

# Marine diesel emission control has never been easier!

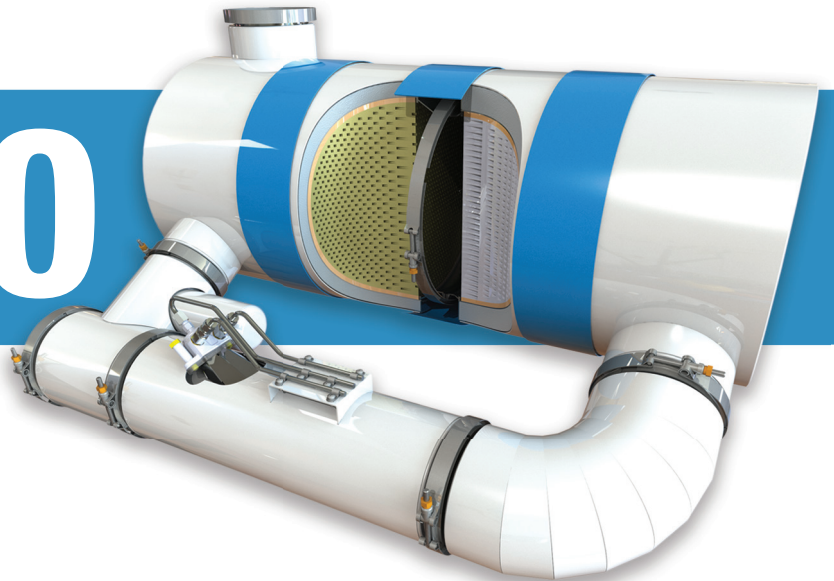
Diesel engines are an excellent power source, with the exception of their emissions. Particulate Matter (PM)/soot is an ongoing issue causing frustration, additional work for the crew, possibly mechanical difficulties, and loss of enjoyment in a pleasure boat environment.

GreenTRAP™ NOVA 320 system is a passive/active Diesel Particulate Filter (DPF) system using a Hydrocarbon Injection (HCI) over a Diesel Oxidation Catalyst (DOC) to raise the exhaust temperature sufficiently for regeneration in cases where the exhaust temperature is not sufficient for passive regeneration. The hydrocarbon injection is controlled by an independent Electronic Control Module (ECU). The active DPF control module monitors the pressure drop across the DPF, the exhaust temperature and the exhaust mass flow rate and calculates the amount of fuel that needs to be injected at any time during regeneration.

In addition to 95-99% PM reduction the system provides a reduction in Carbon Monoxide (CO) and Hydrocarbons (HC) emissions greater than 95% and 97% respectively.

The GreenTRAP™ NOVA 320 PM control system is customized to fit your specific application, providing you full control over PM, rather than allowing PM to control you.

## GreenTRAP™ Nova 320 active diesel particulate filter



scan and learn



Sold and supported globally, Nett Technologies Inc., develops and manufactures proprietary catalytic solutions that use the latest in diesel oxidation catalyst (DOC), diesel particulate filter (DPF), selective catalytic reduction (SCR), engine electronics, stationary engine silencer, exhaust system and exhaust gas dilution technologies. Our reliable and real-world emission solutions will extend the usable life of existing equipment while allowing you to avoid costly future replacements. We manufacture emission control solutions that are California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) verified. As the emission control authority, we are here to help you navigate through the hassles and complexities of emission control compliance.

**NETT**  
TECHNOLOGIES INC.  
...the emission control authority.

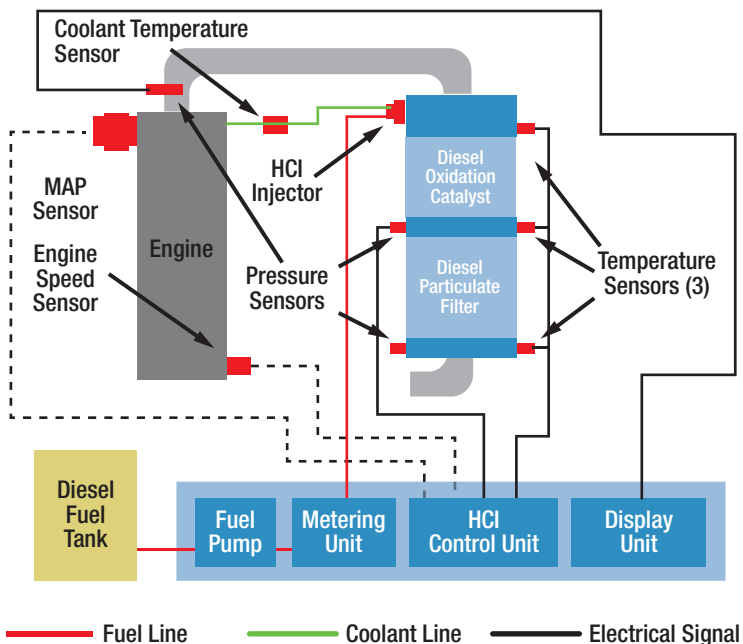
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## GreenTRAP™ NOVA 320 PRODUCT OVERVIEW

### How does the NOVA 320 Active Diesel Particulate Filter work?

The GreenTRAP™ NOVA 320 is an Active Diesel Particulate Filter (DPF) system consisting of a Diesel Oxidation Catalyst (DOC) positioned upstream of a catalyzed DPF. The wall-flow DPF traps Particulate Matter (PM)/soot emission emitted by the diesel engine. The cylindrical filter element of the device consists of many square parallel channels running in axial direction, separated by thin porous walls. A proprietary catalyst is wash-coated on the inner surfaces of the monolith channels. The inner catalyst lowers the PM (soot) oxidation temperature allowing filter to passively regenerate at lower temperatures. When the exhaust temperature is above 575°F for more than 30% of the engine operating time, the DPF is passively regenerated. When the DPF does not passively regenerate it can be regenerated by means of hydrocarbon (i.e. diesel fuel) injection over the DOC catalyst when the exhaust temperature is above 480°F. For that, The GreenTRAP™ NOVA 320 system requires that the exhaust temperature of the unit be above 480°F for more than 25% of the operating time. The principle for DPF regeneration with Hydrocarbon Injection (HCI) has been successfully used for on-highway heavy-duty diesel engines since 2007. A diesel fuel injector located in the exhaust assembly upstream of the DOC will inject a precise amount of fuel at the required time. The injected fuel will be oxidized in the vicinity of the catalyst sites on the DOC located upstream of the DPF. Since the oxidation of fuel is a highly exothermic reaction, the exhaust gas temperature will increase. This increase in the temperature is a function of exhaust mass flow rate and injected fuel flow rate. The objective of the control unit is to bring the exhaust gas temperature to levels that can safely oxidize the soot collected in the DPF (~20 min @ ~1200°F).

### GreenTRAP™ NOVA 320 System Schematic Drawing

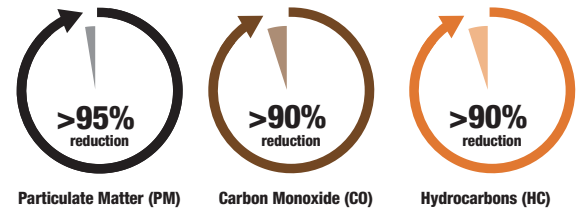


## PRODUCT FEATURES

- Active HCI system
- Ideal for engines with an overall output of 50kw to 450kw
- Automatic or manual regeneration modes
- Internally insulated avoiding external blankets
- Computerized controller with 3 customizable alarms
- Maintenance intervals of 2000 to 5000 hours
- Programmable regeneration profile with data logging capabilities
- Colour display informing of system operational conditions and status
- Energy efficient with fuel requirements of less than 1% of total engine fuel consumption

## EMISSIONS REDUCTION PERFORMANCE

### Typical GreenTRAP™ NOVA 320 Emissions Reduction Performance



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Contact Nett Technologies Inc. today at:

Phone: (905) 672-5453 Toll-Free: 1(800) 361-6388  
or visit us online at [www.nettinc.com](http://www.nettinc.com)