PuriNOx™
Low Emission Diesel Fuel
**Mustang Dynamometer**

Mustang Dynamometer is a global market leader in the I/M industry, supplying a complete line of products for vehicle safety and emissions inspection programs.

Mustang offers the following products and services for both emissions and safety test programs:

- Motor Vehicle Testing Equipment
- Host Computer Systems
- Management
- Screening
- Auditing
- Consulting
- Pilot Services

Mustang is the only company that can provide turnkey solutions as a sole system provider.
Inspection/Maintenance Systems

Mustang has supplied over 11,000 vehicle inspection systems over the last several years. It is estimated that Mustang’s equipment has tested over 350 million vehicles through the year 2000.
The Lubrizol Corporation

World’s Largest Independent Manufacturer of Specialty Chemicals for Transportation & Industry --$1.7 Billion Annual Sales

---Sales and Technical Service Offices: 50 Worldwide

---Presence in Asia for past 45+ Yrs.

---WW Manufacturing 20 Facilities in 14 Countries

World Headquarters: Wickliffe, Ohio, USA
Traditional Approach To Reduce Emissions

• Hardware and Replacement Maintenance
• Significant Capital Investment
• Economic Pressure and Curb on Existing Vehicle Owners
PuriNOx™ - Using Fluid Technology to Help Solve Emissions Problems

PuriNOx™ is a Low-Emission Water-Blended Diesel Fuel Developed with Caterpillar

- Reduces Emissions
  - NOx 15-25%
  - PM 25-55%
  - Opacity 65-98%

- Fill-n-Go
- No Equipment Changes

Immediate & Economical Solution for Urban Regions

Favorable Tax Relief Decisions to Reduce End User Cost
PuriNOx™ Fuel

Water-in-Diesel Fuel

• Low Viscosity
• Fuel in Contact with Tank and Engine
• Efficient Water Dispersion
• Mixes with Diesel Fuel

Water Soluble “Head” of Additive
Fuel Soluble “Tail” of Additive
Opacity Reduction

Port of Houston Gantry

Diesel

PuriNOx™
In-Service Opacity Results

In-Service Vehicle Opacity Test SAE J1667

Engine Model

Opacity

JD 6059T
Cummins ISB230
Cat 3176
Cat 3208T
Pre Euro T11

Baseline
PuriNOx
%Reduction

Baseline
PuriNOx
%Reduction
PuriNOx Performance has been Validated in the Field all Over the World

Technical Successes:

- CARB verification in California
- Product is performing well in a variety of applications
- No harm to engines: supported by engine durability testing
- Developed high capacity blending concept (Fourfold increase in throughput)
Tax Incentives for Cleaner Fuels

Regulatory Support Examples:

• Texas tax relief $0.04/gallon
• Ohio tax relief $0.04/gallon
• British Columbia tax relief $0.38/gallon
• California
  - CARB funding $2.25 million
  - State tax relief $0.03/gallon
Tax Incentives for Cleaner Fuels

Regulatory Support Examples:

- **UK:** No fuel tax on water portion of fuel
- **France:** 32% lower tax rate than diesel
- **Italy:** 36% lower tax rate than diesel
- **Australia:** No tax on water and emulsifier portion of fuel
Tax Incentives for Cleaner Fuels

Potential Programs:

• Emissions Credit Trading
• Grants for local market development
• Clean fuel vehicle zones
Tax Incentives for Cleaner Fuels

Taxation Issues

• The actual cost/km of Emulsified Diesel (ED) is slightly higher than diesel fuel
• Tax concession is needed to encourage widespread use of ED (Similar to the concessions given to the alternate fuels & emission controls devices in other countries)
• US and European governments have already granted financial incentives / tax concessions to promote ED.
Emulsified Diesel Fuel: Economic and Easiest Way to Reduce Emissions

- No Hardware Replacement and Modifications Needed
- Can be Used Immediately by Dispensing Fuel Directly into Vehicle Tanks
- Uses Existing Storage, Distribution, and Vehicle Fueling Facilities
- Handles Like Diesel Fuel and Remains Stable in Storage and Vehicle Tanks
- Most Economical and Easiest to Implement Technology Available