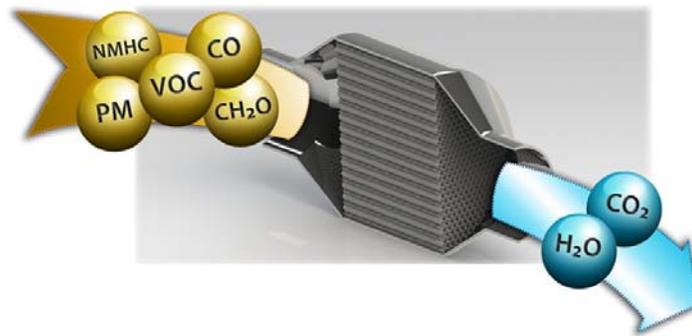




Clean Emissions Products Inc.

“Every Engine Deserves Clean Emissions”

Oxidation Catalyst (PM Reducing) Summary of Technology & Operating Recommendations



Summary of How the Technology Works:

This catalyst is primarily treated with a heavy Platinum (Pt) coating (15 grams) combined with a Cerium based wash coating and high cell density metallic foil (140 to 200 CPSI generally used but we can go as high as 320 CPSI if required).

Installed as close to engine manifold as possible this catalyst uses exhaust temperature and tortuous path cell design to collect PM molecules and subsequently break them apart resulting in particulate matter reductions between 70-88%. In addition this catalyst will also convert CO and HC molecules to CO₂ (carbon dioxide) and H₂O (water vapor) at percentages of 90-99%.

Backpressure Effects

Due to the open cell design of this catalyst (97% open) backpressure across catalyst element generally doesn't exceed 2-3" H₂O (wc) which translates into no loss of engine power or decrease fuel economy.

Engine Exhaust Temperature Required for Successful Regeneration

- Minimal exhaust temperatures of 250 C (482 F).



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Emission Reductions

- Reduces CO (carbon monoxide) by up to 90-99%
- Reduced HC (hydrocarbons) by up to 80-90%
- Reduces PM (particulate matter) by up to 70-88%

Important Operating Notes for Successful Life of Catalyst

Using LSD (low sulfur diesel) or ULSD (ultra low sulfur diesel) fuel will allow the catalyst the benefit of not becoming clogged up with carbon/soot deposits. Once a catalyst cell is clogged with heavy carbon/soot it becomes less reactive and eventually if not maintained can lead to decreased catalyst performance. Periodic inspection of catalyst (generally every 3 months) along with occasional cleaning (blowing out of catalyst with high pressure air/water) will keep catalyst clear of obstructions and carbon buildup.