

NEAR-ZERO CARBON EMISSIONS TECHNOLOGY... TODAY



“We were looking for a solution to maximize emissions reductions while minimizing any effect on operations.”

Chris Geldart, Former Director of Public Works, Washington DC

Optimus Technologies is a clean energy technology company based in Pittsburgh, Pennsylvania. Optimus manufactures the Vector System, an advanced fuel system technology that enables diesel engines of all types and sizes to operate on 100% biodiesel (B100).

The Vector System is designed for severe-duty diesel applications and integrates into existing equipment to facilitate a seamless transition to near-zero carbon fuels without significant equipment replacement or repowering costs.

ENABLES CORPORATE SUSTAINABILITY – The Vector System upgrades any severe-duty diesel engine to operate on 100% biodiesel, which is renewable, sustainable and allow for operations to achieve near-zero carbon emissions.

UPGRADES EXISTING ENGINES – Incorporate The Vector System into existing equipment to leverage your investment in existing assets while dramatically reducing the carbon emissions from operations.

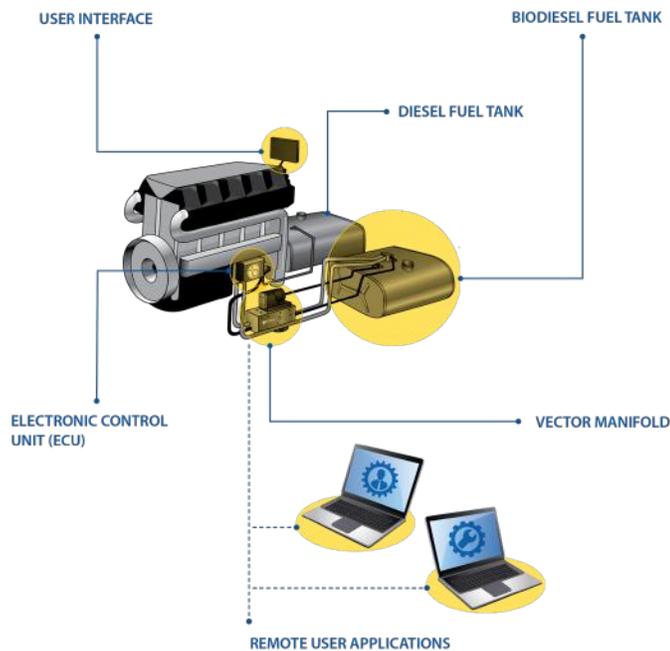
QUICK & EASY INSTALLATION – The Vector System is a bolt-on technology that installs in as few as 20 hours.

FULLY AUTOMATED OPERATION – The Vector System tracks and analyzes emission reductions, cost-savings, and petroleum offsets while automatically optimizing the use of biodiesel – without the need for operator engagement.

STRAIGHTFORWARD FUELING – Biodiesel utilizes existing diesel infrastructure so there are no special processes, training requirements, or lengthy refueling/recharging periods.

SIMPLE OPERATIONS AND MAINTENANCE – Optimus’ system operates in harsh environments and is compatible with all modern emission after-treatment systems.

From heavy equipment to marine and locomotives, The Vector System can be custom engineered for any severe-duty application where it is challenging or impossible to achieve emission reductions in a cost-effective manner through electrification, natural gas, or hydrogen.



OPTIMUS' VECTOR SYSTEM OVERVIEW

BIODIESEL TANK - Includes in-tank heat exchanger and fuel pickup and return lines.

USER INTERFACE - Provides the operator with system information, including operational status, fuel level, and alerts.

VECTOR MANIFOLD - Includes a heat exchanger, fuel pump, sensors, and a dedicated biodiesel fuel filter.

REMOTE USER APPLICATIONS - Allows for real-time wireless access to system data, service information, and performance metrics.

ELECTRONIC CONTROL UNIT - Communicates with the engine's control module, Vector Manifold, and Remote User Applications to optimize the use of biodiesel and record system operational and engine performance data.

BENEFITS OF BIODIESEL:

NEAR-ZERO CARBON

Reduces carbon dioxide emissions to near-zero levels due to its biogenic lifecycle

LOWERS PM EMISSIONS

Reduces particulate matter on average 50% when compared to petroleum diesel

DECREASED DPF LOADING

Biodiesel's lower soot generation fills the DPF much slower, and can lead to less frequent regenerations

INCREASED LUBRICITY

Biodiesel reduces friction between the engine's moving parts, eliminating need for additives

HIGHER CETANE

Biodiesel has a shorter ignition time and higher combustion index than petroleum diesel

