

Factory-fitted alarms tend to be positioned in the same location on a caravan, so experienced thieves might know where they are if they decide to attack and silence them.

If you are having an aftermarket alarm fitted, ensure that the control box and siren are hidden away. The opportunist thief will almost certainly leg it if an alarm sounds, but the brazen professional is more likely to come prepared.



8 WINTER WHEELS

We've been told by those in the know that winter wheels are by far the single best physical security device for tourers kept in long-term storage or on an annual pitch.

Winter wheels are not actually wheels at all; rather, they are axle stands, which bolt onto the wheel hub in place of a removed wheel.

A potential thief would have to be very motivated indeed to arrive at your van with replacement wheels, then try to burn off the device with oxy-acetylene, and hope the heat doesn't damage and seize the hub.

Pop your wheels in storage – away from the caravan, obviously – and your tyres will also benefit from not sitting for three to six months under the weight of the van.



9 STEADY LOCKS

Quick and easy to use and store, these simple locks increase the hassle level for any would-be thief, simply by locking the corner steadies in the lowered position, making it impossible to tow the caravan away.



10 CRiS

CRiS, the Central Registration & Identification Scheme run by the NCC, is a database listing all UK-manufactured (and some imported) caravans and their registered keepers – rather like a DVLA for caravan owners.

Every caravan window is etched with the van's unique vehicle identification number, aka VIN, as is the chassis.

This makes it easy to identify stolen vans, and impossibly expensive for a thief to hide the van's identity. Always check that your caravan has visible and matching CRiS numbers when buying.



STAY WARM ON TOUR THIS WINTER

You've decided to continue caravanning over the winter, but how do you keep warm? John Sootheran outlines ways to take the chill off, whatever the weather

Insulation

For starters, it really helps if you have the right caravan. Those hardy folk who have decided to head out on tour in the worst weather conditions will benefit from a caravan boasting Grade 3 insulation.

This is the official accreditation for four-season use, otherwise known as BS EN 1645-1 accreditation.

The NCC manages this accreditation, and all accredited caravans are embossed with a special 'Approved' badge. It makes hundreds of British and EU standard compliance checks on leisure vehicles.

One section of BS EN 1645-1 accreditation covers the level of thermal insulation.

Each model is chilled to -15°C in a cold chamber. The doors and windows are then closed and the caravan heating turned on. All heating vents are opened to allow the heat from the boiler to circulate throughout, and solely for the purposes of the test, features that are included as standard in the production model are permitted inside.

Experts measure the time it takes for the interior to reach 20°C. The power required to keep the internal temperature at 20°C can also be measured.

INSULATION GRADES

From the 1999 model year onwards, all caravans that have been built to EU standards have received one of the three following gradings, indicating their thermal-insulation and heating performance:

Grade 1

This specifies a minimum degree of insulation, but does not measure the effectiveness of the heating system. These are caravans for use in spring and summer months.

Grade 2

This requires the same level of insulation as Grade 1, but adds a requirement for a heating system that is capable of maintaining the interior at 20°C when it is 0°C outside. These caravans may typically be considered for spring, summer and autumn use in the UK.

Grade 3

This denotes a higher standard for both insulation and heating. The interior must warm from -15°C to 20°C within four hours and the water system must function within an hour of this. The caravan must be able to maintain a temperature of 20°C, and the water system must operate when it is -15°C outside. These tourers are suitable for use all year round.

Most manufacturers include BS EN 1645-1 thermal insulation grading in their technical specs. Some also use the phrase 'Suitable For Four-Season Use'.

Caravan sidewalls, floors and roofs are a composite construction. The walls and roof comprise a thin layer of GRP or aluminium on the outside and thin plywood or GRP on the inside.

Sandwiched between is a thick foam core. In a modern Swift van, for example, the walls have 25mm of polystyrene foam insulation, while the roof has 32mm. These are light, strong and efficient.

Caravans hold their heat quite well. In (unscientific) testing, a van heated to 20°C at 10pm had dropped to 8°C by 4am, with outside temperatures at 4°C. We advise keeping the heating on low (16°C) throughout the night.



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Like domestic central heating, Alde's wet system pumps hot water to the radiators

Heating

There's an excellent choice of heating systems in caravans. Most function on gas and electricity, and combine the two for maximum output.

Truma and Whale make blown-air heating systems. These pipe hot air from a heater through ducting and distribute it around the caravan.

Alde, meanwhile, uses a wet system. Like domestic central heating, hot water is pumped around the van to radiators, which are hidden behind the furniture, to warm the interior.

Both systems have their devotees. Some caravanners believe that blown-air heating can leave cold spots around the van, so they prefer the 'all-encompassing' heat from the Alde radiator system.

I've never found this myself, though, and I like the speed with which blown-air can heat up a caravan.

Alde needs more maintenance, has a potential risk of leaking, is heavier and costs more, but it is quieter, and you also get heated towel rails with this system, which is a real bonus.

Whale has a clever heater unit, mounted underneath the caravan to save space.

Winter caravanners should check that their van doesn't have exposed heating ducts underneath, because this will greatly affect the performance of the heater in very cold weather. Internal ducting is best and can be further insulated to raise performance levels.

All three of these systems will also provide the hot water supply and feature LED control panels inside the caravan. >>



For touring in the winter months, it's essential to choose propane gas, rather than butane

Cleverly, Truma and Alde systems can also be controlled remotely using an app on a digital device. As long as you can get a Wi-Fi or a 4G signal, you can turn on the heating or hot water in the van from anywhere, using Truma's iNet or Alde's Smart Control. This way, you get back to a lovely warm caravan, with plenty of hot water for a reviving shower.

Heating systems are a matter of personal preference, so you could research them all, then talk to friends who tour.

Gas supplies

LPG is the most effective source of heat when you are out and about in your van. It delivers up to 6kW of energy, compared with electricity, which achieves 2kW or 3kW, where the site supply allows.

For touring in winter, it's essential to choose propane gas, rather than butane. Propane vaporises (turning from a liquid to a gas) at temperatures down to -42°C , whereas butane stops 'gassing' at -2°C .

Calor and Flogas supply propane gas bottles (red in colour), while the refillable

specialists, Safefill and Gaslow, use the Autogas that can be bought on many filling station forecourts (including Morrisons supermarket).

Regular winter caravanners can make huge savings by buying Autogas (currently 64p per litre), rather than pre-bottled gas (currently £2 per litre).

Autogas can be a mixture of butane and propane, although in the UK, it is 100% propane all year round. Be mindful that if you refilled your gas bottles abroad in the summer, your gas mix might not be ideal for a UK winter.

Whichever gas you decide to use, don't underestimate your consumption levels, and consider carrying a spare bottle.

Water system

In a cold snap, frozen water and waste pipes are common problems. You can guard against them by protecting your Aquaroll with a specialised insulated cover from the likes of Bags2Cover.

These feature a thick, wraparound bag, plus an insulated base and hose cover, and we've known them to be effective down to -8°C .

Alternatively, bring your Aquaroll and submersible pump into the van overnight if freezing weather is forecast.

Inboard water tanks can be insulated with pieces of polystyrene, as can any external water and waste pipes, using lengths of split foam, typically used for domestic lagging. All this aside, we always keep a large water canister in the caravan, filled with drinking water, just in case.

Unfreezing blocked pipes is a complete nightmare. Pouring hot water down them has limited success, and we've sometimes even had to resort to blasting the frozen section of pipe with a hairdryer!

Your Wastemaster can also freeze, so when it's particularly cold, you might consider a smaller, shallow container that's easier to move and de-ice.



Guard against frozen pipes in winter by insulating your caravan's water system

Draughts, cold spots

If your van feels draughty, don't be tempted to block off the drop-out vents in the floor. These are crucial to allow the escape of heavier-than-air propane and butane gases, should you have a leak. Instead, consider insulating the floor areas under beds and sofas, and in the cupboards, with carpet or some specialist insulation material.

Wheel arches and gas-locker bulkheads are often left uninsulated, and might benefit from additional lagging, too.



'Be prepared, and take extra clothes: thick socks, your warmest pyjamas and a sweater. A winter duvet and a hot-water bottle are good ideas, too'



You might want to upgrade your leisure battery, bearing in mind your increased power consumption during the winter

Leisure batteries

You'll obviously be consuming more power when touring in winter, thanks to lower temperatures, shorter days and more time spent in the van. Low-season caravanners should consider upgrading their leisure battery to allow for this.

A 100Ah leisure battery would be ideal, remembering that batteries do not perform as well in cold temperatures.

There's little point insulating your battery, because it will have no effect during extended cold periods. It might also take longer for it to warm back up when the sun comes out.

Bear in mind that shorter winter days and the low angle of the sun will make solar panels significantly less effective.

Useful accessories

An awning is essential if you tour a lot in the winter months – especially if you love outdoor pursuits.

Awnings create an 'airlock', where you can remove your wet gear and dirty boots,

without letting out all of the precious heat. A compact, sturdy air or pole awning should suffice, making sure that it is pegged down securely. On a frozen pitch, a cordless drill can be used with a long, 4mm-diameter masonry bit to create a guide hole for tent pegs.

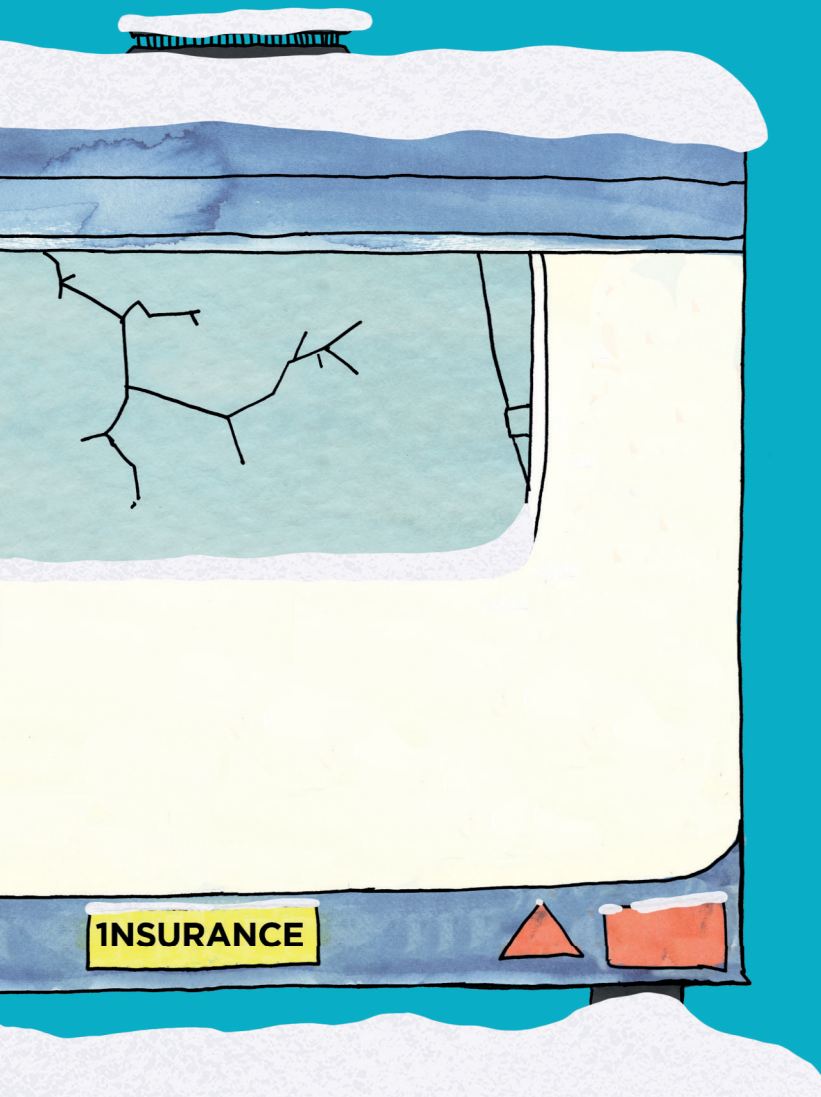
Be prepared, and take extra clothes: thick socks, your warmest pyjamas and a sweater. A winter duvet (12 tog) and a hot-water bottle are good ideas, too.

Most importantly, be safe – make sure that you have fitted a carbon monoxide detector and a smoke alarm. **PC**



In colder weather, your awning can help prevent your caravan from losing precious heat

Get Ahead of the Game!



Winter Caravan Care To-Dos:

- ✓ Drain all water systems, including the toilet.
- ✓ Clean all indoor surfaces.
- ✓ Clean and polish the exterior, followed by a coat of overwintering fluid.
- ✓ Wash all of your bedding & cushions for storage.
- ✓ Remove any batteries and check your gas cylinder valves are closed to store away.
- ✓ Place your cover on your hitch and caravan.
- ✓ Think about taking out **Caravan Insurance**

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