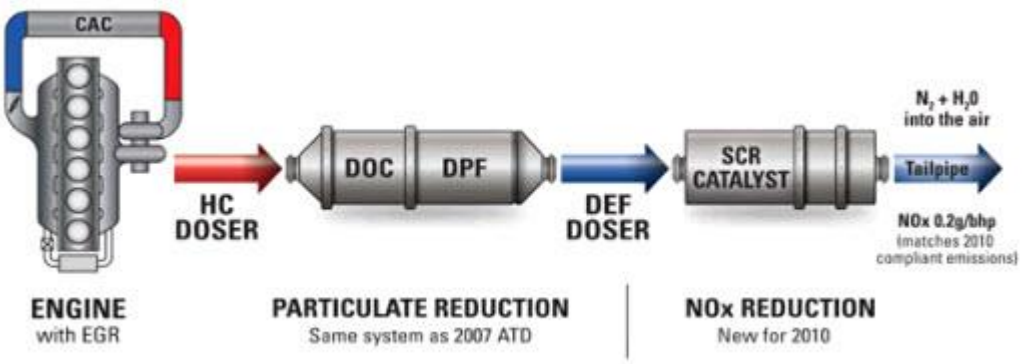
Diesel Exhaust Fluid (DEF)

DESCRIPTION

Diesel Exhaust Fluid (DEF) is an aqueous urea solution blended with 32.5% high purity urea and 67.5% deionized water. DEF solution is used in Selective Catalytic Reduction (SCR) to lower NOx concentration in the exhaust emissions of diesel engines.

The market for DEF is being created due to the emission requirements promulgated by the EPA to meet the Clean Air Act specifications. As depicted below, the progressive reduction in diesel emissions has driven tremendous changes in engine requirements over the past 25 years. These efforts have been focused on reducing particulates, sulphur, and NOX emissions. DEF is focused on meeting the 2010 requirement for NOX emissions reductions.

The specific approach used to reduce NOX emissions requiring DEF is referred to as SCR or Selective Catalytic Reduction. SCR uses a chemical called Diesel Exhaust Fluid (DEF / Urea) and a SCR catalytic converter to significantly reduce nitrogen oxide (NOx) emissions in diesel engines. SCR has been selected by all major engine manufacturers as their method to meet the 2010 specification.



Engine manufactures chose SCR over competing technologies due to the fuel economy benefits of SCR as compared with other options. SCR is expected to improve overall fuel economy by approximately 5%.

In summary, DEF is:

- Diesel Exhaust Fluid (DEF) or Urea
- 32.5% Aqueous Urea Solution (ammonia) in demineralized water
- DEF consumption approximately 2% of fuel consumption
- DEF is a non-toxic, non-polluting and non-flammable substance
- May have slightly pungent odor similar to ammonia
- YES – DEF Does Freeze at 11 degrees F, and may need to be stored inside or in heated storage units
- SCR system is designed to provide heating for the DEF tank and supply lines
- If DEF freezes, it can be thawed and used
- DEF is not damaged or destroyed because it is frozen
- SCR System will add ~200 lbs to each truck
- Maintenance, performance, drivability & durability the same as today
- Meets ISO 22241 standard

How SCR Works - SCR technology is designed to permit nitrogen oxide (NOx) reduction reactions to take place in an oxidizing atmosphere. It is called “selective” because it reduces levels of NOx using ammonia as a reductant within a catalyst system. The reducing agent reacts with NOx to convert the pollutants into nitrogen, water and tiny amounts of carbon dioxide (CO2) – natural elements common to the air we breathe everyday. The reductant source is usually automotive-grade urea, otherwise known as Diesel Exhaust Fluid, which can be rapidly hydrolyzed to produce the oxidizing ammonia in the exhaust stream. SCR technology alone can achieve NOx reductions in excess of 90%.

AVAILABLE PACK SIZES

Diesel Exhaust Fluid (DEF)	Bulk	Tote	Drum	Jug 1 X 9.463 L
	54-8000-00	54-8000-04	54-8000-05	54-8000-09

THE PACK SIZES ABOVE ARE OUR STANDARD PACK SIZES. PLEASE COMMUNICATE WITH US TO FIND OUT FORMATS AVAILABLE LOCALLY.

HEALTH / SAFETY

GHS compliant English and French Safety Data Sheets are available at catalyslubricants.ca under 'Safety Data Sheets'. Keep container closed when not in use. Please refer to the SDS for safe handling information. Always take used products and containers to an authorized collection point. Avoid discharge into the environment. As with any DEF, keep out of reach of children and animals.

QUALITY

Catalys Lubricants partners with respected industry suppliers to bring you high quality products. For more information, contact your local Catalys Representative. Please ensure this product is right for the equipment by following the recommendations of the equipment operating manual.

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