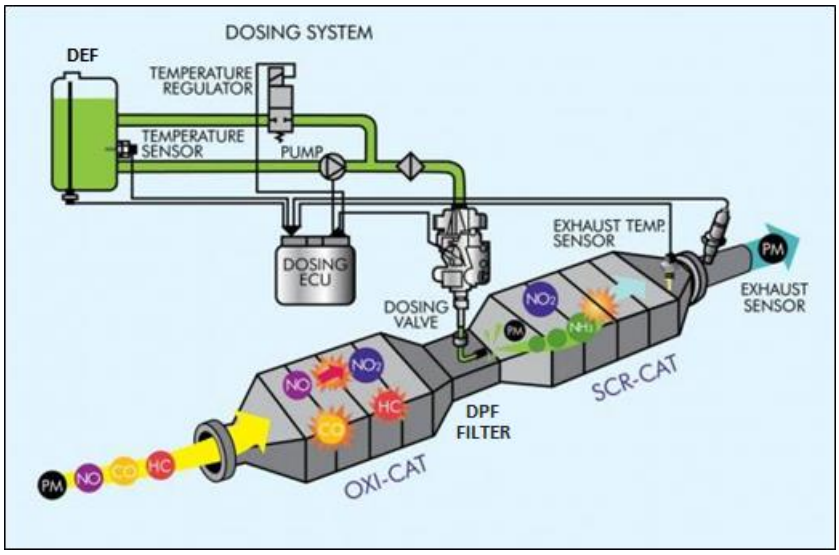
SCR SYSTEMS - DPF FILTERS – DEF

What is an SCR system

Selective Catalytic Reduction (SCR) is one of the most cost-effective and fuel-efficient diesel engine emissions control technologies available. SCR is an advanced active emissions control technology system that injects a liquid-reductant agent through a special catalyst into the exhaust stream of a diesel engine. The reductant source is usually automotive-grade urea, otherwise known as Diesel Exhaust Fluid (DEF). SCR systems can also be combined with a diesel particulate filter (DPF Filter) to achieve even greater emission reductions. Starting in 2010, all diesel vehicles are required to have SCR equipment installed.

How it 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 every day. The reductant source, DEF, is usually automotive-grade urea, 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%.



1. The exhaust sensor, located at the end of the exhaust, takes account of how the system is operating and the level of emissions.
2. It then sends an order to the injector instructing it as to how much DEF it needs to use in order to treat the emissions detected in step #1. (DEF = Diesel Exhaust Fluid used to control emissions.)

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3. The DEF injected reacts with the NOx, transforming it into nitrogen, water and tiny amounts of carbon dioxide,
4. Any excess of DEF is then sent back to the DEF depository.

Benefits of SCR system and DEF

- Reduces up to 90% of NOx emissions (SRC System)
- Reduces the frequency in which the DPF filters have to be cleaned (SRC System)
- Optimizes fuel efficiency while allowing the engine to run cleaner (SCR System)
- Easy to store and handle (DEF)
- Non-toxic (DEF)
- Non-Flammable (DEF)
- Meets with ISO 22241-1 y DIN 70070 specifications (DEF)

How Xp3 fuel additives benefit the system and DEF consumption

Xp3 Fuel Additive helps in the reduction of emissions. In doing so, it reduces the amount of DEF needed to reach required emission amounts, generating savings for the consumer.

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