

INTERNATIONAL Green Diesel Technology®



International Green Diesel School Buses

POWERING INGENUITS



International Truck & Engine Corporation The Diesel Engine Technology Leader

Green Diesel Technology ® by International

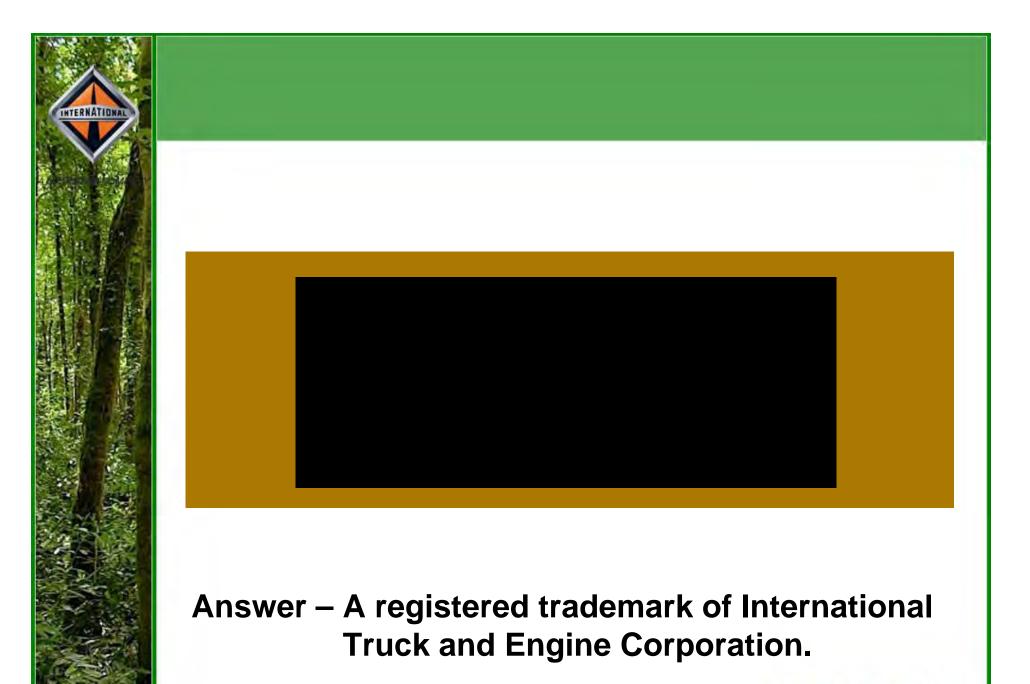
Jim Gardner

Business Development Manager

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International Truck & Engine Corporation The Engine Technology Leader

• **RETROFIT DEVICE**:

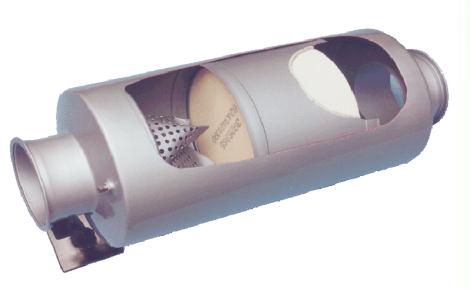
-Any technology that allows reduction of Particulate Matter and/or NOx in diesel exhaust. This includes aftermarket devices, re-power and replacement.





Diesel Oxidation Catalyst

- Particulate matter reduction of 20% to 30%
- Carbon monoxide (CO) and hydrocarbon (HC) reductions of up to 50%
- Harmful hydrocarbons (HC)
 are also reduced by up to 50%
 - No specialized fuel required
 - Recommended for older, mechanical engines built before 1994





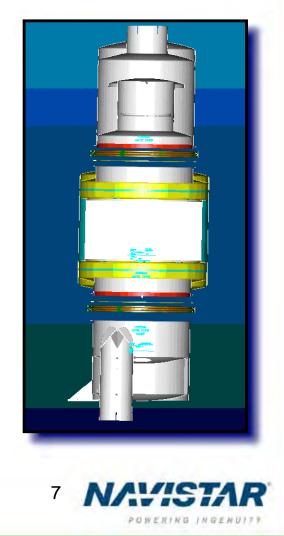
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Particulate Reactor (ARB – Level II device)

• ARB verified level II device

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- Good candidate for city buses, refuse hauling and military applications.
- 50 % minimum PM removal with flow through design.



Diesel Particulate Filter



• International® Diesel Particulate Filters (DPF) utilize the latest advancements in emission control technology from Engelhard, a world leader in emission technology and are OEM engineered and manufactured for quality and durability.

• Emission Reduction Performance:

- 70-98% reduction in particulate matter (PM) and visible smoke; depending on fuel quality
- 70-98% reduction in carbon monoxide (CO) and hydrocarbons (HC)
- Reduced odor and noise
- DPFs from International are passive systems and allow oxidation of PM at normal operating temperatures.

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- Warranty:
- Diesel Particulate Filter kits are warranted for (5) five years or 100,000 miles from date of installation.



Green Diesel Technology® International Closed Crankcase Ventilation System (CCV)



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- OEM designed system
 Sold as a complete kit
 Element life is 750 Hour Min.
- Easy installation and service
- Includes drain valve and hose in the kit.
- Verification pending with
 USA EPA.
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Active Catalyst Technology

Therma Cat™



- Therma Cat[™] Level III, 85%+ Particulate Reductions
 - Verification pending at CARB
 - Will be an active system with low temperature requirements.
- Distributed exclusively through authorized International and IC dealers worldwide.



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•Engine recalibration – change timing. (2000-2003 years of International engines only) •Reduction in combustion temperature. •Reduction in NOx emissions by 25%. •Reduction in PM Emissions two fold.







Diesel Oxidation Catalyst (DOC) G07-5035-A

1 step

DOC only required

Applications: Mechanical engines built before 1994 (All – makes)

Benefits: 20 to 25% PM reduction

Better

Particulate Filter (Retrofit Kit) G07-5036-A

2 step

- Particulate Filter required
- •Ultra low sulfur fuel (15ppm)

Applications: Electronic engines built after 1994 (All Makes)

Benefits: 90 % plus PM reduction 5 to10 % NOx reduction Best

Green Diesel Upgrade (GDT) G07-5701-A

3 step

- Particulate Filter
 required
- Ultra-low sulfur fuel (15ppm)
- Engine Re-calibration

Applications:

Electronic engines built 1999 to 2003 (International only)

Benefits:

Over 90 % PM reduction Minimum 25% NOx reduction



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International Green Diesel Heavy Truck



