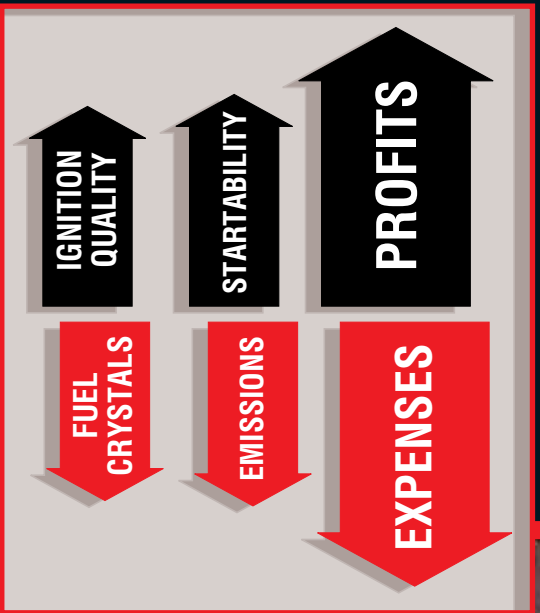




# HEAVY DUTY DIESEL FUEL ADDITIVES



• Diesel Fuel Additive Concentrate • Cetane Boost Additive

# AMSOIL Diesel Fuel Additive Concentrate

## **Boosts Fuel Economy and Power**

AMSOIL Diesel Fuel Additive Concentrate (ADC) keeps fuel system passages and orifices open, allowing better fuel flow, fuel atomization and combustion for improved fuel economy and power.

Laboratory and over-the-road testing shows the detergent in ADC provides fuel economy increases between 2.6 percent and 6.6 percent.

## **Cleans, Protects Entire System**

Standard tests show ADC provides outstanding cleanliness, corrosion inhibition, sludge inhibition and lubricity. By cleaning, conditioning and protecting injectors, pumps, filters, tanks and lines, ADC helps the entire fuel system last longer and work more efficiently.

**Cleanliness** – Superior injector cleanliness reduces the frequency of injector maintenance and consequent downtime.

**Corrosion Inhibition** – Superior protection against the corrosive effects of water, which condenses from the atmosphere during fuel storage, maintains the integrity of injectors, tanks, pumps and lines.

**Sludge Inhibition** – Superior dispersancy keeps sludge from settling on filters and tank bottoms.

**Lubricity** – Superior friction modification reduces the incidence of metal-to-metal contact in pumps, injectors and other fuel system components, protecting them from wear, even with low sulfur fuels.

## **Reduces Emissions**

The emissions-reducing agent in ADC has been shown to reduce emissions of hydrocarbon, oxides of nitrogen, carbon monoxide and particulate matter as much as 20 percent.

## **Improves Fuel Flow**

By reducing wax crystal size and precipitation, ADC lowers pour point as much as 35° F and cold filter plug point as much as 12° F, enhancing the reliability of cold starting and allowing engines to start at colder temperatures than they otherwise could.

ADC also contains a jet fuel de-icer which lowers the freeze point of ice crystals, inhibiting fuel line freeze-up and further enhancing the reliability of cold starting.

## **Stabilizes Stored Fuel**

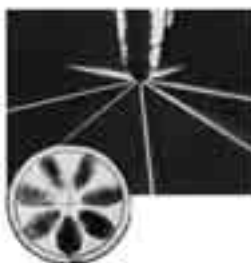
ADC significantly improves the storage stability of fuels, reducing operating problems and eliminating the need for frequent cleanings of tanks and equipment.

## **Alcohol Free**

ADC contains no ethanol, methanol, or other alcohol which may damage seals, injectors, pumps or nozzles.

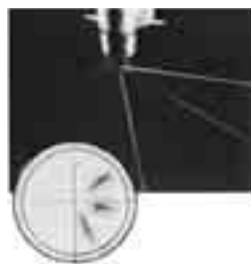
## **Available in Convenient Sizes**

ADC is available in 16-oz. cans, 5-gallon pails, 30-gallon drums and 55-gallon drums. 16-oz. ADC treats 100 gallons of diesel fuel.



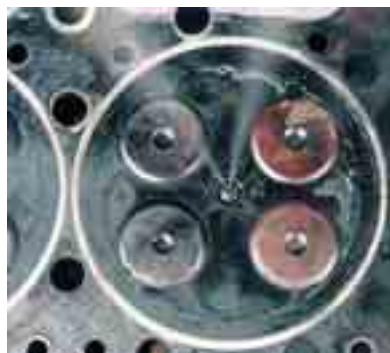
### **With AMSOIL ADC**

*Clean fuel injectors spray evenly, increasing fuel economy, engine power and injector life. ADC cleans injectors of existing deposits and prevents new deposit formation.*



### **Without AMSOIL ADC**

*Clogged fuel injectors spray too much fuel from some ports, increasing fuel consumption and emissions. Other ports spray too little or no fuel, reducing power. Overall, uneven spray patterns reduce injector life.*



# AMSOIL Cetane Boost

## **Increases Cetane Number and Ignition Quality**

Cetane number is the measure of a diesel fuel's ignition quality. Ignition quality is measured by ignition delay, the time between the start of fuel injection and the start of fuel combustion. Fuels with good ignition quality give short ignition delays and are assigned high cetane numbers.

Cetane, the colorless, oily hydrocarbon on which the cetane number scale is based, has extremely good ignition quality and is assigned a cetane number of 100. The cetane numbers of North American diesel fuels may be as low as 37, which may cause startability and driveability problems.

AMSOIL Cetane Boost, ACB, increases a fuel's cetane number and improves its ignition quality. ACB encourages timely, uniform fuel ignition, discourages high pressure rate rise during the combustion cycle and solves startability and driveability problems associated with low cetane number diesel fuels.

## **Smooths Operations**

Too long an ignition delay at high engine loads leads to an excessively rapid increase in pressure within the cylinder before combustion, which in turn, leads to diesel knock, or rough operation, especially on cold starts. Excessive pressure rise rates are theoretically caused by extra chemical reactions occurring before combustion. The products formed by the extra reactions burn rapidly. Rapid burning causes excessively rapid pressure rise in the cylinder. With a shorter ignition delay, the extra reactions don't have a chance to occur, hence the rate of pressure rise is reduced.

By reducing ignition delay, ACB maintains the proper cylinder pressure rise rate. Maintaining the proper pressure rise rate improves driveability. ACB also improves driveability by reducing throttling pintle nozzle coking. Throttling pintle nozzle coking produces noise and emissions. ACB cleans up coke deposits and prevents the formation of new deposits. ACB also reduces varnish formation.

## **Improves Cold Engine Startability**

In a cold engine with low intake air pressure, a long ignition delay causes difficult starting, misfiring and incomplete combustion. Incomplete combustion causes power loss and produces white smoke. White smoke is evidence of unburned or partially burned fuel. It occurs after starting a cold engine, during idling or other cold-engine operations.

By reducing ignition delay, ACB improves cold starting characteristics by reducing the time required to start the engine and the time required to establish smooth engine operation. ACB also allows engines to start at lower temperatures than they can with non-ACB treated fuels.

## **Reduces Emissions**

ACB substantially reduces hydrocarbon and carbon monoxide emissions of heavy-duty on-road diesel trucks. By shortening the ignition delay, ACB helps fuel burn more completely, reducing carbon monoxide and hydrocarbon emissions. ACB may also reduce NO<sub>x</sub> and particulate emissions.

## **Available in Convenient Size**

One 16-oz. can of ACB treats 100 to 200 gallons of diesel fuel and increases the fuel's cetane number three to seven points. Adding one can to 100 gallons of fuel provides maximum benefit.

## **Alcohol Free**

ACB contains no ethanol, methanol, MTBE or other alcohol.

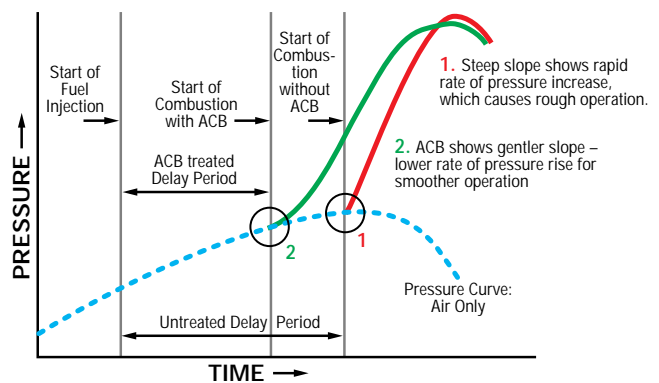
## **Compatible with AMSOIL Diesel Fuel Additive Concentrate**

ADC improves fuel efficiency, lengthens component life and aids cold temperature fuel flow.

## **Increase Performance, Profits**

AMSOIL Diesel Fuel Additive Concentrate and AMSOIL Cetane Boost decrease expenses for fuel, injector cleanings and replacements – even costly road service for cold temperature related failures.

ADC increases fuel economy and injector life, promotes reliable cold temperature operations and reduces emissions and black smoke. ACB increases cetane number and ignition quality for smooth, powerful operation, reliable cold starting and decreased emissions and white smoke.



Cylinder pressure measurements made during compression and power strokes illustrate that fuel does not ignite immediately upon injection. Cylinder pressure continues to rise smoothly for a period after injection and rises sharply when combustion starts. The period after fuel injection and before combustion begins is the ignition delay period. By shortening the ignition delay period in high load operations, ACB improves smooth operation.

# AMSOIL Diesel Fuel Additives



## *All Season Ashless Heavy Duty* **Diesel Fuel Additive Concentrate**

- *Improves fuel economy*
- *Extends injector life*
- *Increases fuel stability*
- *Reduces emissions*
- *Improves cold fuel flow*
- *Improves cold startability*
- *Controls injector wear*
- *Compatible with AMSOIL Cetane Boost*



## *Ashless Heavy Duty* **Cetane Boost Additive For Diesel Fuel**

- *Improves ignition quality*
- *Improves low-temp starting*
- *Reduces cranking time*
- *Reduces emissions and smoke*
- *Provides smoother, quieter operation*
- *Increases efficiency*
- *Compatible with AMSOIL Diesel Fuel Additive Concentrate*

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

