



## Diesel Concentrate Plus Cold Flow Improver

**Combination of Improved Efficiency and Superior Cold-Flow Properties in One Bottle**

AMSOIL Diesel Concentrate Plus Cold Flow Improver (DFC) combines the superior detergency of AMSOIL Diesel Concentrate (ADF) and the excellent anti-gelling properties of AMSOIL Cold Flow Improver (ACF) in one convenient package, without sacrificing performance.

### **IMPROVES EFFICIENCY**

AMSOIL Diesel Concentrate Plus Cold Flow Improver is formulated with excellent detergency properties to help keep injectors, rings and piston crowns lubricated and free of soot. Diesel Concentrate Plus Cold Flow Improver cleans dirty injectors, improving fuel economy by up to five percent and restoring horsepower to like new. Acceleration is improved and with regular use, Diesel Concentrate Plus Cold Flow Improver continues to enhance performance by keeping injectors clean. The net savings on fuel expense can result in no additional cost to vehicle operation.

### **ULTRA-LOW-SULFUR DIESEL FUEL CHALLENGES**

The reduced sulfur levels in modern ultra-low-sulfur diesel fuel (ULSD) result in reduced lubricity, the property that controls wear in the fuel injectors and fuel pump. Improving lubricity in ULSD is difficult because it must be done without adding sulfur back into the fuel. Additionally,

ULSD is subjected to extensive refining, making it even more difficult to treat. For these reasons, many competitive claims are not based on ULSD fuels, rendering them inaccurate and irrelevant. AMSOIL Diesel Concentrate Plus Cold Flow Improver is formulated specifically for modern ULSD fuel. It improves lubricity, helps maintain engine oil TBN and prevents soot loading.

### **REDUCES CYLINDER WEAR, RETAINS ENGINE OIL TBN LONGER**

With high rates of exhaust gas recirculation (EGR) in modern diesel engines, acids from combustion are of particular concern. AMSOIL Diesel Concentrate Plus Cold Flow Improver neutralizes acids during combustion. It helps reduce acid-caused cylinder wear and helps extend engine oil TBN, maintaining engine oil quality longer for better protection.

### **MINIMIZES SOOT LOADING**

AMSOIL Diesel Concentrate Plus Cold Flow Improver is a powerful cleaner that cleans fuel injectors and piston rings for improved combustion and better sealing. It minimizes soot generated from incomplete combustion and helps keep soot out of the crankcase. Reduced soot-loading controls soot-related wear and engine oil viscosity increase.

### **SUPERIOR COLD-WEATHER PERFORMANCE**

As the temperature drops, the wax naturally found in diesel fuel begins to form crystals. The point at which wax crystals form is known as the cloud point. These wax crystals eventually clog the fuel filter and starve the engine of fuel, preventing it from starting. While low-quality fuels may form wax crystals in temperatures as warm as 40°F (4°C), most fuels have a cloud point near



32°F (0°C). The point at which the wax crystals clog the fuel filter is known as the cold filter-plugging point (CFPP). AMSOIL Diesel Concentrate Plus Cold Flow Improver lowers the CFPP by as much as 34°F (19°C) in ULSD.

It also reduces the pour-point temperature of treated diesel fuel, providing better fuel delivery to the injectors during cold weather. It is formulated with a jet-fuel-type deicer that disperses water to control ice formation in all sections of the fuel system. Diesel Concentrate Plus Cold Flow Improver minimizes the need for the use of #1 diesel fuel, enabling better fuel economy, performance and lubricity.

### ***POUR POINT VS. CFPP***

It is important to distinguish between CFPP and pour point. Many competitors make great claims regarding pour point, leading consumers to believe their products are superior when they actually have an inferior CFPP. Once fuel surpasses its cloud point, the wax crystals begin to clog the fuel filter. The CFPP temperature is a more important characteristic than pour point because the engine will not run if fuel cannot pass through the fuel filter.

### ***REDUCED NEED FOR #1 DIESEL FUEL***

One traditional solution to cold weather problems in diesel engines is the use of #1 diesel fuel, which is diesel fuel diluted with kerosene. While #1 diesel fuel has an advantage in low-temperature operability, there are also several disadvantages. The energy content of #1 diesel fuel is about 95 percent of that of #2 diesel fuel, resulting in reduced fuel economy and less horsepower. In addition, the kerosene used in #1 diesel fuel provides less lubrication for the fuel pump and fuel distributor, increasing the likelihood for wear on these critical

components. AMSOIL Diesel Concentrate Plus Cold Flow Improver minimizes the need for blending standard #2 diesel fuel with lower-quality #1 diesel fuel, helping to maintain fuel economy and keep engines functioning normally.

### ***RECOMMENDATIONS***

One 16-oz. bottle of AMSOIL Diesel Concentrate Plus Cold Flow Improver treats 40 gallons of fuel. Diesel Concentrate Plus Cold Flow Improver will show no signs of solidifying in its concentrated state in the bottle until the temperature reaches -22°F (-30°C). It will only freeze in its concentrated state, and AMSOIL recommends storing it at temperatures above 0°F (-18°C). If Diesel Concentrate Plus Cold Flow Improver is allowed to freeze in the bottle it can be thawed and used. When mixed with diesel fuel, Diesel Concentrate Plus Cold Flow Improver effectively improves diesel fuel cold-temperature properties. It is important to treat fuel before it has reached its cloud point as Diesel Concentrate Plus Cold Flow Improver will not dissolve wax crystals which have already formed in the fuel.

AMSOIL Diesel Concentrate Plus Cold Flow Improver meets federal regulations for ULSD fuel. It complies with federal low-sulfur content requirements for use in diesel motor vehicles and non-road engines. While Diesel Concentrate Plus Cold Flow Improver is formulated specifically for ULSD fuel, it also performs well with non-ULSD fuels, including biodiesel.

AMSOIL Diesel Concentrate Plus Cold Flow Improver is specifically formulated to improve the lubrication of fuel system components, improve fuel flow, help maintain fuel integrity and prevent the fuel filter and injectors from clogging. Diesel Concentrate Plus Cold Flow Improver is recommended for diesel-powered vehicles, home heating oil and kerosene heating systems.

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