



# COLD FLOW IMPROVER

## COLD FLOW IMPROVER FOR DIESEL FUEL THAT SOLVES COLD WEATHER PROBLEMS.

**COLD FLOW IMPROVER** with CFI-1000 Anti-Gel and moisture eliminator is designed to enhance cold weather performance of diesel fuel. It has been used successfully in extremely cold climates for years.

CFI-1000 ANTI-GEL is a very effective anticoagulant and wax dispersant designed to prevent gelling of diesel fuels, especially higher paraffin, ultra low sulfur diesel fuels, during cold weather operation.

### CONTINUOUS USE:

- Helps prevent wax crystals from plugging filters
- Lowers Cold Filter Plug Point
- Reduces need for dilution with kerosene or #1 diesel (eliminates need for blended fuel)
- Maintains fuel BTU value

**Moisture Eliminator (without alcohol):** Contains an all-petroleum based dispersant that emulsifies water.

### CONTINUOUS USE:

- Eliminates fuel line freeze
- Prevents fuel filter icing
- Reduces corrosion due to moisture
- Reduces water caused by condensation

When added to ultra low sulfur diesel, continuous use of **COLD FLOW IMPROVER** during temperatures below 32°F will result in easier starting, better fuel economy, less engine wear, reduced downtime, better performance and lower fuel costs.

### THE COLD WEATHER PROBLEM

In 2006, EPA mandated a drastic reduction in sulfur content from 500 parts per million (PPM) to just 15 PPM, after a previous reduction from 5000 PPM. In order to accomplish this, refiners must hydro-treat the stocks to desulfurize the fuel. This process increases the wax or paraffin content of the fuel.





The higher concentrations of wax in the fuel will cause serious problems in cold weather operations. Both the Cloud Point and the Cold Filter Plug Point (CFPP) are much higher in ultra low sulfur diesel than previously experienced in regular diesel.

As the temperature begins to drop in ultra low sulfur fuels, wax crystals form and the fuel becomes thicker and gradually gels until it finally clogs the filter.

In some areas, #2 diesel fuel is blended with kerosene or a #1 diesel to lower the CFPP. However, the disadvantages are:

- **Increased Cost:** Fuel costs will dramatically increase due to the added expense of modifying fuel stocks to comply with the additional regulations.
- **Reduced Mileage:** For every 10% of blended kerosene or #1 diesel, there is a 1% loss in power, performance & mileage. For example: If you are using a 70/30 blend (70% #2 diesel & 30% kerosene or #1 diesel), there will be a 3% loss in mileage.
- **Increased Wear:** Kerosene or #1 diesel is a very dry fuel; therefore, it will cause excessive wear on internal engine parts. The higher the concentration of kerosene or #1 diesel, the faster the corrosive wear will occur on injectors, injection plungers, injector pumps, other fuel system components, valves, cylinder liners and other top cylinder areas.
- **Supply Issues:** The new regulations could make it more difficult to find #1 diesel fuel that complies with the new stricter sulfur standards.

### THE COLD WEATHER SOLUTION

**COLD FLOW IMPROVER** with CFI-1000 anti-gel is extremely effective in all diesel fuels. It slows down the rate at which wax crystals form large masses of gel, allowing the fuel to flow at very low temperatures. **COLD FLOW IMPROVER** eliminates the need for blended fuels and is more effective and less costly than using blends of #1 and #2 diesel.

### WHAT ABOUT WATER?

All diesel fuel contains water when purchased. Additional moisture also collects in supply tanks by condensation when there is a 7°F change in temperature. Water present in the fuel or storage tank freezes at 32°F. **COLD FLOW IMPROVER** contains a moisture eliminator that removes the water, preventing fuel line freeze and icing of the fuel. Use Bell's Diesel Fuel Supplement year round to eliminate water.

**DIRECTIONS:** For best results, add **COLD FLOW IMPROVER** to the fuel at temperatures above 35°F. For best blending, add CFI to the storage tank just before fresh fuel is added. If the filter is already plugged, remove and empty the filter, add **COLD FLOW IMPROVER** and replace filter.

**NOTE:** Cloud points and cold filter plug points vary substantially from one refinery to another. The fuel supplier can furnish the cloud point of delivered fuel. The CFPP is generally 10°F to 30°F lower than the cloud point. If problems occur, increase **COLD FLOW IMPROVER** dosage until fuel delivers desired performance.

### TREAT RATIO:

- 1 Quart CFI to 250 gallons diesel fuel
- If outside temperature drops to 10°F, use double dose of CFI

The treat ratio could vary according to the quality and type of fuel.

**NOTE:** There are some diesel fuels that are not responsive to cold flow improvers.



We Made It First. We Make It Best.

