

Rentar Fuel Catalyst

REDUCES FUEL CONSUMPTION AND REDUCES HARMFUL EMISSIONS

MORE ENERGY ON LESS FUEL



Generator Applications

22-Year-Old Established Company * Sole Source Technology with 33 Issued Patents
Verified Effective by EPA and CARB Recognized Laboratories

Rentar Fuel Catalyst

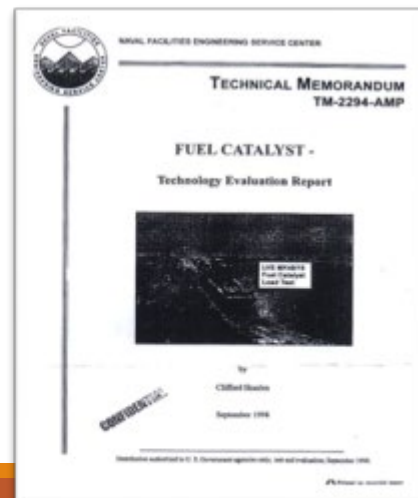
Independently Verified to:



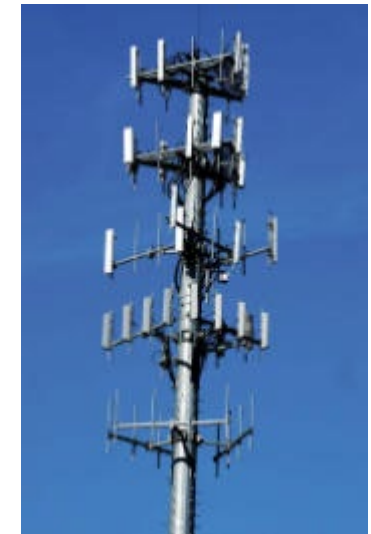
- Reduce Fuel Consumption And Extend Range 2.0% To 12.0%
- Reduce Oil Fired Furnace Fuel Consumption 7.0% To 30.0%
- Reduce Greenhouse Gases (NOx, CO and CO2) Up To 19.2%
- Reduce Particulate Matter (PM) Up To 58.2%
- Reduce Black Smoke (Opacity) Up To 44.8%
- Extend Engine Life Between Engine Rebuilds 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
- Sotreq CATERPILLAR
- Vale Mining
- Yamana Gold
- CEMEX
- Vulcan Materials

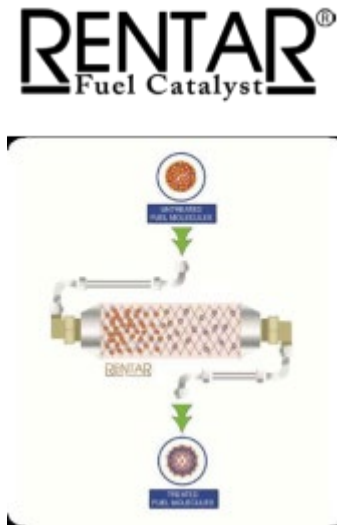


Benefits of the Rentar Fuel Catalyst

- 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
- 33 Issued Patents
- 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 making them combust more completely. The conditioning of the fuel enables the clustered molecules 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 and metals 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.

Testimonial Letters



Date: 02/05/2012

To whom so ever it may concern

This is to certify that HBL –Rental Fuel Catalyst having following specifications have been installed at Tata Motors Ltd., Lucknow plant.

Sr No.	Model No.	Qty	Mounted on Equipment
1	HREN 2012	02 Nos.	1010 KVA Cummins DG
2	HREN 2012	02 Nos.	1010 KVA Cummins DG

Since the installation, Fuel catalysts are performing to our satisfaction at above mentioned DG sets. We are pleased to confirm that we have achieved saving of 15.57% on specific fuel consumption.

For M/s. Tata Motors Ltd.


S. M. Singh
DGM – Plant Services

TATA MOTORS LIMITED
Chief Industrial Area Lucknow 226 019
Tel: 91 522 2818012 2818023 2818032 Fax: 91 522 2818246
Registered Office: Bombay House 24 Fort Street Mumbai 400 001





Mahindra & Mahindra Ltd
Agri Development Centre
Tractor Division
Karnata Road, Ludhiana (Rudrapur)
Dist. Udhham Singh Nagar - 203140
Tel : 91-5944- 280723 / 25
Fax: 91-5944-280724

Ref no: HBL/RDP/HBL/1204/24 Date: 24th Apr'12

TO WHOM SO EVER IT MAY CONCERN

This is to certify that HBL RENTAL fuel catalyst has been installed on our generators and boiler applications.

The performance of HBL RENTAL Fuel Catalyst has been good and about 6% HSD saving achieved.

We appreciate the green energy efforts of M/S HBL Power System LTD. towards reducing the fuel consumption and carbon emission.



Authorized Signatory
RUDRAPUR

Registered Office: Gateway Building, Apollo Bunder, Mumbai-400001
Phone: 2202 1031 Fax : 022 2202 8190 / 8190

YAMANAGOLD | **15 ANOS**

March 21st 2019

We at Mineração Maracá Indústria e Comércio, a YAMANAGOLD job site, have successfully piloted the Rental fuel catalyst model HREN 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 Rental fuel catalyst for installation on our fleet.

We are pleased with the support from SOTREQ, our Rental 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 Rental fuel catalysts.



Fabio Gonçalves
Maintenance Coordinator
Tel: +55 62 3363-4098

YAMANAGOLD | **15 ANOS**

Mineração Maracá Indústria e Comércio
Rodovia GO 347 km 11 - Fazenda Geraçopolis
Alto Horizonte GO - Brasil
76540-000
<http://www.yamanagold.com>

Improve Kilowatt Per Gallon /Liter



Reduce Fuel Consumption and Reduce Exhaust Pollution

Extend Engine and Oil Life



Extend Engine Life 20% Between Rebuilds



22.1% Fuel Improvement

Summary of Findings

Hanson Aggregate conducted fuel economy studies. They solely managed and collected the data. The results are reported below.

At the Wickenburg, AZ quarry facility, Hanson Aggregate managed the creation of a baseline/ installation of the Rentar Fuel Catalyst under supervision of Mark Jaynes and collection of the "post" data.

The result, as documented in the attached report/ due to the Rentar Fuel Catalyst is a **22.1% average improvement in fuel consumption on a Caterpillar 3406 gen-set.**



31.1% Average Improvement in Kilowatts Per Gallon



Summary of Findings

The test was performed at the CEMEX Plant at Terminal Varreux (Port au Prince) Haiti. The test was managed, and all data was collected by CEMEX technicians. The generator used was a Caterpillar 3406 C.

A baseline was created, the catalyst was installed (a conditioning clean-out period was observed) and “post” data information was gathered.

The data collected demonstrated a **31.1% average improvement in Kilowatts per Gallon**

BASE-LINE (Before Installation) December 2015 January 2016 February 2016 <u>March 2016</u> Base-line Average	7.29 KW per Gallon 8.17 KW per Gallon 8.19 KW per Gallon <u>8.72 KW per Gallon</u> 8.09 KW per Gallon
April 2016	Installation of the Rentar Fuel Catalyst
Conditioning Period April 2016 May 2016	
POST DATA (After Installation) June 2016 July 2016 August 2016 September 2016 October 2016 Post Data Average Improvement In Kilowatt Per Gallon	8.85 KW per Gallon 11.9 KW per Gallon 10.71 KW per Gallon 11.81 KW per Gallon 10.61 KW per Gallon 31.1%



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

Genset with Cat 3306 Engine | Saipan Resort **5.3% Improvement in Fuel Efficiency**



Cummins 1250 kVA Generator

Testing Performed Independently at HBL Power Systems Limited, Nanigaon India.

Baseline Data:

Running Hours 844 Hours - KWH Generated 571,930
Fuel Consumed in Liters 182,601
Average Fuel Consumption / Hour 217.33

Post Data after Conditioning Period:

Running Hours 229 Hours - KWH Generated 155,433
Fuel Consumed in Liters 45,791
Average Fuel Consumption / Hour 201.00

Result:

7.52% Fuel Consumption Improvement





World's Largest Inspection and Technology Verification Company



* Computed by Carbon Balance See Test Study

SGS Verifies a
17.05% Fuel Reduction*, x
27.5% Reduction of NO x
32.5% Reduction of CO.

- Over 97,000 employees
- Over 2,600 offices and laboratories worldwide
- World's largest inspection and technology verification company



Toyota



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.

See Test Study

PENSKE TRUCK LEASING FUEL TESTS CONDUCTED FOR DHL

Penske Truck Leasing, at their Terminal in Lubbock Texas, tested fuel consumption reduction on FIVE Exel/DHL trucks.

Penske collected data over 66 days and 123,954 miles. The independent conclusion was that the Rentar Fuel Catalyst *reduced fuel consumption by 5.1%*.



JOINT TMC/SAE TYPE IV

Joint TMC/SAE Type IV Testing



10 Class 8 DHL trucks.

5 Test Trucks / 5 Control Vehicles

289,200 miles over 95 days.

Fuel Savings: 4.59%

Annual Savings of \$3646 per year This created a ROI of less than a year



See Test Study



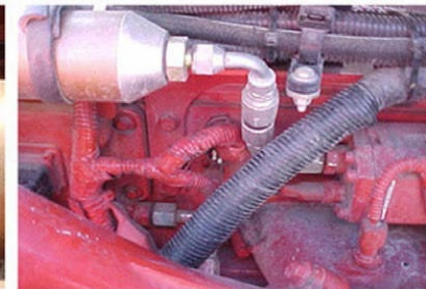
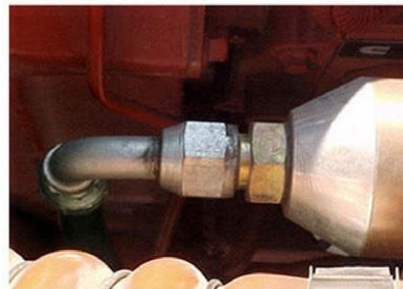
***The fuel consumption
was reduced by 3.56%***

In Harrison Arkansas and North Carolina, Seven Federal Express class 8 Trucks were tested with the Rentar Fuel Catalyst over 18 months during which a total of approximately 900,000 miles were accumulated on 7 trucks.

Data was collected over four months during which a total of approximately 640,000 miles were accumulated on the 16 trucks.

Fuel consumption was reduced 3.66% of the class 8 trucks tested in Kansas.

Cummins ISX (2005)





After 12,703,840 miles from 42 trucks, 10 which were installed with Rentar Fuel Catalysts resulted in an average fuel improvement of 4.4%

Summary of Findings

C.R. England conducted fuel economy studies. They solely managed and collected the data. The results are reported below.

In Salt Lake City, Utah at the C.R. England truck facility, C.R. England managed a fuel economy test procedure using ten Class 8 Tractors as test vehicles and thirty-two Class 8 tractors as control vehicles. All were new tractors with no miles on them thus there was no baseline to start with. The premise was to test the ten Rentar installed tractors against the thirty-two control tractors. The results, as documented in the attached report were a 4.4% average improvement in fuel consumption on ten tractors with the Rentar Fuel Catalyst installed over the thirty-two control tractors.



The forty-two trucks were driven over similar routes and in similar weather conditions throughout the duration of the fuel economy study. Testing started in 2006 and included ten Rentar-equipped trucks and thirty-two control trucks.

Rentar Fuel Catalysts were installed on ten of the new vehicles from factory by C.R. England and supervised by Rentar staff. The test lasted over the entire lifecycle of the 42 trucks in C.R. England's fleet, covering 12,703,840 miles.

See Test Study

Sotreq

CAT



- SOTREQ CATERPILLAR, the fourth largest Caterpillar Dealer in the world and is a Rentar Fuel Catalyst distributor in the eighth largest market in world..

SITECH

Sotreq S.A.

Via Gastão Camargos, 850 - Perobas
3.2371-630 Contagem - MG
Tel.: (31) 3559-6000
Fax : (31) 3559-6616

February 5, 2021

I would like to take this opportunity to introduce Rentar Environmental Solutions, Inc., the manufacturer of the Rentar® Fuel Catalyst, a product we provide to our customers in Brazil.

The Rentar catalyst works as a fuel optimizer for heavy-duty engines. It works differently from additives because it does not add anything to the fuel, it pre-conditions it to burn more completely at combustion.

We have been the sole source of the Rentar in Brazil since 2018 and some of our largest customers have bought the product for their diesel fleets after evaluating it with success, and others are currently evaluating it. The latest example is the fleet of CAT D11 dozers at a big mining site at North of Brazil were outfitted with the Rentar catalyst after a pilot study that showed a 4.3% reduction in their fuel consumption. Other customers include some of the biggest Brazilian iron ore minings.

We also know from past laboratory and field tests that the catalyst helps to lower greenhouse gas emissions and reduces the carbon buildup in the engine. This product is leveraging our business when the subject is emissions, and it is being of great advantage to us to have Rentar in our portfolio.

It is with confidence that I introduce the Rentar company. I am available for any questions, so please feel free to contact me.

Marx H. M. Gutierrez
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- VALE SA, a \$34 billion (revenue) 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.

Return-on Investment (ROI)



VALE S.A. (SOSSEGO MINE)

Actual

CAT 793D (CAT3516B)	Liters	US\$0.59/L (\$ cost)	4% fuel reduction (\$ savings)	5.29% fuel reduction (\$ savings)	7% fuel reduction (\$ savings)
Hourly	157.33 L	\$92.82	\$3.71	\$4.91	\$6.50
Day – 12 hours	1,887.96	1,114	44.56	59.00	78.00
Month – 30 days	57,426	33,881	1,355	1,792	2,372
Year	689,106	406,573	16,263	21,508	28,460
Five Years	3,445,531	2,032,863	81,315	107,538	142,300
10 Years	6,891,062	4,065,726	162,629	215,077	284,601

Approximate time to payback for a haul truck at SOSSEGO Mine is 5.6 months*

* Using a total product cost of US\$10,000 for two Rentar fuel catalyts on a CAT 793D haul truck at 5.29 percent fuel reduction



March 21st 2019

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Maintenance Coordinator

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YAMANAGOLD | 15
ANOS

Mineração Maracá Indústria e Comércio

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Alto Horizonte GO – Brasil

76560-000

<http://www.yamana.com>

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.



- DP World is the largest SHIPPING PORT management company in the world, They manage more than 80 ports in forty countries. They purchased 92 Rentar Fuel Catalysts for their Dominican Republic Port and over the first year reduced that ports overall fuel cost by 7.5%.

See Test Study



- Del Monte Freighters have achieved 4.5% fuel reduction through 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.

See Test Study



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

Credentials



LISTED



**\$2 Million International
Product Liability Insurance**

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



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 consumption.
- 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% CO₂ 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, HINO, 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 results:

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.



Some of Our Customers



VALE



SUZANO

lundin mining

PetroRio



HYDRO



Mosaic



TOYOTA

adani™

ArcelorMittal



Belocal

Uma Empresa do Grupo Lhoist

DP WORLD



COVANTA
Powering Today. Protecting Tomorrow.

Johnson
Controls



NORBULK



Rentar Fuel Catalyst

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



Generator Applications

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