

# Bad Weather Driving Guide

Pocket Guide



Health & Safety Executive



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# Contents

Introduction	3
UK Weather: The Four Seasons	7
Your View, Your Safety	18
Is Your Vehicle Fit for Purpose?	21
Be Prepared	31
Appendix	37

# Introduction

During bad weather, professional drivers face more challenges than other road users through increased demands on their own concentration and their vehicles. Some of these are due to the size of the vehicles and factors such as braking distances that are affected by certain weather types.

Typically, planned delivery times and journey times remain the same all year round with drivers and vehicles required to perform the same duties whatever the driving conditions. We know that high winds, ice and snow or driving rain make the operation of a large vehicle much more difficult.

Remember, whilst on the road, you the driver, are solely responsible for the safe operation of your vehicle, security of your load and delivery of goods to your destination.

By following the simple steps outlined in this Pocket Guide you can ensure your own safety and that of other road users:

- ➡ Check your vehicle daily
- ➡ Ensure your load is safely secured in place
- ➡ Plan your route including potential diversions
- ➡ Watch the weather forecasts ahead
- ➡ Drive safely

## REMEMBER:

Professional Drivers are Champions of Safety



## How Will This Guide Help You?

This Pocket Guide is for you – the professional driver. It offers simple advice to help:

- ➔ Check your vehicle is fit for purpose
- ➔ Plan your route
- ➔ Know the weather forecast for your route
- ➔ Adapt your driving style to suit the conditions
- ➔ Be flexible to road closures and re-routing
- ➔ Minimise delay and idle time
- ➔ Save you and your employer money

Planning ahead and preparing for potential road closures and diversions will save you time, fuel and money. Having the right advice to hand is sometimes difficult when you are out on the road. Carry this Pocket Guide in your jacket pocket or cab for quick reference. Keep it handy and cut the risk of delay or accidents caused by bad weather conditions.



There are many guides, manuals and codes of practice available on specific aspects of transport. This Pocket Guide is a summary of how to prepare and drive in bad weather but is not comprehensive advice. **Appendix 1** provides a useful list of organisations that can help you find more information.



**Drivers: You are the key!**

**WINTER DRIVING:  
DON'T MAKE HEAVY  
WEATHER  
OF IT!**



- Check the forecast**
- Check your vehicle**
- Check your equipment**
- Check your route**

# UK Weather: The Four Seasons

The UK weather is known to change quickly. What can start out as a bright sunny day can change quickly over the course of the working day or over the course of your journey.

In almost all cases of bad weather you will have to adjust your driving style and vehicle speed to suit the conditions. The following is a list of advice on situations which you, the driver, will need to address during bad weather.

## High Winds

Strong headwinds can affect your forward speed and the turbulence from other vehicles on the road around you can affect your vehicle's handling and performance.



## Headwind and Crosswind

- ➔ When driving into a headwind at motorway speeds a splitter gearbox may allow you to maintain a good headway at slightly higher engine revs
- ➔ Remember to change back up the gearbox to a more fuel efficient gear once the headwind has reduced. In gusty winds it is important to keep a slow but steady pace
- ➔ Control your steering - side winds can cause a high sided vehicle to veer out of lane

### FACT!

Lower speeds improve vehicle handling in high cross winds



In high winds watch out for damage to:

- ➔ Lamp-posts and signposts
- ➔ Telephone and electrical wires
- ➔ Scaffolding and construction material
- ➔ Low hanging trees and branches
- ➔ Other vehicles
- ➔ Buildings
- ➔ Roadside furniture

**REMEMBER:**

Any of these can put your vehicle at risk!

## Rain & Spray

Rain obscures your vision through bouncing off the windscreen. Rain can also lead to 'fogging-up' on the inside of the windscreen and wing mirrors making it harder to see all around.

Fast moving traffic can lift gallons of water off the road surface creating a 'spray cloud'. This makes visibility very difficult for ALL drivers.

Lack of visibility caused by rain can be equally dangerous when operating at low speed. Rain water from your side windows and mirrors can affect your view from the cab.



## Wet conditions

- ➡ Turn on your vehicle's lights to be seen by other road users
- ➡ Use longer braking distances to slow your vehicle more smoothly
- ➡ Make your vehicle's movements known with extended use of the indicators
- ➡ Watch out for puddles! Other road users may try to avoid them
- ➡ Fit a spray suppression kit to keep down the spray from your tyres
- ➡ Water thrown from your vehicle's tyres can be a hazard to other road users and pedestrians

### FACT!

By planning well ahead and braking smoothly, gear changes will be reduced and fuel will be saved





## Snow

When driving in cold weather, keep an eye on the outside temperature, especially when climbing long ascents. At nightfall the temperature can fall rapidly turning rain to snow. Most modern vehicles have a temperature gauge on the dashboard.



## Snowfall

- ➔ Heavy falling snow will cause all road users to slow down
- ➔ In heavy snow you may have to make 'tram lines' to allow other road users to follow safely through
- ➔ Gentle use of all of the controls is required to ensure the vehicle does not 'break-away' in the slippery conditions
- ➔ You should use the differential lock on the drive axles to increase grip in the worst cases

### FACT!

In snow using higher gears at low engine revs helps to avoid wheel spin



## Snow

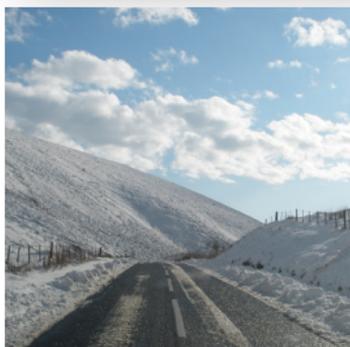
Ice can not only build up on the windscreen and windows but also along the vehicle body and on the roof of the trailer. This may present a danger to other road users.



Black ice is invisible to the eye. In freezing conditions black ice may form without warning.

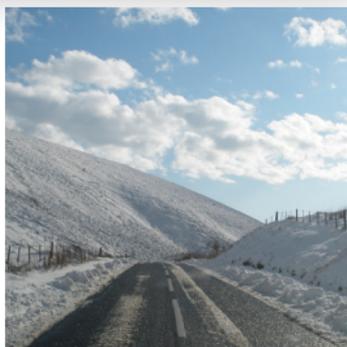


**CAN YOU SPOT BLACK ICE?**



13

**NO ICE**



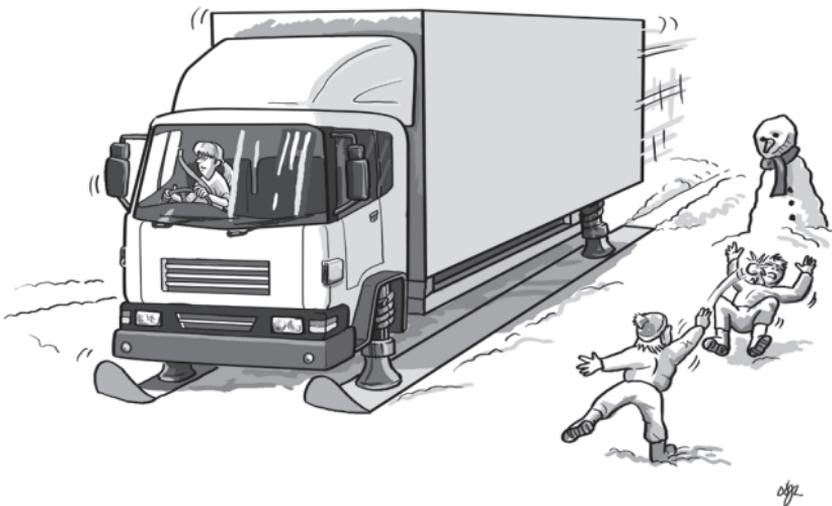
**BLACK ICE**

## Ice and Black Ice

- ➔ Ice on the road surface will massively increase your stopping distances. Brake early and gently
- ➔ Steering and braking must be gentle so as not to upset the high centre of gravity of your vehicle thereby causing a skid
- ➔ Where your vehicle does not have ABS, 'cadence braking' may be used whereby rapid but gentle use of the brake pedal slows the vehicle
- ➔ Watch out for bridge decks during icy conditions.
- ➔ They may be colder than the road close by making them more slippery

### FACT!

Ice reduces grip with the road surface making all aspects of traction, steering and braking less effective





## Slush

Often, stripes of melting snow create 'tram lines' along the road making driving particularly difficult for drivers of smaller vehicles with smaller wheels.

### Slush

- ➔ You should reduce your speed during slushy conditions; there may still be ice underneath the layer of slush
- ➔ Other road users may have difficulties in these conditions. Be aware of other vehicles' movements.
- ➔ Try to avoid damage to wheels and tyres as slush can cover roadside objects such as kerbstones
- ➔ Be aware of your vehicle's position when approaching junctions and roundabouts.
- ➔ Road markings may be covered

### FACT!

Debris thrown up by your vehicle's tyres can cause a hazard to other road users, particularly pedestrians and cyclists



## Fog

Fog is a danger to the driver. It blocks the driver's view over long distances causing most vehicles to slow down.

On open motorway and trunk roads fog represents the greatest danger. Varying vehicle speeds affect traffic flow creating more potential for accidents.

### Fog

- ➡ Fog limits your visibility. You should slow down to a safe speed. You must make sure you have adequate stopping distance in front of your vehicle
- ➡ Use your fog lights when appropriate and remember to turn them off once you clear the fog to avoid dazzling other road users

### FACT!

Just because you can see the fog lights of the vehicle in front does not mean you have time to stop. Always maintain a safe braking distance from the vehicle in front





## Flooding

Following wet and wintry weather, dangers can still exist through snow melt and localised flooding. This can result in road closures and diversions.

### Flood Water

- ➔ If you have to ford a flooded road you should keep to the highest point of the road camber, usually the centre line
- ➔ Keep your speed down to avoid making a 'bow wave' which may be thrown up onto oncoming vehicles
- ➔ Always dab your brakes several times after getting them wet, in order to test / dry the system

#### **FACT!**

Flood water may be flowing at speed, placing side loads on the vehicle. Stay in the middle of the road where possible

# Your View, Your Safety

A professional heavy goods driver is only as good as what he / she can see. The information provided in this section tells you what you, the driver, needs to be aware of from the driver's seat.

## Windscreens & Windows

Your windscreen is your view on the world; make sure it is free of stickers, hanging motifs and emblems. Keep side windows free of obstructions such as sleeper curtains.

Cold and wintry weather can lead to a build up of condensation on the windscreen and windows in the cab. In very cold weather ice can build up quickly on the outside of the cab covering unheated parts of the windscreen and side windows.

To ensure that your windscreen stays clear during poor weather you should:

- ➡ Regularly clean the glass on all cab windows with an approved cleaning product
- ➡ Ensure that the cab heater is set to blow onto the windscreen and door windows
- ➡ NOT cover air vents with paperwork and clothing
- ➡ Pre-programme your night heater to defrost your cab before you start the engine
- ➡ NOT leave your engine idling to defrost your cab before starting a shift, unless it is essential

## FACT!

3% of all roadside prohibition notices are served for defective glass and restricted view of the road



## Windscreen Wiper Blades

Windscreen wiper blades are vital to maintain your line of sight on the road. If they become iced up or there is damage to the rubber blades this will restrict your view of the road ahead. Check and renew wiper blades regularly.

Wash-wipes can freeze in very cold weather due to exposed pipes feeding the fluid from the reservoir to the blades. Use neat screen-wash with a minimum freeze limit of -20 degrees C to help prevent wash-wipe fluid from freezing. Neat screen wash will help defrost nozzles.

## REMEMBER:

Keep a spare bottle of screen-wash inside a cab locker in order to top up en-route



## Wing Mirrors

Before starting your journey, make sure your wing mirrors are positioned so that you can see all around the vehicle.

Most modern vehicles have a heated wing mirror function. Make sure it works properly and that you use it. Cracked or damaged glass should be replaced straight away. To ensure the best all round view you should:

- ➔ Wipe clean your mirrors before every journey
- ➔ Replace any broken or cracked glass
- ➔ Ensure that the heater is switched on at all times to clear mirrors while driving

### REMEMBER:

Road salt can build up quickly because of heated wing mirrors - wipe your mirrors regularly





## Is Your Vehicle Fit for Purpose?

Vehicle performance in the winter months can be as much as 10% poorer than in the summer months. Winter conditions can mean greater use of equipment such as fog lights, screen de-misters, etc. The change from 'summer grade' diesel fuel to 'winter grade' can also contribute to an increase in fuel consumption of around 3%.

Defects or problems should always be recorded, reported and if necessary, repaired. The Vehicle and Operator Services Agency (VOSA) has the right to stop a vehicle at the roadside, carry out spot checks and issue prohibition notices if necessary.



## Safety Checks

Vehicle checks should be carried out before starting any journey. These should be part of your everyday responsibilities as a professional driver.

Drivers are legally responsible for:

- ➔ Checking the vehicle is roadworthy
- ➔ Ensuring specified equipment is present and serviceable
- ➔ NOT DRIVING the vehicle if major faults are present

### REMEMBER:

For reporting crime or emergencies you must phone your local Police force

## Fuel

Make sure your vehicle has enough fuel to cover any stoppages or holdups you may face on your journey. In severe and cold weather you may need to top-up your tanks prior to tackling a potentially hazardous journey.

## Brakes

When you need to use your brakes they must be working at their best, in order to protect you and other road users.

The air brake system draws moisture from the atmosphere through an air compressor. Many modern vehicle designs use an automatic draining system for the air brakes. Manual systems need regular draining to keep them safe.



## REMEMBER:

Check to see if your vehicle has manual or automatic draining



**Air Brakes** - check your brakes before every journey:

- ➔ Charge up your air tanks and turn off the engine
- ➔ Listen for leaks in hoses and brake components
- ➔ Monitor your air tank readouts on the dashboard
- ➔ When coupling up to a different trailer, carefully inspect the components visually, audibly and with a brake test
- ➔ Before leaving your rest area or yard, test your brakes with a simple tap of the brake pedal, this should draw your vehicle up promptly

## FACT!

In 2008 TruckPol 3,749 incidents of HGV crime with a combined value of £84.5 million



## Use of ABS

Modern HGV design includes disc brakes on all axles, typically with Anti-Lock Braking System (ABS). This technology is included to assist your input as a driver NOT to take over for you.

For the safest use of ABS brakes apply the brake, maintain maximum force to the pedal as this ensures that the system works most effectively.



## Auxiliary Braking Systems

Auxiliary braking systems typically work in the drive-train of the prime mover; exhaust brakes, retarders and intarders all use systems to slow the drive axles of the vehicle.

Be aware that in icy and snowy weather there is potential for skidding or locking up the drive-axle as the following axles on the vehicle rely wholly on the drive axles to brake the vehicle.

### REMEMBER:

In slippery conditions you should try to balance the use of service and auxiliary braking systems



## FACT!

Sympathetic use of service brakes will increase their operating life and ensure better performance, also saving you money



## Tyre Conditions

Ensuring that your tyres are in good condition on both the steering and drive axles during the winter months is particularly important.

To ensure that you remain within the law and don't run the risk of a 'blow-out', inspect tyres for damage and wear before every journey:

- ➔ Inspect tread depth across the tyre
- ➔ Check for correct operating pressure if equipment is available (if not, plan visits to your fitter for checks often)
- ➔ Look for uneven wear on shoulders
- ➔ Inspect dual tyres for even wear between tyres
- ➔ Look for damage and cracks

- ➔ Remove debris trapped in a tyre's tread and between twin tyres
- ➔ Replace worn or damaged tyres immediately
- ➔ Flat spots can indicate a locking brake



## Tyre Pressure

In very cold weather, tyres can appear to be under-inflated as the air pressure inside drops with the temperature.

Regular tyre pressure checks should ensure that as the weather, temperature and air pressures change the tyres are operating at the correct pressure.

### FACT!

Soft tyres increase rolling resistance and fuel is wasted e.g. a 10 psi fall in tyre pressure will result in a 1% decrease in MPG



## Lights, Markers & Reflectors

During bad weather other drivers' ability to see your vehicle is as important as your ability to see other vehicles.

### REMEMBER:

Make sure that lights are working all round your vehicle

Drying road salt on the lenses greatly deteriorates headlight efficiency; these may need to be cleaned regularly to ensure they remain effective.



### FACT!

When driving at night clean and efficient headlights reduce eyestrain and driver fatigue!

When using headlights and fog lights in very poor visibility remember to turn them off again when the weather clears to avoid dazzling other road users.

Side marker lamps must be visible at set intervals along your vehicle. If snow or ice builds up you must stop to clean these lights.

Before every journey and throughout a long journey in winter months:

- ➔ Regularly check and clean all onboard lights
- ➔ Clean debris from all markers and reflectors at all rest stops and breaks
- ➔ Replace broken bulbs, light clusters and reflectors BEFORE setting off again

### FACT!

If other road users can't see you they can't avoid you, 22% of all HGV accidents are as a result of the driver failing to look properly!

## Catwalks, Ladders and Trailer Beds

Slips, trips and falls are responsible for the greatest number of accidents in the workplace. During snow and icy weather you must be extra careful when walking or climbing on the outside of your vehicle.

- ➔ Ensure that you have slip resistant footwear with good grip
- ➔ Remove snow and ice on the catwalk behind the cab
- ➔ Be careful of ice and snow when walking across flat or exposed trailer beds in winter weather
- ➔ Chip ice off ladders, tail lifts and ramps BEFORE attempting to climb on or operate them

➔ After cold nights, watch out for ice which may fall from your vehicle and become a danger to other road users

### FACT!

Ice falling from your vehicle is classed as an insecure load, you can be prosecuted for damage it may cause

## Curtain-Sided Trailers

In high winds, curtain-sided trailers and loose sheeted flat-bed vehicles can be affected by wind damage more than other vehicle body types. The risk of 'blow-over' is far higher when operating a curtain-sided trailer due to the air pressure difference between the windward and leeward side of the vehicle.

When running a curtain-sided trailer empty in high winds, it may be necessary to tie back the curtains to avoid a blow over. When making this decision you must assess the risks involved.

Factors which may be considered in this are tying back curtains to reduce the wind load on the trailer or if this is not possible, rerouting away from high and exposed routes to minimise risk to you, your vehicle and other road users and pedestrians.

Damage to curtains and sheets must be repaired immediately not only to protect your vehicle's load but because loose trim may be hazardous to other road users.

## Straps and Lashings

If your vehicle is a curtain-sided trailer or a flat-bed with sheeted load, you must check your vehicle over regularly. Ensure there are no loose lashings, chains, ropes and straps which may break away from the load in high winds.

You should check the condition of your straps, worn or damaged straps can fail. Replace damaged equipment at the earliest opportunity. Report any defected equipment to your Transport Manager.

**REMEMBER:**

It is illegal to drive an HGV with loose lashings and chains which may cause a danger to other road users



# Be Prepared

Before starting your journey in bad weather, you should plan your route in detail. Identify any potential hazardous locations on the route and where you will need to stop for rest breaks.

If necessary take advice from other drivers and your Transport Manager over issues you may face on your journey.



## Route Planning

Taking 10 minutes to plan your route before starting your journey could save you hours out on the road.

Always plan for an alternative route to allow for road closures during bad weather. When planning a route during bad weather try to:

- ➔ Identify the locations where there is a risk of high winds, particularly on high or exposed routes
- ➔ Be aware of potential localised road closures through snow gates, flood risk, landslide or other dangers
- ➔ Always prepare for a suitable diversion route

### FACT!

Getting lost causes stress, wastes fuel and money



## Radio Advice for the Route Ahead

Your best defence against getting lost or stuck in traffic is forward planning. Local radio is one of the best and most up to date methods of monitoring weather and traffic.

You can tune your in-cab radio by:

- ➔ Using the Traffic Report (TP) or Traffic Announcement (TA) button, this function can tune into local as well as national traffic reports
- ➔ More modern radios also feature the Traffic Information Memory (TIM) function which can be set up to record traffic announcements before your journey

## Variable Message Signs (VMS)

Variable Message Signs (VMS) are used to transfer short messages to road users and provide accurate and up to date information on local traffic delays.



## REMEMBER:

In bad weather listen to the radio and watch VMS signs for traffic reports!

## Internet and RSS Services

A number of Internet based traffic and weather services are available. Some examples are:

Traffic Scotland:

**<http://www.trafficscotland.org/traffic.aspx>**

Traffic England:

**<http://www.trafficengland.com/>**

Met Office:

**<http://www.metoffice.gov.uk/weather/uk/>**

## Satellite Navigation

Some satellite navigation equipment has built-in or optional real-time traffic updates. You can only use one if it is available. It could save you lost miles, time and money.

## Pack Your Bags

During bad weather you should prepare for delays and the possibility that you could have to spend longer in the vehicle than normal. You should be prepared to bring with you:

- ➔ Warm jacket
- ➔ Gloves and hat
- ➔ Winter boots
- ➔ Spare clothing
- ➔ Bottles of water
- ➔ Extra food and a flask of warm drink
- ➔ A blanket
- ➔ Mobile phone and charger

### FACT!

Training and preparation is vital. Don't go out in severe weather conditions without being properly prepared

## Rest Stops & Breaks

Plan your rest stops and breaks ahead of travelling. When operating in bad weather make sure you have a plan for suitable places to park your vehicle in the event of the weather closing in and preventing your onward progress.

During bad weather you should always have a secondary route planned. A journey you consider simple on a fine day can result in significant additional time and mileage during bad weather.

## Fixed Diversion Routes

Fixed diversion routes are shown through the use of traffic signs and VMS messaging. Typical situations where re-routing may occur are the closures of bridge crossings due to high winds or accidents.



### REMEMBER:

If you have to follow a fixed diversion route make sure it is suitable for your vehicle type!

## Own Choice Diversion

Where you know from experience that high and exposed routes are likely to be closed or very treacherous, make sure that you plan a diversionary route suitable to your vehicle. Stop and take your time to plan ahead using Maps, Atlases or SatNav.

### REMEMBER:

For reporting crime or emergencies you must phone your local Police force

## Getting Stuck

If you do get stuck in snow or in a traffic hold up, you may have to park up until snow ploughs can clear a route or an accident has been removed from the carriageway. When you park up for the night or to take a rest period, make sure you do so in a safe and legal place.

### REMEMBER:

In these circumstances follow the requests of any official at the location

## After your Diversion Route

Once you rejoin your original route, **DO NOT** be tempted to push past the legal driving hours just to make up mileage, drivers' hours are still mandatory even under exceptional circumstances.

# Appendix

Health and Safety Executive (HSE)

Tel: **08701 545 500**

**[www.hse.gov.uk](http://www.hse.gov.uk)**

- ➔ Driving at work – managing work-related road safety (HSE)
- ➔ Health and safety in road haulage (HSE)
- ➔ Workplace Transport Safety (HSE)
- ➔ WorkSmart videos for workplace transport (HSE)

Department for Transport (DfT)

Tel: **020 7944 8300**

**[www.dft.gov.uk](http://www.dft.gov.uk)**

- ➔ Safety of Loads on Vehicles – Code of Practice (DfT)
- ➔ Work related road safety (DfT)

Vehicle and Operator Services Agency (VOSA)

Tel: **0870 606 0440**

**[www.vosa.gov.uk](http://www.vosa.gov.uk)**

- ➔ Drivers' hours and tachograph rules for goods vehicles in the UK (VOSA)
- ➔ Your guide to ABS and EBS (VOSA)
- ➔ Guide to maintaining roadworthiness (VOSA)  
Check it out - DVD (VOSA)

Driving Standards Agency (DSA)

Tel: **0115 936 6666**

**[www.dsa.gov.uk](http://www.dsa.gov.uk)**

- ➡ The official guide to hazard perception - DVD (DSA)
- ➡ The Official Highway Code (DSA)
- ➡ The Official DSA guide to Driving Goods Vehicles (DSA)

Royal Society for the Prevention of Accidents (RoSPA)

Tel: **0121 248 2000**

**[www.rospa.com](http://www.rospa.com)**

- ➡ Driving for Work: Mobile Phones (RoSPA)
- ➡ Driving for Work: Safer Speed Policy (RoSPA)

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*Saving* **FUEL**