









Lubricants for a Healthier Planet™ is the portfolio of environmentally intelligent Hydrotex® products including lubricants, greases and fuel improvers. All of these products are formulated and tested to meet very specific application and environmental hurdles and parameters. These products complement the triple bottom line of People, Planet and Profit, making a contribution to sustainable business practices. Lubricants for a Healthier Planet combined with the Principles of Lubrication Management provide a competitive advantage, improve efficiency and reduce operational costs and emissions.





**Power-Kleen**<sup>™</sup> is designed with the following features to reduce environmental impact:

- Reduces Carbon Footprint
- Improves Fuel Economy
- Extends Asset Life
- Reduces Exhaust Emissions
- Enhance Sustainability of Operations\*

\*Meets two(2) or more of the following criteria:

- Delivers a measurable economic value
- Provides an environmental benefit or is an environmentally intelligent/sensitive product
- Improves employees' work environment and efficiency

The data from a diesel additive study conducted by WPC of Savannah, Ga. at The Georgia Ports Authority indicates with strong confidence levels that PowerKleen reduced the concentration of EPA Criteria Pollutants in the engine exhaust for RTGs and Jockey Trucks. WPC concluded that the greatest decreases in emissions are observed during revved engine tests.

## For Jockey Trucks:

- The change in NO<sub>2</sub> concentrations lies within an 11.25% and 26.89% decrease from background concentrations.
- The change in CO concentrations lies within an 8.80% and 25.84% decrease from background concentrations.
- The change in PM10 concentrations lies within a 64.71% and 78.27% decrease from background concentrations.

## For RTG Cranes:

- The change in NO<sub>2</sub> concentrations lies within a 5.12% and 15.14% decrease from background concentrations.
- The change in CO concentrations lies within a 4.05% and 13.95% decrease from background concentrations.
- The change in PM10 concentrations lies within a 37.11% and 66.43% decrease from background concentrations.

The results of this test with relation to SO, reduction were inconclusive.





# As released by Georgia Ports Authority

# Port's Study Shows Diesel Additive Increases Fuel Efficiency and Reduces Emissions

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Savannah, Ga. – August 13, 2010 – The Georgia Ports Authority's (GPA) Executive Director Curtis J. Foltz announced today that its diesel additive study yielded a five percent reduction in fuel consumption, as well as drastically decreased emissions.

"We undertook this study as a proactive effort to reduce our environmental footprint," said GPA's Executive Director Curtis J. Foltz. "As we expand our operations to accommodate increased cargo, we continue to look for ways to improve efficiencies and operate in an even more environmentally-friendly manner."

GPA's engineering staff commissioned a study to determine whether a fuel additive would be effective in reducing pollutant emissions and increasing engine fuel efficiency for its diesel equipment fleet. WPC of Savannah, Ga., was contracted to conduct the test and provide analysis. This large-scale test studied two of the most widely used container-handling equipment at the Port of Savannah.

"We were pleasantly surprised to see these dramatic results;" said GPA's Senior Director of Engineering and Facilities Maintenance, Wilson Tillotson. "With the large-scale nature of this study, we are confident the additive will yield an improvement in fuel efficiency and a significant reduction in emissions."

In January 2010, the GPA conducted a baseline monitoring for its diesel vehicle fleet at Garden City Terminal. The study included a diesel vehicle fleet of 64 rubber-tired gantry cranes (RTGs) and 40 jockey trucks. Baseline monitoring consisted of collecting emissions and fuel consumption data with all vehicles using ultra-low-sulfur diesel without the additive.

For emissions monitoring, the test measured the Environmental Protection Agency's (EPA) criteria pollutants: nitrogen dioxide, carbon monoxide, sulfur dioxide and particulate matter. Fuel consumption and operating hours were measured to develop a consumption rate in gallons per hour.

"The intent of the fuel additive is to yield a more complete and efficient fuel combustion," said Joseph R. Ross, Jr., Senior Associate and Environmental Department Manager with WPC. "By increasing the combustion efficiency, not only are fuel savings evident, the formation of criteria air pollutants is also reduced. These reductions will benefit all of Chatham County by reducing pollutant concentrations and helping to maintain compliance with state and federal attainment criteria."

The result of the study indicated a decrease of approximately five percent in fuel consumption. Reductions in EPA criteria pollutants were more significant. Particulate matter reductions averaged as high as 71 percent, while nitrogen dioxide decreased as much as 20 percent and carbon monoxide decreased an average of 19 percent. The study did not produce conclusive results regarding the impact of the additive on sulfur dioxide emissions. However, GPA's conversion in 2008 to ultra-low-sulfur diesel reduced the total sulfur content by 99 percent.

"The results are proof-positive that these additives work," said Tillotson. "We plan to continue using fuel additives for all diesel consumed on GPA property."

Through the GPA's crane electrification, use of refrigerated container racks, upcoming RTG repower project and use of fuel additives, the Port of Savannah will avoid use of more than 4.5 million gallons of fuel annually.

Georgia's deepwater ports and inland barge terminals support more than 295,000 jobs throughout the state annually and contribute \$15.5 billion in income, \$61.7 billion in revenue and \$2.6 billion in state and local taxes to Georgia's economy.

About WPC, a Terracon company:

WPC joined Terracon in September of 2009 and provides professional services to clients in the commercial development, education, environmental, government/military, industrial facilities, medical, power/utilities, residential and transportation industries. Terracon is an employee-owned engineering consulting firm with more than 2,700 employees providing geotechnical, environmental, construction materials and facilities services from more than 100 offices in 37 states nationwide. Terracon provides value to its clients through the following key benefits: reliability, responsiveness, convenience and innovation. Terracon currently ranks 46th on Engineering News-Record's List of Top 500 Design Firms.

For more information contact: http://www.wpceng.com or http://www.terracon.com.



# Lubrication Management

Hydrotex collaborates with customers on Lubrication Management, a reliability-centered process that focuses on solutions to enhance the customers' overall operating model by improving output capabilities, reducing operating costs and increasing ROI and profitability.

# Lubrication Management is a Process, the Following Overview is Not All Inclusive:

- Define Goals & Develop Implementation Plan
- Review OEM Recommendations, Previous Years' Lubrication Problems, Usage and Expense
- Agree on Historic Lubrication Costs & Maintenance Activity Levels
- Commit to Changeover to Hydrotex Lubricants & Methods
- Introduce Principles of Lubrication (POL) Training
- Conduct A Hydrotex Survey and Confirm OEM Recommendations
- Approve the Hydrotex Survey
- Conduct Customer Specific Lubrication Training
- Conduct Root Cause Analysis & Solutions for Significant Lubrication Issues
- Implement Extended Drain Intervals & Oil Analysis Program
- Implement Fuel Analysis Program
- Develop Standard Operating Procedures (SOP) & Lubrication Practices
- Implement Key Metric Reporting

 Continuous Improvement & Ongoing Training



Hydrotex is committed to developing the most appropriate solutions for our customers.

We have over 300 products and even more in research and development. In addition, we frequently formulate a specific product for a customer to ensure the best solution is created for the application.

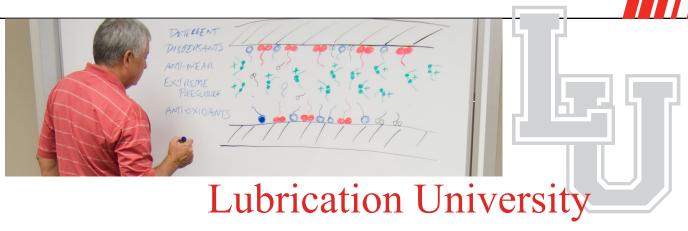
Our products provide solutions across a wide range of industries and applications, ranging from Food Processing and Agriculture to Utilities and Sanitation and from Pupil Transportation and Fleets to Textiles and Building Components.

We develop and manufacture all of our products in the USA. We are ISO 9001:2008 certified and all of our products are designed to meet or exceed Industry Performance Standards such as API, NLGI, SAE, DIN, NSF and ISO.

### A Few Solutions We Provide:

- Extending Maintenance Intervals
- Decreasing Downtime
- Reducing Energy Costs
- Improving Productivity
- Extending Equipment Life
- Delivering Environmentally Intelligent Products
- Formulating Products to Eliminate Known Carcinogens
- Providing Reliable Cold Weather Performance
- Improving Fuel Performance & Efficiencies
- Decreasing Harmful Emissions
- Decreasing Internal Rust and Corrosion
- Meeting Specific Lubricity Requirements to Protect Equipment
- Addressing High Temperature Requirements
- Providing Solutions for Heavy Loads
- Decreasing Carbon Footprint





Lubrication Training is a Vital Step in Developing and Maintaining Successful Maintenance Programs and is the Cornerstone to Our Reliability Centered Maintenance Approach.

Hydrotex Lubrication University offers fundamental and customized lubrication training. Either at our corporate office or at our customers' facilities across the nation, we present our lubrication training seminars.

Through our training and Lubrication Management, Hydrotex customers implement many of the following condition monitoring processes.

- Electrical Consumption Monitoring
- Fuel Analysis
- Oil Analysis
- Performance Analysis
- Power Quality Monitoring

- Thermography
- Ultrasound
- Vibration Analysis
- Visual Inspection

## Following is a list of some of the Lubrication University courses:

**Principles of Lubrication** -- Since we all must learn to walk before we run, we begin our training series with the Principles of Lubrication. The duration of this seminar is approximately two (2) hours. It begins with subjects such as, Why Lubricate and Different Lubrication Practices. It also covers what specific lubricants must accomplish in order to protect valuable equipment and defines the real cost of a lubricant.

**QSchool** -- This intense 3-day course is developed and presented by Hydrotex experts specifically to train our Lubrication Consultants, our Division Partners and our Customers. You will learn the most current application procedures, product knowledge, industry changes, upcoming mandates and environmental issues in the Lubrication Industry.

**Oil Analysis** -- Just as medical labs analyze key indicators within our blood, oil analysis labs analyze key indicators within in-service oils. When we learn how to interpret this information, we can correct problems in the early stages of development before there is permanent damage to the equipment. This course covers topics such as The Basics of Oil Analysis, How Oil Analysis Works, Sampling Methods and How to Read a Report.

**Fuel Analysis** -- Testing is used as a predictive tool to determine any potential performance issues or sources of contamination before impacting your fleet. Testing also evaluates how well the fuel can be expected to perform during both summer conditions and harsher winter conditions. Fuel Analysis Training will help your team determine specific fuel treatment options to optimize fuel usage and fleet performance.

**Customer Specific Training** – The value of lubrication training becomes very clear when facilities begin to see positive results with increased output capacities, reduced operation and maintenance costs and improved return on investments. Hydrotex offers customized training for customers. Following are a few examples:

- Introduction to Bearing Lubrication
- Bearing Failure Analysis
- How to Start an Oil Analysis Program
- Managing an Oil Analysis Program
- · Reading and Interpreting an Oil Analysis Report
- Hydraulics and Fluid Cleanliness
- Fuel Management
- Green Lubricants / Sustainability



