
# Taylor Oil Co.
# Fuel & Fluids
# Guide to Winter

INTRODUCTION

## Winter is Coming!

The dog days of summer are behind us, there's a chill in the air, winter is here.

As the weather gets colder & wetter, we have to adjust our routines when it comes to equipment.

Colder weather makes motors harder to start and can play havoc with fuel & fluids which is why we have created this helpful guide to highlight the areas to focusing on and to provide a useful checklist to make sure nothing goes missing.

## The Focus of this Guide

This guide is designed to offer tips to help equipment owners better adjust fuel, lubrication and maintenance routines for cold weather. Always check with your equipment's manufacturer guidelines before making any changes.

# INTRODUCTION

## About Taylor Oil Co.

Taylor Oil Co. is your trusted partner for on-site fueling and lubricant solutions, serving contractors and industrial clients from Boston to Washington, DC.

With over 100 years of experience, we specialize in reliable, efficient fuel delivery tailored to keep your heavy equipment running smoothly, even in the harshest conditions.

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# Winterizing Your Equipment


**Covered in this section:**

- Diesel gelling
- DEF
- Fuel
- Fuel filters & water separators
- Lubrication & Fluides
- Batteries & engine care

Properly winterizing your equipment is essential for maintaining productivity during the cold months. Focus on the following areas to keep your machinery in optimal condition.

## Diesel Gelling

Diesel gelling occurs when diesel fuel thickens or solidifies due to exposure to cold temperatures, preventing it from flowing properly through the fuel system. This typically happens in cold weather when paraffin wax, a natural component of diesel, begins to solidify and form wax crystals.

As temperatures drop, these wax crystals combine and eventually block the fuel lines and filters, causing engine performance issues or preventing the engine from starting altogether.

Diesel gelling is especially problematic in industries like construction and trucking, where equipment operates outdoors during winter.

Diesel fuel is more prone to gelling at lower temperatures, especially if it's untreated.

There are two common solutions to prevent this:

**Winterized Diesel Fuel:**

In colder regions, diesel fuel is often treated with additives or mixed with kerosene to lower its gel point and prevent gelling.

**Fuel Additives:**

Special anti-gelling additives, like Taylor Oil Co.'s O.P.T. 1000/CFI additive (used from November to April), can be mixed with the fuel to lower its cold filter plugging point, keeping it flowing even in freezing temperatures.

## DEF (Diesel Exhaust Fluid) Considerations

### Can DEF freeze?

DEF is made from urea and water so it definitely can freeze. Its freezing point is 12°F and when frozen, it expands about 7%. DEF storage containers are usually built to accommodate this expansion.

Here's what can happen when DEF freezes:

**DEF thickens and may reduce flow:** Frozen DEF becomes slushy or solid, making it impossible to dispense properly until it thaws.

**System malfunctions and error codes**: If DEF cannot flow to the SCR system due to freezing, sensors may trigger warning lights, alerting the operator to low DEF levels or flow issues.

**Potential for leaks or container damage:** DEF tanks are typically designed to withstand the expansion of frozen DEF, poor-quality or worn containers can crack under pressure, leading to leaks.

**Is it OK to use DEF that has thawed after freezing?**

If DEF freezes, allow it to thaw naturally before use. Do not add chemicals, heat, or dilute it, as this can affect its composition. Once thawed, DEF will return to its original state and be safe to use.

Regularly inspect thawed DEF to confirm it is free of contaminants, as these can accumulate if containers are not properly sealed. But as long as the DEF is uncontaminated and returns to its liquid state, it remains effective for emissions control.

Constant freezing and thawing cycles should be avoided.

**Here are some tips to avoid any DEF-related issues during the winter months:**

Key guidelines:

- Store DEF between 32°F and 86°F: Proper temperature range prevents fluid degradation.
- Avoid Direct Sunlight: Sun exposure can compromise DEF quality and performance.
- Use Proper Containers: Clean, sealed polyethylene or stainless steel containers prevent contamination of the SCR system.
- Keep Containers Sealed: Preventing moisture absorption and air exposure maintains DEF integrity.
- Indoor Storage: Climate-controlled environments protect DEF from freezing and temperature variations.
- Monitor Shelf Life: 12-month typical lifespan requires stock rotation to ensure fluid quality.

Proper storage ensures DEF effectiveness during winter months.

## Lubrication and Fluids

**Switch your grease**: Benefits of NLGI #1 vs #2

Key advantages of using NLGI #1 grease in cold weather:

- Superior flow and pumpability at low temperatures
- Better cold-weather lubrication with improved penetration
- Reduced equipment strain and friction
- Prevents grease hardening in freezing conditions
- Enables smoother equipment startup

By switching to NLGI #1, you ensure more efficient lubrication and equipment performance during winter months.

**Consider changing your antifreeze**

Key reasons to change antifreeze before winter:

- Prevents coolant freezing and potential engine damage
- Maintains optimal engine performance
- Provides corrosion protection for cooling system components
- Prevents scale and deposit buildup
- Ensures proper coolant mixture ratio
- Prevents overheating in cold conditions

Changing antifreeze safeguards engine efficiency and integrity during winter months.

**Hydraulic systems care**

Cold weather can increase viscosity in hydraulic fluid causing potential damage to pumps and seals.

This can often be addressed by:

- Using winter-grade hydraulic fluid
- Implement fluid warming strategies
- Warm-up equipment gradually
- Conduct regular fluid viscosity checks

Proactive management prevents hydraulic system inefficiency and potential component damage during winter.

**Battery and Engine Care**

Batteries lose power in cold weather, making engines harder to start.

Keep batteries fully charged and consider using block heaters or engine warmers to help equipment start more easily in freezing conditions.

**Engines:**

Perform routine checks before winter to ensure engines are in top condition. Change oil and filters, and inspect belts and hoses for signs of wear or cracking due to cold temperatures.

**Tire Pressure:**

Cold weather causes tire pressure to drop, affecting stability and performance. Regularly check and adjust tire pressure, especially in icy or uneven conditions, to prevent damage and ensure proper traction.

**Track and Tread Inspections:**

Frozen ground puts more strain on tracks and treads, increasing wear. Inspect for cracks or signs of damage and consider adjusting driving techniques to reduce stress on these components.

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## Conclusion here

Winter can be tough on your heavy equipment, but with the right preparation, you can keep your operations running smoothly no matter how low the temperature drops.

## Ready to Winterize Your Fleet?

Contact one of our representatives today to discuss your specific fueling requirements and discover how we can support your operations this winter.

### Products & Services

- DEF
- Diesel
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- Gasoline
- Biodiesel
- Kerosene
- Fuel tanks
- Marine fuels
- Valvoline HD line of lubricants


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