

When the CO wind blows

Predicting what the UK's winter weather will throw at us is, at best, precarious. Peter Shakespeare assembles some top tips for the forthcoming season

The online climate pundits have been hard at it since late July and based on 10-year trends, the consensus is a slightly milder than average 2017/18 winter for the UK.

While no one knows for certain what the winter has in store, operators of commercial vehicles can be sure of a few guaranteed outcomes. First, Scotland, Northern Ireland and the North of England normally see the harshest conditions. Second, the entire country faces average temperatures below 7°C, high winds, heavy rain, poor visibility and long hours of darkness. Wind presents the biggest danger to high-sided vehicles. Cold, wet roads mean longer stopping distances, and poor visibility and darkness take their toll in terms of more accidents and increased congestion.

That's not all. The run-up to Christmas is the busiest time for most operators: vehicle utilisation peaks,

the use of spot-hire vehicles increases, and maintenance-related issues rise accordingly. Coughs, colds and flu will take their toll on staff, and agency workers will probably have to be brought in to cover shortfalls.

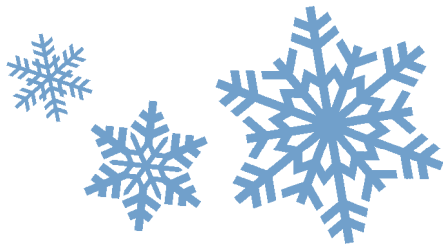
When it comes to preparing vehicles for winter, the recommendation is to ensure that they are well-maintained all year round, so the fleet is in top mechanical condition as winter approaches. Drivers' daily checks must be thorough, and in addition to all non-roadworthiness defects, non-critical defects should, where possible, also be remedied before vehicles leave the yard. Also helpful is an available stock of bulbs, screen wash, spare Suzie connections, mirror lenses, spray suppression flaps, cable ties and wiper blades.

Britain's roads are plagued with

potholes and imperfections that can do serious damage to vehicles, and they get worse during the winter months. Commercial vehicle wheel alignment specialist Haweka offers advice for operators. It says: "Driving over large potholes can alter or damage a truck's steering and suspension dynamics. Critical components can also become damaged. By ensuring wheels are correctly aligned, operators can minimise the effects of any pothole damage. If a truck's wheels are misaligned by just one degree, it can increase fuel consumption by 5% and will significantly increase tyre and driveline wear." It adds that correctly-aligned tyres are less likely to overheat, and overheating is the main cause of blowouts.

Tyre management is especially





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Rob Blurton

important in the autumn and winter months. Tyres must be capable of clearing water from their contact patches to maximise wet grip. Rob Blurton is Michelin’s technical manager responsible for the UK and Ireland. He says: “Tread design has a big influence on clearing water from under tyres, and a regional tyre will be more effective at doing this than a long-distance tyre.”

Blurton explains that the trick for most commercial vehicle fleets is about fitting the right tyres and looking after them all year round, rather than trying to use a summer tyre for winter conditions. “Operators should ensure they have the most suitable tyre for their operation. This means the most appropriate type of tread pattern,” he says, adding: “We don’t recommend different pressures for winter and summer. Pressures should be specific to the type of tyre and the vehicle loading. Once these are set, maintaining them is important, so in the winter, good maintenance goes a long way to ensuring optimum grip.”

He continues: “For roads covered in ice that is dry – as you will encounter in

Russia and northern Europe – a softer compound improves grip more than the tread design. For wet ice and packed snow, what we see in the UK, it goes back to the tread.”

In wet conditions, steer tyres have the most influence on grip and avoiding under- and oversteer, while on the semi-trailer, tyres on the middle axle dominate, according to Simon Waye, technical support engineer at ATS Euromaster.

Michelin drive axle tyres are marked ‘M+S’, meaning they offer better levels of grip on mud and snow, although this is not an official rating. There is an official European certification, Three Peaks Mountain Snowflake (pictured), under EU Regulation 661/2009 on the safety of motor vehicles. To qualify, a tyre must better a standard tyre for grip on snow by more than 25%, although this is not a requirement in the UK (see also weblink on p42).



FUEL

Due to its molecular composition, diesel is prone to waxing at lower temperatures (and indicated by the cloud point). Truck fuel systems warm the fuel filter when the engine is switched on. The critical period is therefore immediately after start-up when wax crystals may already be present on the filter and in the fuel being pumped through it; this is known as the cold filter plugging point (CFPP). Provided that sufficient fuel flow is maintained to enable the engine to complete its warm up and melt the wax crystals, then no operational issues result.

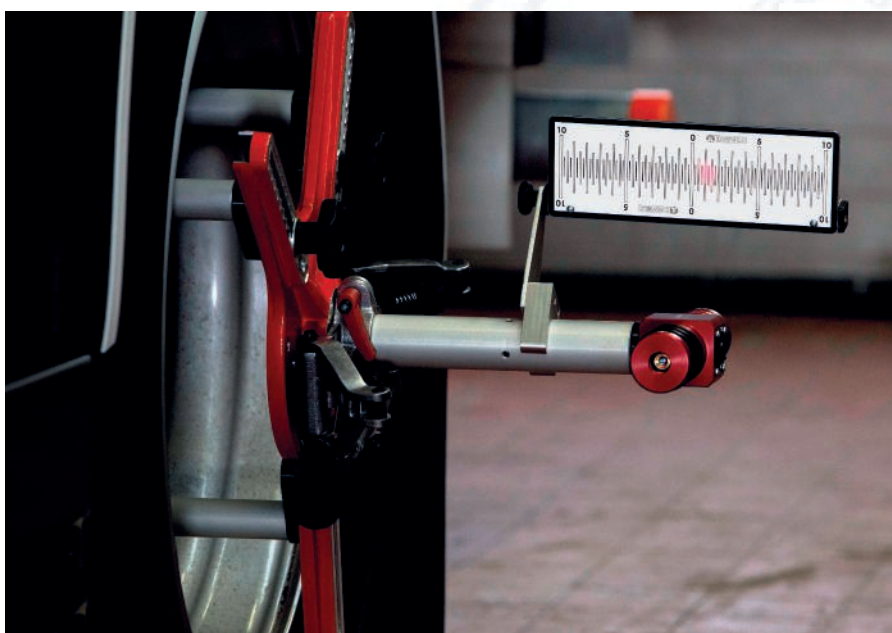
In the UK, winter-specification fuel (dictated by BS EN 590) must be sold at the retail pump from 16 November until 15 March. UK fuel has a CFPP of -15°C in winter, and -5°C in summer. According to fuel supplier BP, winter additives in temperate climates do not impact fuel economy directly, so there is no significant difference between summer and winter grades for the UK.

Biodiesel mixes may be more affected by cold temperatures than mineral oils. Biodiesel source material varies in its chemical structure; some types have good stability but relatively poor cold flow performance, and vice versa. For example, HVO (hydrotreated vegetable oil) tends to be less sensitive to cold than FAME (fatty acid methyl ester).

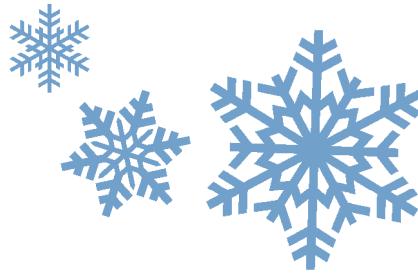
INCLEMENT WEATHER

Highways England offers predictions and advice on travelling conditions. Paul Furlong, team leader for national and severe weather at Highways England (HE), says: “Issues around high winds and heavy rain have been more prevalent in recent years. The advice we give to all drivers is to be prepared for your journey and check the conditions before you travel. Keep a close eye on the weather forecast, check traffic conditions on the Highways England website and listen to local traffic bulletins on the radio.”

In particular, if a high wind alert is



Rough winter roads can worsen wheel alignment problems (Picture: Haweka Axis 500 tool)



WEATHER ADVISORY

Highways England issues its own weather alerts based on Met Office information that are specific to the strategic road network and warn of potential disruption. Operators can ask to be included by telephoning 0300 123 5000. Traffic and weather updates are also broadcast on social media website Twitter, @highwaysEngland, and via regional feeds: @highwaysSEAST, -SWEST, -EAST, -EMIDS, -WMIDS, -NWEST, -NEAST, -YORKS; @a14c2h; @lowerthames; @a303stonehenge.

In August, US-based firm The Weather Company launched its Operations Dashboard for Ground Transportation, a private subscription service that is also available in the UK (<https://is.gd/iviniif>). A free alternative is Highways England's own 'Weather Watch' website (<https://is.gd/apinar>).

issued, drivers should consider very carefully if their journey is essential, and if it is, choose an alternative route, avoiding exposed stretches of road. Furlong adds: "It's about taking the conditions into account and driving according to those conditions. Also take other road users into account. For example, don't follow a high-sided vehicle or caravan too closely, and just take a lot of extra care. It is normally gusts of wind that cause the problems, so if your vehicle feels unstable, find somewhere safe to pull over and stop."

Furlong explains that HE works on the assumption that every winter will be severe. It has 500 gritters and 280,000 tonnes of rock salt, positioned at over 100 depots around the road network – enough to treat 620,000 miles of road.

Incidentally, there are a few unwritten rules about driving near gritters and snow ploughs. States Furlong: "On three-lane roads, the gritter will travel up lane two. HGVs should not overtake in lane one, or as we have seen, the hard shoulder. It is best to stay behind and [wait to pass when] they exit to grit the junctions.

"In heavy snow, never obstruct the hard shoulder or a closed-off lane. If you lose traction, stop in the lane you are in. We see lorries in the snow trying to get onto the hard shoulder; they don't quite make it and get stuck, and end up straddling lane one and the hard shoulder. Snow ploughs and gritters need the hard shoulder to get in front of the traffic to clear the road ahead. On managed motorways, we use lane one as somewhere to push the snow. In these conditions, drivers must obey the lane instructions on the overhead gantries," he adds.

Depending on where they operate in the winter, vehicles



might benefit from being equipped with a shovel, a bag of rock salt and steel tow rope. Snow chains have very limited application in the UK, but some European countries do require them to be carried (trade associations such as the FTA or RHA can advise on country-specific requirements). Probably more important is to ensure that vehicles' night heater and radios are working. Keeping drivers warm when parked up, and keeping them abreast of weather and traffic news, is important. It might also be an idea to make sure that drivers' personal mobile telephones are on record in case of an emergency.

BACK AT BASE

Most companies will have some form of gritting and snow clearance equipment at their operating bases. A supply of rock salt and a couple of snow shovels are essential to keep pedestrian walkways and entrances safe in icy conditions. A range of mechanical gritters can be hand-operated or towed behind a 4x4 or forklift. Larger operating bases, such as distribution centres, can use larger vehicle-towed or demountable gritting bodies and snow ploughs, and rent an appropriate prime mover during the winter months. Companies such as Contact Attachments (<https://is.gd/dipoha>) and Rasco (<https://is.gd/fikape>) supply a range of relevant equipment. It is important that staff are trained to use it, and that it is serviced and tested prior to winter commencing. Rural operating bases would benefit from understanding which local farmers have council contracts for snow clearance.

In the competitive world of road transport, the weather will be seen as a pretty lame excuse for non-delivery. It may be worth speaking to your customers

to gauge what they consider 'severe weather' to be. They are likely to be more understanding if they are based in the north. Sadly, in the south of the UK, the slightest hint of snow brings the road network to a standstill. It is worth building contingencies into the transport plan to anticipate the fallout from bad weather and, where possible, plan routes to avoid potential problem areas. Communication with drivers is key, both to keep them informed, and to receive feedback from them, so that customer expectations about late deliveries can be managed.

The most important component of preparing transport operations for the challenges of winter is to plan ahead. **TE**

FURTHER INFORMATION

Continental's guide to winter equipment regulations – <https://is.gd/xupeno>
 Traffic England – <https://is.gd/fuhewo>
 BS EN 590:2013, on sale for £116 from BSi – <https://is.gd/besexu>