## Orientation Rentar Fuel Catalyst

Reduces Fuel Consumption and Reduces Harmful Emissions More Energy on Less Fuel



18-Year-Old Established Company \* Sole Source Technology with 33 Issued Patents Verified Effective by EPA Recognized Laboratories



#### The Mission Statement





Globally, there are more than one half billion diesel engines and oil-fired furnaces burning billions of gallons of fuel per year and emitting millions of tons of greenhouse gases into the atmosphere.

The Rentar Fuel Catalyst is independently proven to reduce fuel consumption and greenhouse gas emissions by EPA and CARB recognized laboratories.

It is the "Mission" of Rentar Environmental Solutions, Inc. to install Rentar Fuel Catalysts on the world's diesel equipment.



### Rentar Fuel Catalyst Independently Verified to:



- Reduce Fuel Consumption And Extend Range 2.0% To 12.0%
- Reduce Oil Fired Furnace Fuel Consumption 7.0% To 30.0%
- Reduce Greenhouse Gases (NOx, CO and CO2) Up To 19.2%
- Reduce Particulate Matter (PM) Up To 58.2%
- Reduce Black Smoke (Opacity) Up To 44.8%
- Extend Engine Life Between Engine Rebuilds 20% to 50%
- Reduce Organic And Elemental Carbon Up To 35.0%
- Reduce Volatile Organics up to 63.0%

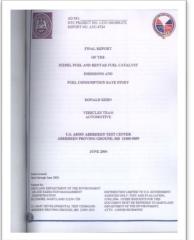
Results vary based on the applications, type of engine and type of fuel utilized

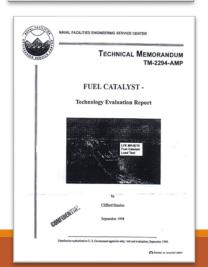


# Rentar Is Independently Verified By:









- Southwest Research Institute
- EPA & CARB Recognized Laboratories
- Aberdeen Proving Grounds
- Olson Ecological Laboratories
- Virginia Tech University
- SGS,SA
- Vale Mining
- Yamana Gold
- CEMEX
- Vulcan Materials





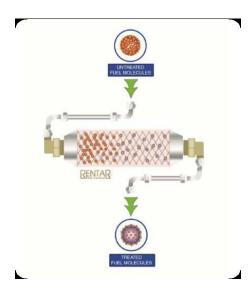
#### Benefits of the Rentar Fuel Catalyst

- Reduces Fuel Consumption
- Increases Payload Per Gallon / Liter
- Reduces Greenhouse Gas Emission
- Extends Engine Life
- Extends Oil Life
- Reduces Engine Maintenance
- 10 Year Warranty
- Easy to Install
- Pays for Itself in Fuel Savings in 3 to 12 Months



#### How does it work?





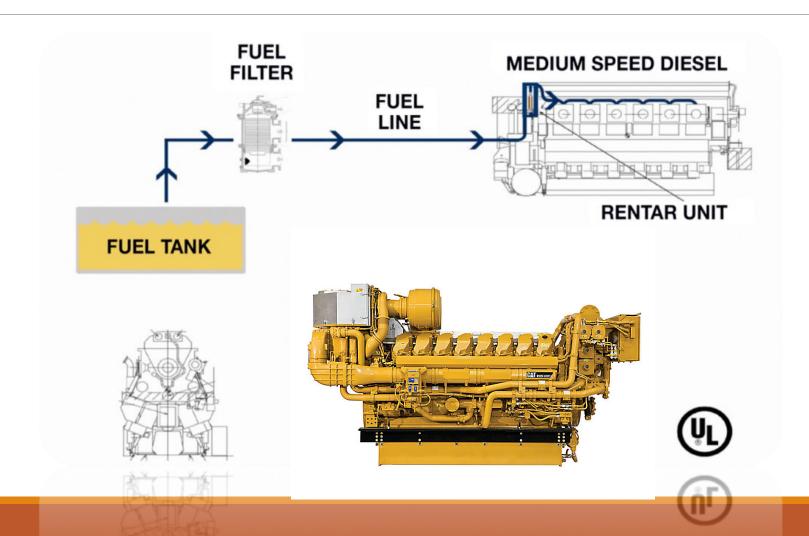
The Company's core product is the *Rentar® Fuel Catalyst* ("RFC"), which aggressively conditions fuel through a series of complementary processes resulting in a more complete and cleaner burn at combustion. The Rentar technology works with any fossil fuel combustion process.

Fundamentally rooted in "cracking fossil fuels", a method of altering organic compounds with large molecules, making them more useful compounds with smaller molecules. The RFC enables the clustered molecules in fuel to temporarily repel each other, allowing more surface area of the fuel molecules to be exposed to oxygen at the point of combustion.

The proprietary combination of rare earth elements contained in Rentar's catalyst cause the saturated straight chain aliphatic (paraffin) molecules to convert into unsaturated ring compound aromatics which in turn releases a small amount of hydrogen. The hydrogen interacts with the dispersed fuel molecules to achieve a more complete combustion.



#### Simple Installation

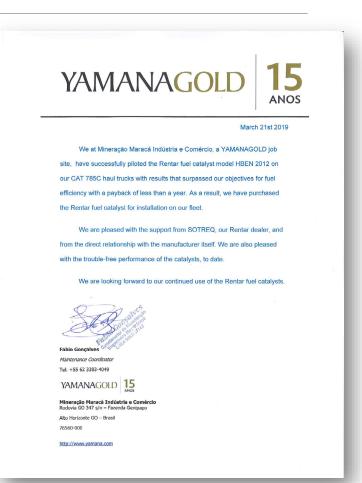




#### **Testimonial Letters**









#### Applications Applications



















#### Increase Payload or Kilowatts Per Gallon /Liter

Reduce Fuel Consumption and Exhaust Borne Pollution

























#### Automotive Research Association of India is co-operative industrial research association by the automotive industry with the Ministry of Industries, Government Of India



Testing Conducted on 6SL8800TA 200 KW Kirloskar 250 Genset Engine

Tested with ISO: 8178 D2 - 5 Mode Test Protocol

3.04% Fuel Improvement

58.2% Reduction of Particulate Matter

7.9% NOx Reduction

35.4% CO Reduction

15.4% Hydrocarbon Reduction



#### World's Largest Inspection and Technology Verification Company





SGS Verifies a 17.05% Fuel Reduction\*, a 27.5% Reduction of NO<sub>x</sub> and 32.5% Reduction of CO.

- Over 97,000 employees
- Over 2,600 offices and laboratories worldwide
- Conducted an emissions study on the Rentar fuel catalyst in 2016
- World's largest inspection and technology verification company

<sup>\*</sup> Computed by Carbon Balance See Test Study



#### Caterpillar 777D

Schedule of Annual Fuel Savings at Various Fuel Cost Using the Rentar Fuel Catalyst



Assuming the Caterpillar 777D

Consumes 20 GPH / 20 Hours per Day / 6 days per Week / 50 Weeks per Year

Per Gallon Price	\$4.00	\$6.00	\$8.00	\$10.00	\$12.00
2% Savings =	\$ 9,600	\$14,400	\$19,200	\$24,000	\$28,800
4% Savings =	\$19,200	\$28,800	\$38,400	\$48,000	\$57,600
6% Savings =	\$28,800	\$43,200	\$57,600	\$72,000	\$86,400
8% Savings =	\$38,400	\$57,600	\$76,800	\$96,000	\$115,200







• SOTREQ CATERPILLAR, the fourth largest Caterpillar Dealer in the world has acquired the right to distribute the Rentar Fuel Catalyst in the eight largest market in the world, Brazil. In addition to supplying all the new equipment, they maintain tens of thousands of existing pieces of equipment.

### RENTAR®





• VALE SA, a \$134 billion company, the largest iron and nickel MINING OPERATOR in the world, is saving \$20,000 to \$35,000 per piece of heavy-duty equipment annually through fuel savings at a one-time cost of either \$5,000 to \$10,000. They have more than 2,000 pieces of equipment and they have begun equipping their fleet. They recover the cost of the Rentar Fuel Catalyst in less than four months.



Yamana Gold Inc. is a Canadian-based gold producer which is a listed NYSE company with more than 1.8 billion in sales. They have significant gold production, gold development stage properties, exploration properties, and land positions in Canada, Brazil, Chile and Argentina.

Yamana Gold has installed Rentar Fuel Catalysts at their Brazilian mine and provided this letter of endorsement.

### YAMANAGOLD 15 ANOS

March 21st 2019

We at Mineração Maracá Indústria e Comércio, a YAMANAGOLD job site, have successfully piloted the Rentar fuel catalyst model HBEN 2012 on our CAT 785C haul trucks with results that surpassed our objectives for fuel efficiency with a payback of less than a year. As a result, we have purchased the Rentar fuel catalyst for installation on our fleet.

We are pleased with the support from SOTREQ, our Rentar dealer, and from the direct relationship with the manufacturer itself. We are also pleased with the trouble-free performance of the catalysts, to date.

We are looking forward to our continued use of the Rentar fuel catalysts.

Fight Hard Constitution of the Constitution of

abio Gonçalves

Maintenance Coordinator
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YAMANAGOLD 1

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### RENTAR® Fuel Catalyst





• The largest SHIPPING PORT management company in the world, managing more than 80 ports, purchased 90 Rentar Fuel Catalysts and over the first year reduced that ports overall fuel cost by 7.5%.

### RENTAR®





• Del Monte Freighters have achieved 4.5% fuel reduction though the implementation of the Rentar Fuel Catalyst. As a result Del-Monte Food Company equipped their entire fleet of freighters with the Rentar Fuel Catalyst.

### RENTAR® Fuel Catalyst





Penske Leasing and Toyota Transport equipped their entire fleet of West Coast car carrier transports with the Rentar Fuel Catalyst after successful testing in an EPA recognized laboratory. The test results on an average of 5 trucks was 11.3% fuel reduction and 42.2% particulate matter reduction in highway driving mode.







After EPA protocol testing, Covanta Energy equipped their entire fleet of equipment at their 28 plants with the Rentar Fuel Catalyst

#### Credentials









World's 4<sup>th</sup> Largest Caterpillar Dealer A Rentar Distributor 400 Offices - 4300 Employees



\$2 Million International Product Liability Insurance



Export-Import Bank of the United States Official Export Credit Agency





California Resource Board Executive Order (CARB)



#### Rentar Case Studies

#### CASE STUDY



#### **COVANTA ENERGY**

Covanta Holding Corporation (NYSE: CVA) is an international owner and operator of Energy-from-Waste power generation projects converting municipal solid waste into renewable energy for numerous communities throughout the United States.

2009 consolidated operating revenues were \$1.55 billion with \$397 million in operating cash flow and adjusted EBITDA of \$515 million.



Installed Rentar Fuel Catalyst on entire fleet of heavy-duty diesel vehicles at 28 plants around the United States.

- 5% reduction in fuel consuption.
- 43.6% reduction in CO2 emissions.
- 75.9% reduction in CO.
- 47.7% reduction in NOx
- 52.6% reduction in particulate matter.

#### CASE STUDY



#### U.S. ARMY

Located in Hartford County, Maryland on 79,000 acres with research capabilities in Automotive; Environmental Effects & Technologies; Fire Control; Firepower; Support and Survivability/Lethality; Warfighter & Support Equipment.





The Aberdeen Test Center tested Rentar units on a Navistar International 359.9 cu. in., 170 hp. diesel engine and reported the following:

- 3.6% Fuel Consumption improvement.
- 3.6% Extended Range improvement.
- 12% NOx improvement.
- 14% CO<sub>2</sub> improvement.
- 17.4% CO improvement.
- 12.6% HC improvement.
- 10.9% O2 improvement.

#### CASE STUDY



#### **TOYOTA**

Toyota Motor Company, established in 1937, is today the world's largest automobile manufacturer by sales (7,051,000 units FY 2009), with 320,808 employees building autos under the DAIHATSU, HNO, LEXUS and TOYOTA brands.



Toyota has installed Rentar Units of all their auto transport trucks operating in the Port(s) of Long Beach & Los Angeles with the following resuilts:

STEADY STATE (Highway Driving)

- 11.3% Fuel Consumption improvement.
- 42.2% Particulate Matter improvement.
- 9.7% CO2 improvement.
- 33.5% Carbon Monoxide improvement.
- 36.8% Total Hydrocarbon improvement.

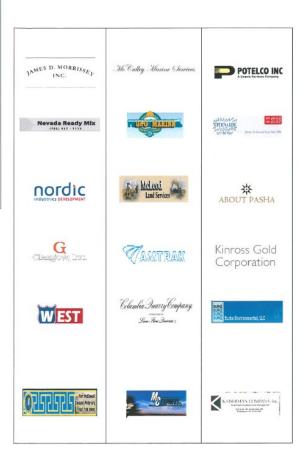
Toyota Laboratory Results conducted by EPA & CARB recognized laboratory.

# Logos of Rentar Fuel Catalyst Purchasers











### I like the Rentar Fuel Catalyst

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