

# BUMPER 2 BUMPER

WINTERIZING YOUR RIG



A GUIDE CREATED BY:  
TBS FACTORING  
SERVICE

# BUMPER **2** BUMPER

## WINTERIZING YOUR RIG

### ...CREATED BY TBS FACTORING SERVICE

[TBS Factoring Service, LLC](#) is a leading provider of freight-bill factoring to growth-oriented companies in the transportation industry. Founded in 2004, the Oklahoma City-based company currently serves nearly 4,000 clients nationwide with simple and flexible cash-flow solutions.

TBS Factoring is a key part of a family owned, one-stop shop for independent trucking services that also includes [Truckers Bookkeeping Service](#), formed in 1968 to provide independent truckers with permitting, DOT compliance and fuel tax reporting services, and [TBS Insurance Agency](#), founded in 1998 to provide truck insurance nationwide. In 2013, [TBS Capital Funding](#) joined the TBS Family, expanding our service offering to include general factoring. In 2015, [Elite Dispatch Service](#) was formed to provide logistics services for motor carriers nationwide.

The TBS family ownership group has more than 50 years of experience serving independent truckers. Our clients receive outstanding service from a seasoned and dependable staff.

TBS Factoring Service is among the most highly regarded freight-factoring companies in the USA.

 **LET'S BE FRIENDS**





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# BUMPER 2 BUMPER

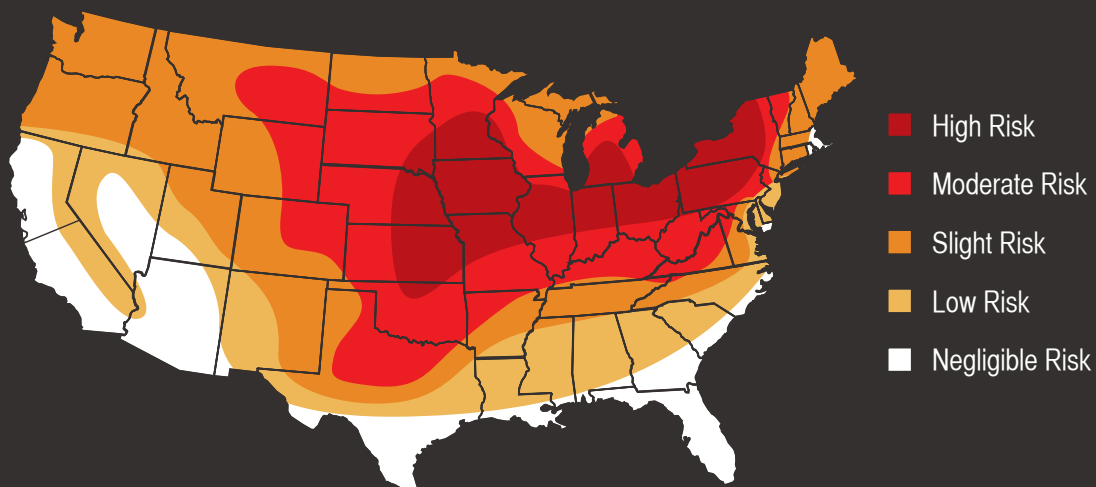
## WINTERIZING YOUR RIG

You can tell a lot about mechanics by the way they take care of their tools. And your rig may be the most expensive tool you'll ever own. Staying roadworthy is more than just a good business practice, your livelihood depends on it.

We have created this series of free handy reference guides to help you keep your ride revved during winter and ready to make you money from bumper to bumper.

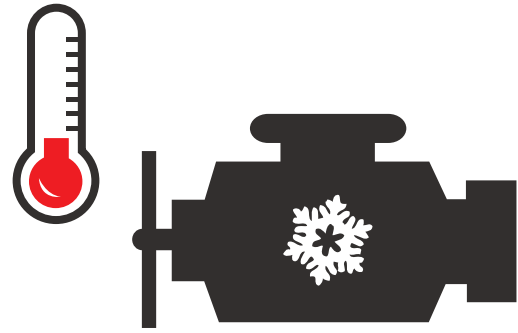
Safe travels!

### ROAD ICE RISK ZONES



# CHAPTER #1

## ENGINE



Winter's frigid temperatures and inclement weather, accompanied by harsh driving conditions, can have a pronounced effect on any vehicle. Nevertheless, vehicle downtime can be minimized, while still maintaining performance and reliability, through winter preparation measures that should be part of every truck owner's maintenance operations.

If you have an effective preventive maintenance program, you are already ahead because your trucks have been well maintained. For winter, there are a few components and systems that require additional attention in order to avoid a hazardous situation.

Make sure the engine is properly tuned and serviced. Cold, damp weather can impact engine performance. Oil takes longer to circulate and the engine takes longer to reach its operating temperature.

## BELTS & HOSES

Fan belts and coolant hoses should be checked for bulges, cracks and other damage, and replaced if necessary.

Photo courtesy of Kenworth Truck Company

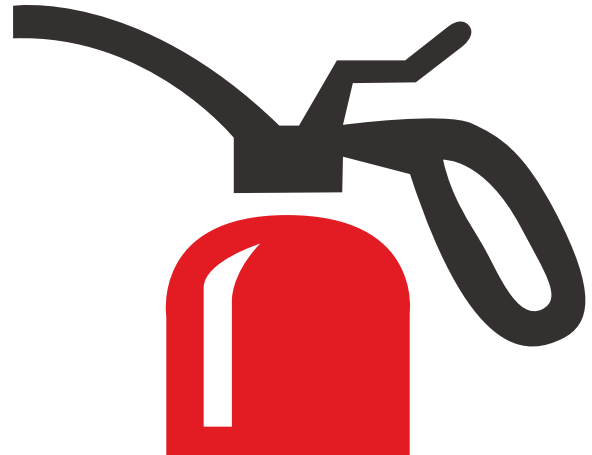


# ENGINE OIL

Be certain the proper oil grade is being used for cold weather, as this will make starting easier. Colder temperatures require lower grade oils for correct flow during starting, whereas higher temperatures call for higher grades for proper lubrication.

The Society of Automotive Engineers (SAE) defines oil viscosity (thickness) by grade. Basically, viscosity is oil's resistance to flow. Consult the vehicle's owner's manual for the recommended oil viscosity.

In addition, ensure that all engine fluids are at their proper levels. Oil and air filters should be checked regularly and changed when necessary.



## DON'T OVERLOOK LUBRICATION

Along with making things “slippery” to reduce friction, using the right lubricant also reduces the amount of wear that occurs during operation, decreases operating temperatures and minimizes corrosion of metal surfaces. Consequently, don't overlook lubrication in vehicle winterization.

Be sure all lubricating oils (engine, transmissions, differentials, wheel bearings, etc.) are at the proper fill levels.

For tractor-trailer combinations, it is best to use a winter grade of lubricant on the fifth wheel. At low temperatures, some

summer lubricant grades can become too heavy and may interfere with steering on slippery surfaces.

Lubricate the moving parts on doors to make sure they operate easily in freezing temperatures. Use a deicer on locks to prevent freezing.

# FUEL SYSTEM

As the seasons change, it is a good idea to check the diesel fuel grade, as well as the cetane rating on the pump. The cetane number is a measure of the readiness of a fuel to auto-ignite when injected into a diesel engine. The higher the cetane number, the easier the vehicle will start in cold weather.

Diesel fuel is sensitive to temperature. All diesel fuel contains paraffin components that are high in energy value and help improve fuel economy.

When temperatures dip below 20 degrees, the paraffin components turn to wax flakes. If temperatures are low enough, these flakes can obstruct fuel filters and stop fuel from reaching the engine, leaving the vehicle stranded and cold.

To minimize chances of fuel waxing, maintain fuel filters and drain fuel water separators and fuel tanks of any accumulated water and sediment to prevent freezing. Service fuel water separators and verify that they are working properly. Also verify operation of fuel heaters, if so equipped.

Look over fuel tanks and valves for signs of any problems. Ensure that fuel lines are tight and damage-free. Caps should be tight. It is advisable to refuel at the end of a day's operation or before leaving a vehicle standing for an extended period of time, as moisture will condense in an empty fuel tank. Minimize condensation buildup by keeping tanks as full as possible — 50 percent at a minimum.



# ENGINE COOLING SYSTEM

Inspect all fan belts and coolant hoses for bulges, cracks and other damage, and replace if necessary. Make certain all hose clamps are tight and in good working condition.

Also, check the condition of the radiator, radiator cap, fan, fan shroud and fan clutch to see that they are all in good

working order. Again, replace as needed.

Verify the protection level and quality of the coolant. The antifreeze needs to provide adequate protection in those areas where your trucks will be operating.

# BATTERIES & CHARGING SYSTEM

Cold temperatures drain batteries faster so it is important to make certain batteries and the charging system are in good shape and operate properly. Batteries typically fail due to the high starting load created by cold weather.

- Check out the battery case for cracks or other damage. Be sure batteries are securely mounted.
- Clean and inspect all battery cables and posts. Clean, tighten and grease all terminals.
- Load test batteries to determine their condition and make sure they are fully charged. A partially charged battery is subject to damage by freezing temperatures.



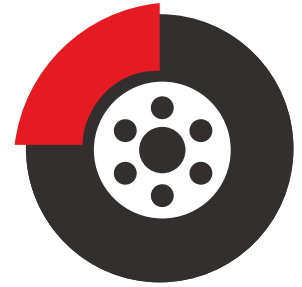
## ELECTRICAL SYSTEM

Check the alternator and starter for condition and proper operation. Thoroughly examine the routing and condition of the electrical wiring, checking for frayed, loose, exposed or hanging wires.



# CHAPTER #2

## BRAKES & TIRES



**BRAKES.** Inspect brake lining condition and check for leaking wheel seals. Ensure proper braking from each wheel, as well as the operation of the anti-lock braking system.

Properly functioning brakes keep a vehicle in control and minimize skidding by providing uniform braking.

**TIRES.** The importance of tire maintenance takes on even greater significance during the winter months. Cold weather reduces tire pressure, and low inflation adversely impacts tire life and performance.

Make sure tire air pressures are correct, as this also helps maximize traction. Check and adjust air pressure frequently.

Also check tire and tread condition. It's common sense that a tire with a lot of tread will have more traction than a tire on its last 32nds. Worn tires can compromise a vehicle's traction when it is wet and slippery.

## TRACTION ACTION

Before heading for snow country, check out state DOT regulations for chain, traction device or snow tire requirements. Highway signs will indicate when chains are required. Difficult passes on the Left Coast include I-80 at Donner Pass, around Redding on I-5, the Grapevine on I-5, and Tehachapi on CA 58. Control areas can change rapidly due to weather conditions – so stay alert.

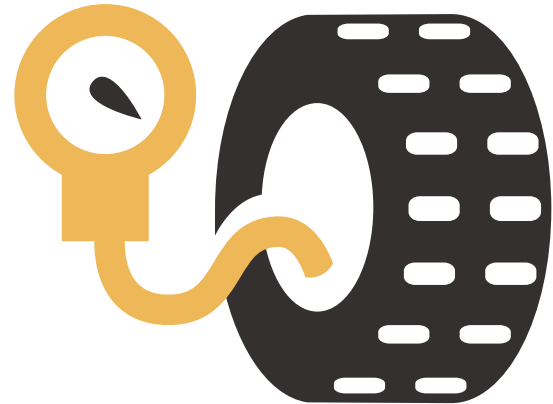


## TIRES (CONTINUED....)

Having an “aggressive” drive-axle tread pattern is very important for single drive-axle tractors and straight trucks. A pattern with lots of lugs will dig into snow and provide better traction. The key thing for traction is having lots of gripping edges for traction improvement in snowy or slushy conditions.

When taking an air pressure reading, moist air comes out of the valve stem, which can often times freeze on the spot, and cause the value to stick. If bitter-cold weather is encountered and tire air pressures need to be checked, do it in a shop where it’s warmer and the risk of a stuck valve is lessened. If air pressure needs to be added, remember to compensate for the pressure drop that happens in extreme cold.

If chains are used, it is important that they are the correct size for the tires and properly installed. If the chains are not tight enough, or if chains are run after they’re no longer needed, the tires will have a shortened life.



## AIR SYSTEMS

Inspect the air system and components for proper operation and check valves for function and leakage. Examine the routing of air lines and be on the lookout for any damage or potential problems. Drain water from all air tanks daily. Always use dummy airline connectors on the rear of the tractor cab when the lines are not connected to a trailer in order to prevent debris and excess water from getting into the system.

## EXHAUST SYSTEMS

Inspect vehicle exhaust systems, particularly on gasoline engine models, to assure they are in good condition and properly sealed, with no leaks or holes. Sitting in slow-moving traffic, creeping because of heavy weather or parking with the engine running to maintain cab temperature can increase the risk of carbon monoxide entry into the truck cab.

# ICE ICE BABY

Along with prepping vehicles for winter weather, drivers ought to be prepared, too, because winter weather makes for hazardous roads. Here are some safe winter driving practices from traffic safety professionals.

1. Drive with the lights on.
2. Be alert to changing road conditions.
3. Increase following distance to leave plenty of room to stop.
4. Accelerate slowly and refrain from sudden or jerky movements.
5. Signal turns well in advance to give other drivers increased warning.
6. Drive appropriately for conditions and allow extra time for traffic delays.
7. Clear snow and ice from all windows and lights, plus the vehicle's hood, and brush them off frequently.
8. Use brakes cautiously and begin slowing down well before a stop. It takes 10 times more time and distance to stop on wet, icy and snow-covered roadways, especially with heavily loaded vehicles.
9. Be extra cautious when approaching bridges and overpasses, as they typically freeze first. Because of the difference in the exposure to air, the surface condition can be worse on a bridge or overpass than on the approach road.
10. Stay a safe distance behind snowplows and maintenance vehicles, and do not pass them on the right.



## LIGHTS

Lights are especially important in winter weather to ensure that trucks are clearly visible to other drivers. Make sure all headlights are correctly adjusted, and that all other lights work properly.

Photo courtesy of Bendix Commercial Vehicle Systems



# CHAPTER #3



## WINDSHIELDS, WIPERS, WASHERS, HEATERS & DEFROSTERS

These all need to be in good working order to allow clear vision at all times.

Check windshields for minor chips and pitting. As temperatures decrease and sheet metal contracts, stress on windshields can increase. Have small chips repaired to help avoid crack propagation and the need for a full windshield replacement.

Examine windshield wiper blade condition and replace if necessary. Look for signs of wear, such as cracking or discoloration, and check for the quality of the wipe.

## KEEP YOUR VEHICLE CLEAN

When possible, wash vehicles. A good pressure washing and cleaning of the frames can help mitigate the corrosive damage caused by the harsh road deicers used by highway departments around the country.

Photo courtesy of Steamaway



## WINDSHIELDS, WIPERS, WASHERS, HEATERS & DEFROSTERS (CONTINUED....)

Check and fill windshield washer fluid reservoirs regularly, and be sure to use proper winter dilution levels to avoid freezing.

Always turn off windshield wipers before shutting off the vehicle's engine. Otherwise, ice, snow or rain could freeze the blades to the windshield. When the driver starts the truck, the wiper motors could be damaged trying to get the wipers moving.

Test heater/defroster operation, including the function/position of the directional vanes in the system to assure effective defrosting.



## HOW TO KEEP TRUCK DOORS FROM FREEZING SHUT

The night before:

- Rub talcum powder on the rubber stripping
- Spray the door hinges and lock springs with WD-40, Armor All or PAM cooking spray
- Park close to a house wall, or a tree, sometimes these give off just enough heat to make the difference
- If the lock is frozen, heat the key

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