Daryl Zebrasky

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AMSOIL Regulatory Compliance

DATA SHEET

Diesel All-In-One

All-season protection and performance

AMSOIL Diesel All-In-One (ADB) combines the superior detergency and improved lubricity of AMSOIL Diesel Injector Clean, the excellent cold-flow and anti-gelling properties of AMSOIL Diesel Cold Flow and the increased horsepower and cetane of AMSOIL Cetane Boost in one convenient package, providing the full potency and benefits of all three products. It is safe for use in all diesel fuels, including biodiesel. Diesel All-In-One is specially engineered to provide exceptional all-season protection for a serious performance boost. One dose delivers outstanding detergency, improved lubricity, better cold flow and higher cetane.



- **Cleans** dirty injectors
- **Lubricates** pumps and injectors to reduce wear
- **Extends** fuel-filter life
- **Improves** fuel economy up to 8%
- **Combats** fuel-system corrosion
- **Prevents** wax settling during storage
- **Lowers** cold filter-plugging point (CFPP) by up to 40°F (22°C)
- **Delivers** maximum horsepower
- **Increases** cetane up to 4 points
- **Safe for use** in all diesel fuels, including biodiesel
- **Alcohol-free**

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 common as vehicle manufacturers attempt to produce more power while still meeting tightening emissions standards. In high-pressure common-rail systems, injection pressures can be 30,000 psi and higher to 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.

Diesel All-In-One features advanced chemistry that delivers concentrated strength to target internal diesel injector deposits and traditional carbonaceous deposits, helping to restore horsepower and operability to like-new condition. Acceleration is improved and, with regular use, Diesel All-In-One continues to enhance performance by keeping injectors clean. The net savings on fuel can result in no additional cost of ownership.

Lubricates Pumps & Injectors to Reduce Wear

Ultra-low-sulfur diesel fuel (ULSD) provides significantly reduced lubricity – a critical property in controlling wear in fuel pumps and injectors. Diesel All-In-One adds the lubricity the fuel pump and injectors need, reducing wear, improving service life and saving time and money on maintenance costs.

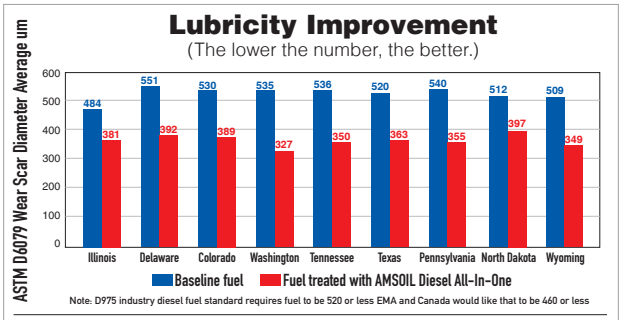
Improves Fuel Quality for Peak Performance

Fuel with a higher cetane number provides for a more complete burn, resulting in improved performance. By increasing cetane, Diesel All-In-One improves the ignition quality of diesel fuel, maximizing available power and improving starting. It also smooths idle and reduces smoke and emissions.

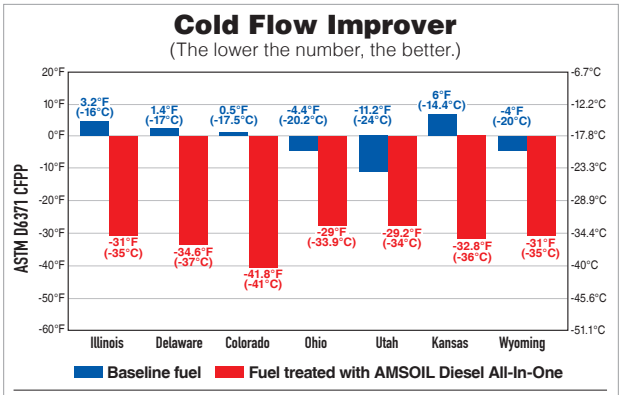
Helps Prevent Gelling

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). Diesel All-In-One lowers the CFPP by up to 40°F (22°C) in ULSD.

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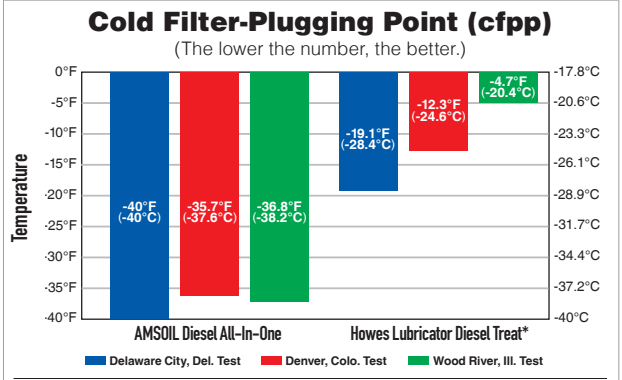
The ASTM D975 diesel fuel standard specifies a wear scar below 520 µm in ASTM D6079 testing, while the Engine Manufacturers Association (EMA) specifies a wear scar below 460 µm. Testing reveals AMSOIL Diesel All-In-One provides significant lubricity improvement in diesel fuels found across the U.S., delivering improved wear protection.



Testing reveals AMSOIL Diesel All-In-One provides significant cold-flow improvement in diesel fuels found across the U.S., delivering improved cold-weather performance.

SUPERIOR COLD-TEMPERATURE PROTECTION

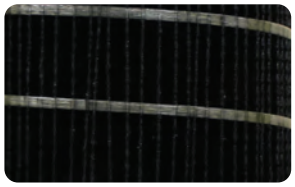
Provides as much as **32˚F (18°C) better protection** against cold temperature gelling than Howes Lubricator Diesel Treat.[M] Plus raises cetane up to 4 points.



[M]Based on third-party testing in July 2017 of AMSOIL Diesel All-In-One and Howes Lubricator Diesel Treat using diesel fuel representative of the U.S. marketplace and Howes' recommended treat ratio for above 0°F (-17.8°C.)

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Extends Filter Life



Modern diesel engines run hot, raising the temperature of the fuel returned to the tank and causing carbonaceous deposits that collect in the fuel filter (see picture), plugging it and causing premature failure issues. Diesel All-In-One effectively protects against deposits, extending fuel filter life.

RECOMMENDATIONS

Diesel All-In-One is recommended for use with all types of heavy- and light-duty, on- or off-road and marine diesel engines. Add before filling tank. Diesel All-In-One must be added at temperatures above the diesel fuel cloud point (the temperature at which wax begins to cystallize). It will not reverse gel or wax crystals once formed.

ADDITIVE	MAINTENANCE Up to 4-point cetane increase	FUEL VOLUME
	2 oz. (59.1 ml)	5 gal. (18.9 L)
	4 oz. (118.3 ml)	10 gal. (37.9 L)
	8 oz. (236.6 ml)	20 gal. (75.7 L)
	12 oz. (354.9 ml)	30 gal. (113.6 L)
	16 oz. (473.2 ml)	40 gal. (151.4 L)
	64 oz. (1.9 L)	160 gal. (605.7 L)

PRODUCT WARRANTY

AMSOIL products are backed by a Limited Liability Warranty. For complete information visit AMSOIL.com/warranty.aspx.



◀ High-Pressure Common-Rail Fuel Injector Pintal



◀ Traditional 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 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 All-In-One targets deposits wherever they form, maximizing power, fuel economy and performance in high-pressure common-rail and traditional diesel engines.

AMSOIL The First in Synthetics®

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

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