



Guide to Fleet Winterization



Understanding and Preparing for Winter Challenges

Extreme temperatures can wreak havoc on fleet assets, but proper winterization helps keep drivers and assets safe, while reducing repair events related to cold temperatures

with Expert Contributor James Shelton, Technical Field Support Manager, Jiffy Lube International

Winter can be brutal on vehicles, and when you're managing a fleet, keeping those vehicles in top operating condition should be a top priority. With his extensive background in automotive mechanics and technical expertise, James Shelton discusses the ins and outs of seasonal maintenance, including the importance of winterization for fleets.

A Car Guy by Heart

James boasts a remarkable background in the automotive world. The 10-year Jiffy Lube veteran holds multiple ASE certifications, including Master certification in automotive and medium-heavy truck and advanced drivability/diagnosis/repair certification. He is also an ASE-certified undercar specialist, parts specialist and service consultant. For James, vehicles aren't just a profession, they're a passion.

James's journey began in high school, where he attended an automotive mechanics vocational school. Post-graduation, he ventured into the workforce, spending several years at a dealership, as well as working for a few independent garages. He was even a prototype technician for Roush Racing. However, the physically demanding nature of the job eventually led him to transition into an automotive instructor role.



While continuing to work hands-on with vehicles, James decided to further his education. He earned his undergraduate degree in automotive technology and later obtained a master's degree in education, with a focus on web training development. This unique combination of practical experience and educational training makes James the perfect source of advice for fleet managers looking to winterize their vehicles effectively.

Understanding the Effects of Extreme Cold

When winter sets in, the cold can severely impact the performance and health of vehicles, leading to a range of issues. James highlighted some key areas that are particularly vulnerable to cold weather:

Engine oil — The temperature drop in winter affects engine oil viscosity. Even with synthetic oils, which tend to perform better in cold conditions, oil thickens in lower temperatures. This thickening can impede oil flow, particularly during the critical first few seconds after starting the engine. "Those first couple of seconds that you start an engine is when 90 percent of [engine] wear occurs," James explains. Checking your oil more frequently during the colder months can help you catch particulate build-up early.

Battery — Cold weather can drastically impact a vehicle's battery performance. "If you remember back to high school chemistry, chemical reactions occur — they change — based on the temperature, and all a battery is is a big chemical reaction that produces current," says James. "So as the temperature goes down, the ability for those electrons to move around real quick doesn't happen — or doesn't happen as well — so your battery becomes weaker." This can result in difficulties starting the engine and can potentially leave drivers stranded. A good way to avoid battery-related downtime in colder months is by increasing battery checks and keeping battery charges above 70 percent.

Wiper blades and washer solvent — Winter brings its share of ice buildup, especially on windshields. Dealing with ice can put added stress on wiper blades, potentially causing damage or reduced performance. On top of that, there's the dreaded road spray; "You really don't think about using washer solvent in the winter because you're just clearing off snow or maybe some ice and rain," explains James. "When you get a day where the temperature goes above 32, you get a lot of road spray. Here in Traverse City, we use sand on the road but downstate, they use salt. So when you get that salt mixed with the water on the road and it sprays up on your windshield, it actually will coat your windshield — it'll make your window opaque. So you end up using a lot of washer solvent. I've gone through a gallon of washer solvent in a day, so keeping that washer solvent full this time of year is very important." Clear visibility is vital for safe driving, making it essential to ensure that wiper blades are in optimal condition and washer solvent levels are topped.

Tires — Cold temperatures play a major role in tire issues, especially underinflation. "As the temperature goes down, the pressure in your tires actually drops. There's many manufacturers out there where the window of operation is quite small and you start getting a TPMS — a tire pressure monitor system — light warning indicator on your dash that will go on just because the temperature has dropped," says James. Tires lose one psi for every 10-degree Fahrenheit drop in outside temperature. During colder months, increasing tire pressure checks can go a long way toward decreasing downtime associated with tire-related issues.

Antifreeze — Checking your vehicle's antifreeze is crucial in winter, as it prevents the engine coolant from freezing in cold temperatures. "You know, your radiator fluid has been in there all year, and [as] you start getting into cold temperatures, you need to make sure you check your freeze protection and also the corrosion protection on that." Ensuring the right freeze protection and corrosion resistance is key in preventing engine damage in freezing conditions.

James advised that it's especially important to be proactive about winterizing



your fleet when temperatures consistently drop below freezing. Taking action to prepare for these cold snaps can save you significant headaches and expenses down the road, and it helps ensure the safety of your drivers. It can also help improve asset lifecycles and return on investment (ROI).

Tips for Effective Winterization

With a better understanding of how the cold affects your assets, you can build a comprehensive winterization plan to maintain safety throughout the season. James emphasizes the importance of proactive maintenance during the winter: “Remember that maintenance is a proactive action; it should not be reactive. If you’re running a fleet, and you’ve got deliveries that need to be made, and that truck or that car or whatever is broken down because of a maintenance-related item, that’s that percentage of work that that truck can’t do until it’s repaired. It’s my recommendation to be more on the proactive side; spend the money up front, because in the long-run it’s going to pay for itself.”

Here are a few tips for creating a winterization plan:

Use high-quality fluids — Whether we’re talking about engine oil or antifreeze, James emphasized the importance of using high-quality, name-brand fluids. These fluids are specifically formulated to withstand the extreme temperatures that your fleet might encounter. Look for products that meet USDOT standards

and always follow the manufacturer's recommendations for the right type and viscosity of fluids.

Follow the owner's manual — Your vehicle's owner's manual is your bible when it comes to maintenance. James strongly recommended adhering to the manufacturer's recommendations for maintenance schedules and fluid types. Most vehicles have two maintenance schedules: normal and severe. In the world of fleets, you're likely operating under severe conditions. According to James, "A very small percentage of your [fleet assets] are going to fall under that 'normal' driving condition, because if you look at the criteria they use for [severe, it] fits right into what most fleet vehicles are going to fall under: stop and go traffic, hot operation, cold operation, short trips, the list goes on and on."

Prepare for the unexpected — Winter weather can be unpredictable, and breakdowns can happen at any time. Equip your fleet vehicles with emergency kits that include items like road flares, a first-aid kit, a flashlight, an ice scraper, food, water, blankets, jumper cables and even basic tools. James also notes that medication is another important and often overlooked item to include in emergency kits.

Communicate with drivers — Your drivers are your eyes and ears on the road. Encourage them to report any unusual noises or warning lights promptly. Early issue detection can prevent costly breakdowns and keep your fleet running smoothly.

Maintain detailed records — Record-keeping is crucial for tracking maintenance and spotting such trends as an increase of vehicles in the shop during winter, which can be a sign of component durability, for example — or lack thereof. Whether you handle maintenance in-house or partner with a service provider, maintain detailed records of all maintenance and repairs — a task made easy with Fleetio. Regularly review these records to identify patterns or areas that



might require additional attention, such as high-fail items.

Consider preventive maintenance

(PM) policies — Some fleets adopt PM policies that go beyond manufacturer recommendations, taking into account service and inspection histories to tailor PM to better fit individual assets. Others regularly replace critical components like tires, brakes and fluids, even before they show signs of wear, significantly reducing breakdowns and extending asset life. The former offers better control of fleet health through insights gained from consolidated fleet data analysis, while the latter — though costing more on the front end — can save fleets thousands in avoidable breakdowns and productivity loss. Either method could be considered the foundation of a proactive PM plan, especially when adding winterization to the mix.

Understanding your vehicles' unique quirks and issues can help you address problems before they escalate. By being proactive in addressing recurring issues, encouraging your drivers to provide feedback and implementing a strong winterization plan, your team will be better prepared to successfully take on the cold. Taking these steps to winterize your fleet makes all the difference in ensuring your vehicles stay safe, reliable and efficient during the colder months. As James wisely pointed out, being proactive with maintenance can save you both time and money in the long run, helping your fleet weather the storm.



PRO TIPS

Winter Maintenance

Consult the manual

Sticking to OEM-recommended service intervals goes a long way in maintaining a fleet asset's health.

Keep good records

Maintaining good service records can help you determine winter-related high-wear/high-fail items specific to your fleet's location and daily operations.

Prepare your fleet

By incorporating winter maintenance tasks into your fleet's PM program, you can ensure a healthier, safer fleet.

Seasonal Inspection Form

Vehicle Information

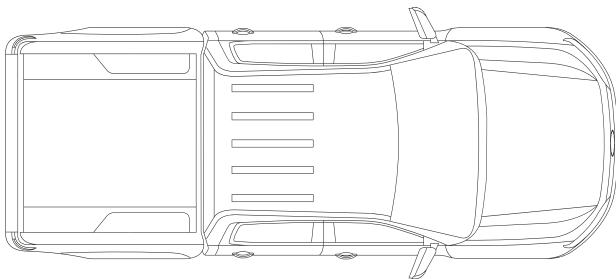
Date/Time:

Vehicle ID or VIN:

Odometer Reading:

Inspection Items

Engine	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass	Coupling Devices	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass
Transmission	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass	Fluids	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass
Clutch	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass	Battery	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass
Heating System & Defroster	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass	Belts & Hoses	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass
Windshield	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass	Lighting Devices	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass
Windshield Wipers	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass	Weatherstripping	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass
Steering Mechanism	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass	Coolant/Antifreeze Level	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass
Parking Brake	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass	Winter Tires/Tire Pressure	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass
Service Brakes	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass	Rear Vision Mirrors	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass
Trailer Brake Connections	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass	Emergency Equipment	<input checked="" type="checkbox"/> Fail	<input checked="" type="checkbox"/> Pass



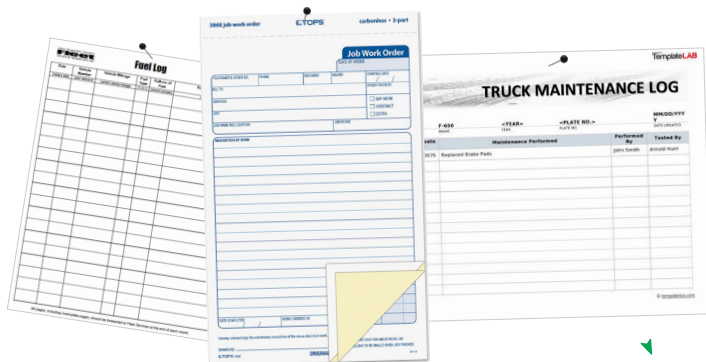
Use the diagram above to indicate any failed items.

Winter Roadside Safety Kit

- | | | |
|---|--|---|
| <input type="checkbox"/> Ice Scraper | <input type="checkbox"/> Portable Jump Starter | <input type="checkbox"/> Non-Perishables |
| <input type="checkbox"/> Phone Charger | <input type="checkbox"/> Emergency Thermal Blanket | <input type="checkbox"/> Extra Washer Fluid |
| <input type="checkbox"/> Tool Kit w/ Flashlight | <input type="checkbox"/> First Aid Kit | <input type="checkbox"/> Portable Tire Inflator |
| | <input type="checkbox"/> Road Flares | |

Inspection Completed by:

Technician Signature:



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One place to manage and maintain your fleet.

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