

MEETING THE CHALLENGE

Pass your emissions test with Cat Emissions Solutions. Aftertreatment products are available for the following applications:

- Electric Power
- Industrial
- Petroleum
- Marine
- Machines



FOCUSED ON CUSTOMER SUCCESS

Our objective is to provide engineered exhaust emission reduction solutions with awareness and support of ever-changing emissions compliance challenges.



For more information, contact your local Cat dealer or visit www.cat.com/emissionsolutions

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CAT® EMISSIONS SOLUTIONS

Aftertreatment Products



CAT EMISSIONS SOLUTIONS

Reduce Emissions, Stay Competitive

Your Cat® machines and engines face challenging national, state, local, and site restrictions. Caterpillar has the products and services you need to meet these emissions standards. Caterpillar Emissions Solutions works with you and your dealer to determine which solution is right for your operation.

Benefits

- Trusted Caterpillar technology
- Customized products for specific applications
- Competitive pricing
- Fast turnaround
- Product support from the worldwide Cat dealer network



	Selective Catalytic Reduction (SCR)	Diesel Particulate Filter (DPF)	Diesel Oxidation Catalyst (DOC)	Oxidation Catalyst (OC)	Three-way Catalyst (TWC)
What It Is:	Designed to selectively reduce NOx but can be combined with DOC or DPF technology to reduce multiple pollutants in a single package. System consists of SCR catalyst, static mixer, reactor housing, and dosing control system. Applicable to natural gas or diesel engines.	A wall-flow ceramic filter coated with a high performance catalyst and housed within a stainless steel canister. Optional silencing available. Applicable to diesel engines.	A flow-through honeycomb substrate coated with a high performance catalyst and housed within a stainless steel canister. Optional silencing available. Applicable to diesel engines.	A flow-through honeycomb substrate coated with a high performance catalyst and housed within a stainless steel canister. Optional silencing available. Applicable to lean burn natural gas engines.	A flow-through honeycomb substrate coated with a high performance catalyst and housed within a stainless steel canister. Optional silencing available. Applicable to rich burn (stoichiometric) natural gas engines.
How It Works:	Dosing control system injects Diesel Exhaust Fluid (DEF) into the exhaust upstream of the SCR catalyst. The DEF decomposes to ammonia (NH3), then passes through a static mixer and enters the SCR catalyst where NOx are reduced to nitrogen (N2).	A series of alternately blocked channels forces the exhaust gas to flow through the channel walls, capturing and oxidizing PM together with CO and HC by a high performance catalyst.	Exhaust gas from the engine passes over the catalyst where a chemical reaction takes place to oxidize CO, HC, and the soluble organic fraction (SOF) of particulate matter.	Exhaust gas from the engine passes over the catalyst where a chemical reaction takes place to oxidize CO and HC.	Exhaust gas from the engine passes over the catalyst where a chemical reaction takes place to simultaneously reduce NOx, CO, and HC emissions. A closed-loop air-fuel ratio controller is required for the TWC to work effectively.
Emissions Reduction:	NOx: Up to 95% CO: Up to 95% HC: Up to 90% PM: Over 85%	CO: Up to 95% HC: Up to 90% PM: Over 85%	CO: Up to 95% HC: Up to 90% PM: Up to 20%	CO: Up to 95% HC: Up to 90%	NOx: Up to 98% CO: Up to 95% HC: Up to 90%

Terms

CO Carbon monoxide

HC Hydrocarbons

NOx Nitrogen oxides

PM Particulate Matter