



## HYDROGEN CARBON CLEANER

#### **Meet HCC**

#### What is the Hydrogen Carbon Cleaner?

The Hydrogen Carbon Cleaner (HCC) is a simple, safe, and effective system that enhances diesel, gasoline, and natural gas internal combustion engines with the power of clean hydrogen.



## Service in Action

#### Why do Engines Need Cleaning?

All internal combustion engines produce carbon deposits as a result of their operation. This holds true for engine types across countless sectors such as transportation, shipping, agriculture, mining, construction, power generation, and more. We recommend using the HCC as part of your fleet's regular maintenance schedule.

# What are Carbon Deposits?

Carbon deposits in an internal combustion engine develop on internal surfaces such as the engine crankcase, pistons, piston rings, intake valves, and fuel injectors, both internally and externally. These deposits adversely affect engine parts and performance which lead to more frequent maintenance and higher costs.





The HCC effectively removes 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 plastic products.

## Four-Step Cleaning Process

- 1 The HCC connects to the engine's air intake
- 2 Hydrogen-enriched gas enters the engine's cylinders
- 3 The hydrogen-enriched gas reacts with carbon deposits
- 4 All is then omitted through the exhaust as a gas







### Key Features

The HCC can enhance engine performance and optimize the life of diesel particulate filters (DPFs), EGR valves, and other engine components, with a 30-60 minute hydrogen carbon cleaning.

- Optimal engine performance
- Reduce maintenance costs
- Potential fuel savings



## **Our Company**

#### 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



Donald Owens
Founder and Chairman
Don, our visionary and leader for 15+ years,
combines engineering, patent law, and
entrepreneurship, driving our hydrogen
technology success.



Paul Mueller
President and CEO
Paul leverages 30+ years in Aviation, Aerospace, and Defense. P&L leader since 2007, he transforms our green hydrogen business with strategic organization.



Greg Heller
CTO
Greg brings strategic insight in our technical
development, collaborating with engineers to
innovate and optimize our hydrogen systems.



