



# HYDROGEN CARBON CLEANER

**Optimal Engine Performance**

# Meet HCC

*What is the Hydrogen Carbon Cleaner?*

**A High Impact Carbon Removal Technology** that is a simple, safe, and effective system that enhances diesel, gasoline, and natural gas internal combustion engines using the power of clean non pressurized hydrogen.



Weight: 440 lbs  
Height: 46.6"  
Length: 36"  
Width: 22"

## Applications We Service

*The HCC cleans multiple engine types*



Trucks



Buses



Generators



Port Equipment



Construction



Agriculture



Military



Ground Support Equipment

## Service in Action

*Why do Engines Need Cleaning?*

All internal combustion engines produce carbon deposits as a result of their operation. Carbon build up on the engine will negatively effect engine performance. We recommend using the HCC as part of your fleet's regular maintenance schedule.

# What are Carbon Deposits?

Carbon deposits in internal combustion engines develop on internal surfaces such as the fuel injectors, pistons, glow plugs, and EGR valves, both internally and externally. These deposits adversely affect engine parts and performance, which lead to more frequent maintenance, costly replacement of parts, and higher operational expenses.



The HCC effectively extracts carbon deposits from combustion engines, enhancing efficiency, reducing maintenance costs, and minimizing environmental impact. Our service is simple, safe, effective, and does not require engine dismantling or the use of added chemicals.

# Four Step Cleaning Process

- 1 The HCC connects to the engine's air intake
- 2 Hydrogen- enriched gas enters the engine's cylinders at idle RPM
- 3 The hydrogen-enriched gas reacts with carbon deposits
- 4 Carbon deposits are extracted and then emitted through the exhaust

## Piston Head



Before HCC cleaning



After HCC cleaning

## Key Features

The HCC enhances engine performance and optimizes the life of diesel particulate filters (DPFs), EGR valves, and other engine components, with a 30-120 minute hydrogen carbon cleaning. (HCC cleaning time can vary based on the type of engine)

- Optimal Engine Performance
- Reduces Maintenance Costs
- Potential Fuel Savings
- Engine Component Longevity
- Mechanical Intervention Not Required
- 24/7 Digital Data Recording App.



# Risk Mitigation

- Improves Safety
- Avoidance of Unexpected Engine Downtime
- Unplanned Repairs & Repair Costs



# Service Models

- In house fleet operations
- Diesel Truck Stops
- Diesel & Gas engine repair facilities
- Multi-purpose portable unit for land & marine applications



# Company Overview

## Who We Are

HNO International is a green hydrogen product development company. Our mission is to provide cost-effective, modular, scalable systems that produce, store, and dispense green hydrogen on a regional, local scale.

## Highlights:

- 15+ years in hydrogen R&D exp.
- 19 US patents
- Strong partnerships in industry



## Contact Us



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