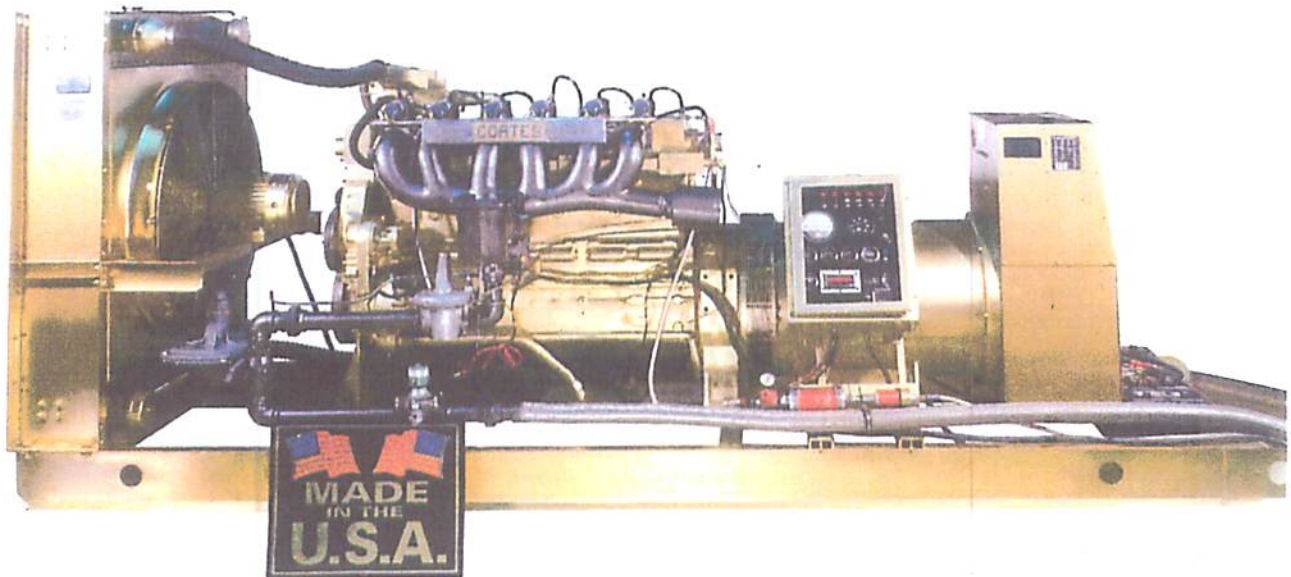




# Coates Warranty

All Diesel Engines, Natural Gas  
CNG and LNG Engines  
Worldwide  
Generator Drive



COATES NATURAL GAS CSRV ELECTRICAL POWER INDUSTRIAL GENERATOR  
Specifically designed for the oil and gas industry

# ALLIED DIESEL SERVICE CO.

Authorized Sales and Service - CUMMINS, MACK and VOLVO GMC

869 Hwy. 33 East  
Freehold, N.J. 07728

Parts: (732) 462-5072  
Service: (732) 462-9683

March 7, 2006

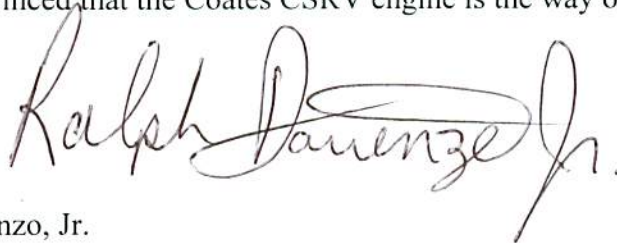
To Whom It May Concern:

Some time in 2001, we supplied components to Coates International for a new type of engine Mr. George Coates was working on at that time. It was an 855 Cummins engine. We inspected and observed the CSRV system adapted to the Cummins block with the Coates CSRV in place, running very quietly at full speed which is 1800 RPM's to 2000 RPM's. The engine ran extremely smoothly and quietly. As Mr. Coates exposed the components to us, we observed only two moving parts. We were astonished to say the least. We remanufacture Cummins engines and other makes for over forty-seven years here at Allied Diesel.

After a week or two, we calculated approximately 2700 parts in the poppet valve standard version compared to Mr. Coates replacing all these parts with only two moving parts. After a number of visits, and delivering parts and observing the engines operating on numerous occasions, we became investors in Coates International, Ltd.

We are convinced that the Coates CSRV engine is the way of the future.

Sincerely,



Ralph Darienzo, Jr.



COMPLIANCE  
AND  
RESEARCH  
SERVICES, INC.

1701 West Front Street Plainfield NJ 07063  
PHONE (908) 561-1824 • FAX (908) 755-5893

---

August 24, 2006

Coates International, LTD  
2100 Highway 34  
Wall, NJ 07719-9738

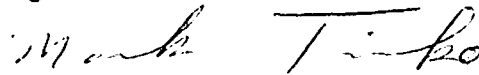
Re: Nonroad Engine Certification

Dear Mr. Coates,

In regards to your current engine project, a normally aspirated 14.0 liter inline 6 cylinder fueled by natural gas powering a stationary generator, we have determined that this engine application complies with the guidance of 40 CFR 1048 "CONTROL OF EMISSIONS FROM NEW, LARGE NONROAD SPARK-IGNITION ENGINES " (Title 40 of the Code of Federal Regulations Part 1048)  
([http://www.access.gpo.gov/nara/cfr/waisidx\\_05/40cfr1048\\_05.htm](http://www.access.gpo.gov/nara/cfr/waisidx_05/40cfr1048_05.htm)).

As per 40 CFR 1048.5 (d), as defined in 40 CFR 1048.801<sup>1</sup>, your stationary engines are in compliance with this part. You are further obligated to comply with 40 CFR 1048.20<sup>2</sup> (Labeling requirements) and prohibitions of 40 CFR 1068.101 restrict the use of a stationary engine.

Regards,

  
Mark Timko  
President

---

<sup>1</sup> See attachment 1

<sup>2</sup> See attachment 2

COMPLIANCE  
AND  
RESEARCH  
SERVICES, INC.

1701 West Front Street Plainfield NJ 07063  
PHONE (908) 561-1824 • FAX (908) 755-5893

---

January 10, 2006

George Coates, President  
Coates International  
2100 Highway 34 & Ridgewood Rd.

(732) 449-7717  
(732) 449-0764

Re: 855 Natural Gas Engine

Dear Mr. Coates,

Compliance and Research Services, Inc. a recognized emissions test facility by the United States Environmental Protection Agency and the California Air Resource Board, will be testing the 855 Natural Gas engine at our Plainfield NJ facility. The following is an estimate of costs for relocation of the engine from your Wall NJ facility.

Phase 1. Removal, transportation, and reinstallation

- 1) Disconnect battery supply to starter
- 2) Disconnect and label all electrical wiring from control panel
- 3) Drain engine oil
- 4) Drain cooling system
- 5) Disconnect computer and governor system
- 6) Disconnect computer to fuel supply
- 7) Disconnect natural gas supply system and block off mains
- 8) Remove radiator
- 9) Remove control panel
- 10) Disconnect and remove electric from power generator
- 11) Disconnect and remove fan motor
- 12) Disconnect and remove exhaust system
- 13) Disconnect engine mounts
- 14) Remove engine
- 15) Fit engine to transport frame
- 16) Load engine on truck
  
- 17) Transport engine to Plainfield test facility

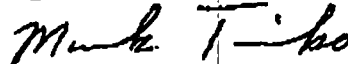
- 18) Reinstall engine in reverse order of above
- 19) Install high flow Natural Gas fuel line
- 20) Install electric power capable of handling genset output

Estimated costs

Items 1-16	\$15,000.00
Item 17	\$To be determined
Item 18	\$15,000.00
Item 19	\$To be determined
Item 20	\$To be determined

If you have any questions and/or comments, feel free to contact me at your convenience.

Regards,



Mark Timko

COMPLIANCE  
AND  
RESEARCH  
SERVICES, INC.

1701 West Front Street Plainfield NJ 07063  
PHONE (908) 561-1824 • FAX (908) 755-5893

---

September 20, 2006

Coates International, LTD  
2100 Highway 34  
Wall, NJ 07719-9738

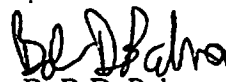
Re: Nonroad Engine Certification

Dear Mr. Coates,

As per your request, we ran a fuel consumption test and estimated fuel consumption on a per day (24 hour) basis. This test was run at your facility on September 20, 2006. The engine was set to output approximately 50KW. The method used to calculate the daily fuel consumption rate was based on the actual fuel flow rate at 50 KW. This value is more likely to be closer to the actual in use fuel consumption than the total fuel used during our test, since the total fuel also includes both start up and shut down procedures.

The fuel consumption rate we measured is 27648 cubic feet per day. Attached to the end of this document is the current calibration certificate for the fuel meter used. If you have any further questions, please feel free to contact my office at your convenience.

Regards,

  
BoB DePalma  
Lab Manager

THE STATE UNIVERSITY OF NEW JERSEY  
**RUTGERS**  
Campus of New Brunswick

Department of Mechanical and Aerospace Engineering • College of Engineering

Mr. George Coates  
President  
Coates Automotive, LTD.  
Highway 34 & Ridgeway Road  
Wall Township, NJ 07719-9738

Dear Mr. Coates:

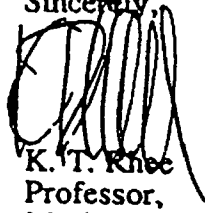
I was very pleased to meet you to learn about your new rotary-valve engine. I am greatly impressed by the creative achievement that you have made in invention/development of the engine system, which, I trust, will produce a big impact on the automotive industry.

As we concurred in the meeting, there seems to be a room for me to assist you. My current status of being a full-time professor at the State University, however, may not allow my involvement in *certain* capacities of your company, but any role associated with the technical area will be in general unlimited.

It is my hope that I can become a part of your future activities soon, as long as it avoids infringement on the legal and ethical limits of the University. For example, the University permits me to spend no more than one day per week in consulting activities, which may be performed either on or off the campus.

Again, I am very happy to come to know you and a possibility of being involved in your exciting engine activities. I look forward to hearing your decision on my role to play for implementing mutually productive goals.

Sincerely,



K. T. Khee  
Professor,  
Mechanical Engineering

Enclosure

## ADVANCED DESIGN

The new Coates Spherical Rotary Valve technology improves the performance of all classes of reciprocating internal combustion engine while reducing manufacturing costs and emissions.

The CSR valve system replaces the entire valve train of the conventional engine. Induction and exhaust functions are controlled by rotating spherical valves which incorporate a passageway through which the air/fuel mixture is drawn from the inlet manifold during the induction stroke and exhaust gases are expelled to the exhaust manifold during the exhaust stroke, respectively. The internal cylinder pressure is maintained by floating seals whose sealing action is responsive to the pressure generated within the cylinder. This patented and highly innovative design brings multiple advantages, including simplified manufacture, reduced costs, improved performance and fuel consumption and reduced emissions.

## PERFORMANCE

- \* Breathing is improved - clear gas flow paths, poppet valves obstruct flow - reduced contact area results in lower aerodynamic losses
- \* Valve train frictional losses are reduced and valve spring hysteresis losses are eliminated - power loss to valve train is reduced by 90%.
- \* Valve train requires no liquid lubrication - elimination of oil leakage into cylinders improves combustion conditions and reduces emissions. External cylinder head oil leakage is eliminated.
- \* Dynamically balanced valve train, with no valve float, allows higher engine speeds - elimination of valve/piston conflict allows flexibility in cylinder head design and higher compression ratios.
- \* Surface of rotary exhaust valve is cooler than poppet exhaust valve, eliminating "hot wall" effect, and tendency to pre-ignition.
- \* Valve overlap can be eliminated, preventing emission of unburned fuel/air mixture and back flow of residual combustion gases into inlet manifold.
- \* Mechanical valve clatter of conventional valve train is eliminated.



## MANUFACTURE

- \* Valve train parts count reduced more than 50%, reducing parts cost and assembly time.
- \* Direct replacement of existing complex cylinder head is possible.
- \* Reduced engine height, as much as 20cm/4in improves flexibility in design of engine compartment and allows lower vehicle hood line.
- \* Maintenance requirements are reduced - use of advanced materials and elimination of impact forces reduces wear. One test vehicle has been driven over more than 150,000 miles (240,00 km) with no valve maintenance requirements.
- \* No liquid lubrication is required in any part of the rotary valve train, no oil to leak or burn, no oil seals to replace, no need for valve cover ventilation.

## FUEL CONSUMPTION AND EMISSIONS

- \* Improved breathing reduces internal losses throughout the performance envelope. At tickover (30-60% of operating time for many vehicles) reduced losses allow stable operation at half or less of normal tickover. Under higher load, improved breathing increases torque, giving better, more responsive acceleration and reduced fuel consumption.
- \* Emissions are improved by absence of valve overlap, reduction in exhaust valve surface temperature and elimination of oil leakage from valve gear.
- \* Improved combustion conditions delays degradation of lubricating oil, allowing less frequent oil changes.

Sincerely,



K. T. Khoo  
Professor,  
Mechanical Engineering

**WELL TO WIRE ENERGY INC.**

Mr. George Coates  
2100 Highway 34 & Ridgewood Road  
Wall Township, NJ 07719-9738

Dear Mr. Coates:

It is with a deep sense of excitement that I am writing this short note to you.

I want to especially convey to you, our most profound appreciation for manufacturing and delivering the prototype 6 cylinder CSRV engine that we have received on April 5<sup>th</sup> past. We were able to assemble this revolutionary engine to our "Electrical Generating Demonstration Unit" and actually produced commercial grade electrical power to the overhead power grid.

The engine ran flawlessly at the following conditions:

1. Fuel: - Natural Gas
2. Gas Usage @ 1815 rpm - 48,000 scf/day
3. Engine Water Temperature: - 160° F
4. Exhaust Stack Temperature: - 1,020° F
5. Demonstration Power Output: 75 kw
6. Engine Oil Pressure: 42 psi
7. Emissions: very low

We look forward to the early start of the first of thousands of future engines.

Please confirm delivery as soon as possible.

Yours truly,

WELL TO WIRE ENERGY INC.

  
Bryan Campbell  
President  
BC/csj

#17, 1700 Varsity Estates Drive NW  
Calgary Alberta T3B 2W9  
Tel: (403) 288-3647 Fax: (403) 286-3696

**WELL TO WIRE ENERGY INC.**

Nov 10, 07

Coates International, Ltd.  
2100 Highway 34 & Ridgewood Road,  
Wall Township, N.J. 07719-9738

Attn: George Coates

Dear George:

This letter is to confirm the reaffirmation of the bench testing that was conducted by myself and by our Business Development Manager, Mr. Leo Perry within the Coates International, Ltd's headquarters at Wall Township, New Jersey on the 855 cubic inch CSRV engine. It should be noted that that energy use was measured at 27.5 to 30.4 % less than what we presently experience with alternate engines. The CSRV Natural Gas fired engine will be used by Well To WIRE in all of our future electrical power generation systems.

I am extremely satisfied with the smoothness, the flawless operation, the very low energy use and the initial power output. We are eagerly looking forward to you being able to ship at least two of these power plants within the next two to three weeks, as we would like to start filling orders within the next three months. With these successful results, our five-year business plan will now proceed forward.

Best of Regards,  
Sincerely,

Bryan Campbell, P. Eng.,  
President,  
Well to Wire Energy Inc.

10-Nov-07

ATTACHMENT # 1

**MEASURED BENCH TEST PERFORMANCE of the  
855 in3, In-Line, 4 Cycle CSRV NATURAL GAS ENGINE**

ENGINE MAKE	SIZE	ENGINE SPEED	# of GANGED ENGINES	POWER OUTPUT	NATURAL GAS USE	ENERGY USE:	
	(in <sup>3</sup> )	(rpm)		(kw/h)	(scfd)	(btu/kW)	(% Improvement)
Field Measured Major Supplier**	496	1,815	1	75	27,000	14,260	0.01%
COATES*** 10-Nov-07	895	1,700	1	115	28,800	10,330	27.51%

\*\* where the Lower Heating Value (LHV) of the sweet Natural Gas =

990

btu/scf

\*\*\* where the Lower Heating Value (LHV) of the sweet Natural Gas =

990

btu/scf