



## Diesel Injector Clean + Cold Flow

A performance concentrate that delivers maximum results.

AMSOIL Diesel Injector Clean + Cold Flow (DFC) combines the superior deposit-removing properties of AMSOIL Diesel Injector Clean and the excellent anti-gelling properties of AMSOIL Diesel Cold Flow in one convenient package. It is designed for all types of diesel engines, including high-pressure common-rail designs. Unlike all-in-one fuel additives that may sacrifice performance in specific areas in the name of convenience, AMSOIL Diesel Injector Clean + Cold Flow makes no sacrifices; it is purpose-built for diesel owners who demand maximum results.

### Restores Horsepower & Improves Fuel Economy

Fuel injector deposits interrupt spray patterns, causing poor fuel atomization, incomplete combustion, excessive emissions and smoke. High-pressure common-rail fuel systems are becoming commonplace as vehicle manufacturers attempt to produce more power while still meeting tightening emissions standards. In high-pressure common-rail systems, injection pressures near 30,000 psi atomize the fuel into a fine mist for more efficient combustion, yielding increased power and fuel economy while reducing emissions. To maintain these high pressures, injector assemblies are highly engineered, with clearances as tight as 1-3 microns (a human hair is typically 70-100 microns thick). Even minimal internal diesel injector deposits on the injector pintal or other components can lead to sticking and even seizure, reducing power, fuel economy and operability. Traditional additive chemistry is not designed to address these tough-to-remove deposits.

AMSOIL Diesel Injector Clean + Cold Flow features advanced chemistry that delivers concentrated strength to target internal diesel injector deposits and traditional carbonaceous deposits, restoring horsepower and operability to like-new condition and improving fuel economy up to 4.5 percent. Acceleration is improved and, with regular use, AMSOIL Diesel Injector Clean + Cold Flow continues to enhance performance by keeping injectors clean. The net savings on fuel can result in no additional cost of ownership.

### Lubricates Fuel Pump and Injectors

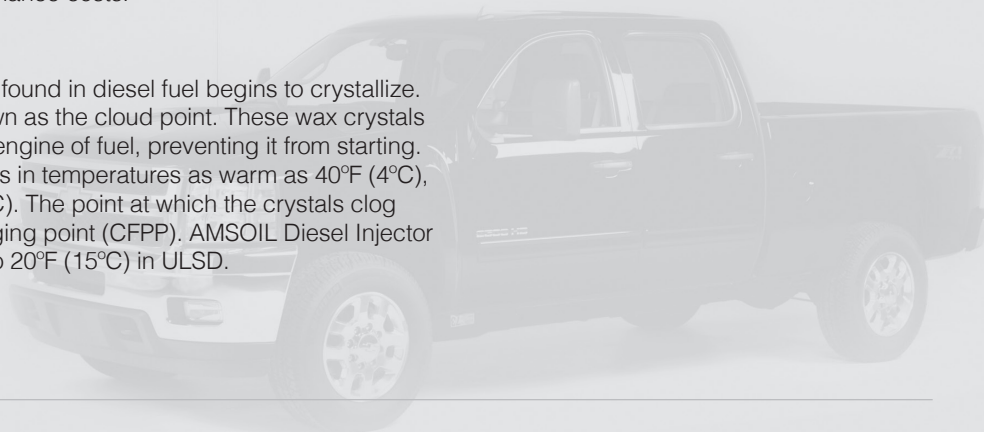
Ultra-low-sulfur diesel fuel (ULSD) has significantly reduced lubricity – a critical property in controlling wear in fuel pumps and injectors. AMSOIL Diesel Injector Clean + Cold Flow adds back the lubricity the fuel pump and injectors need, improving service life, while saving time and money on maintenance costs.

### Helps Prevent Gelling

As the temperature drops, the wax naturally found in diesel fuel begins to crystallize. 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 crystals clog the fuel filter is known as the cold filter-plugging point (CFPP). AMSOIL Diesel Injector Clean + Cold Flow lowers the CFPP by up to 20°F (15°C) in ULSD.



- Cleans dirty injectors
- Adds lubricity to reduce fuel-pump & injector wear
- Improves fuel economy up to 4.5 percent
- Disperses water to control ice formation & prevent gelling
- Improves diesel cold-flow ability by up to 20°F (15°C)



### Minimizes Soot-Loading

AMSOIL Diesel Injector Clean + Cold Flow's powerful formula 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, reducing soot-related wear and motor oil viscosity increase.

### Reduces Need for #1 Diesel Fuel

Using #1 diesel fuel is one traditional solution to cold-weather diesel fuel problems. While #1 diesel fuel has an advantage in low-temperature operability, the energy content of #1 diesel fuel is about 95 percent 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 injectors, increasing the likelihood of wear. AMSOIL Diesel Injector Clean + Cold Flow 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

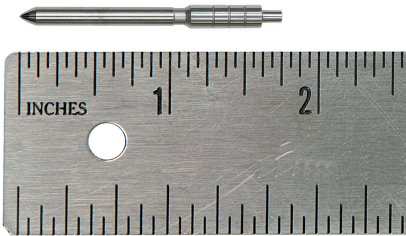
AMSOIL Diesel Injector Clean + Cold Flow is recommended for use with all types of heavy- and light-duty, on- or off-road and marine diesel engines. Use maintenance dose for regular treatment. Add before filling tank. AMSOIL Diesel Injector Clean + Cold Flow must be added at temperatures above the diesel fuel cloud point (the temperature at which wax begins to crystallize). It will not reverse gel or wax crystals once formed. Do not store at temperatures below 0°F (-18°C). Excellent for use with AMSOIL Diesel Cetane Boost.

	MAINTENANCE	FUEL VOL.
ADDITIVE	2 oz.	5 gal.
	4 oz.	10 gal.
	12 oz.	30 gal.
	16 oz.	40 gal.

### AMSOIL PRODUCT WARRANTY

AMSOIL products are backed by a Limited Liability Warranty. For complete information visit [www.amsoil.com/warranty.aspx](http://www.amsoil.com/warranty.aspx).

### High-Pressure Common-Rail Fuel Injector Pintal



Fuel injectors in high-pressure common-rail diesel engines use smaller, highly engineered components to produce the higher fuel pressures needed for improved combustion. The tighter clearances invite internal diesel injector deposits that interfere with injector needle actuation, reducing performance. External deposits can also form on the injector

### Traditional Fuel Injector Pintal



nozzle (the typical trouble spot for traditional injectors). While many other fuel additives have yet to catch up to the internal diesel injector deposit problem, AMSOIL Diesel Injector Clean + Cold Flow targets deposits wherever they form, maximizing power, fuel economy and performance in high-pressure common-rail and traditional diesel engines.



AMSOIL products and Dealership information are available from your local full-service AMSOIL Dealer.