



Combustion Components Associates Profile

*Leader in Design,
Development, Testing
and Manufacture of
Cost Effective Emission
Solutions*

- Established in 1980
- 20,000 MW of Pollution Compliance Experience
- 100+ Large Utility & Industrial Customers
- Burner Modifications and In furnace Pollution Control Systems
- 148 SCR Systems installed on Diesel Engines
- 29 Patents & Patents Pending
- Acquired RJM Corp Intellectual Property and US assets in November of 2004
- 12,000 sq.foot Corporate Facility
- 20,000 sq.foot Manufacturing Facility

Environmental Compliance at the Lowest Cost



- Power & Steam Generation
 - Utility Boilers
 - Industrial Steam Generators
 - Process Heaters
 - Stationary Diesel Engines

- Transportation
 - On Highway Trucks
 - Off Road Equipment
 - Portable Equipment
 - Ferries
 - Ships

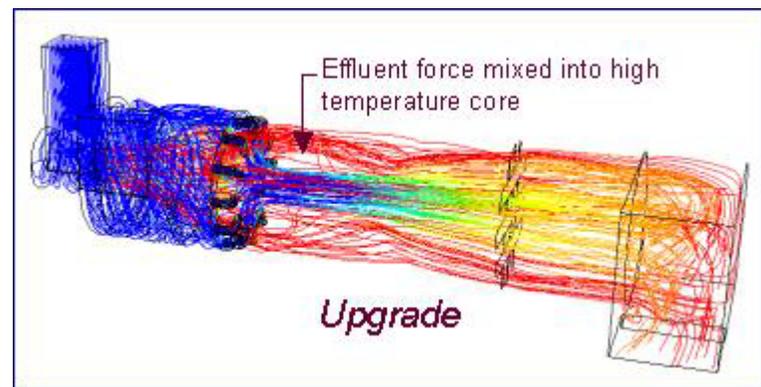
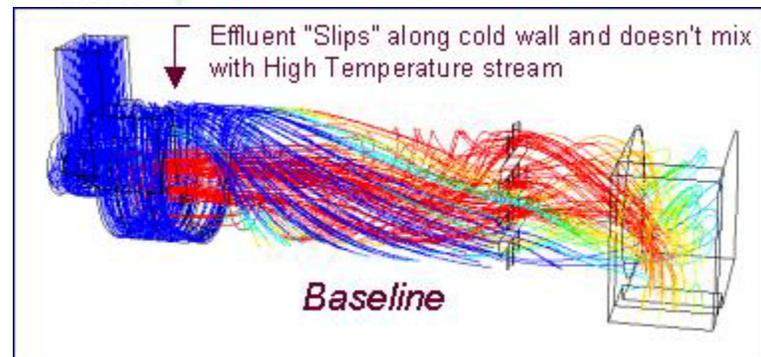
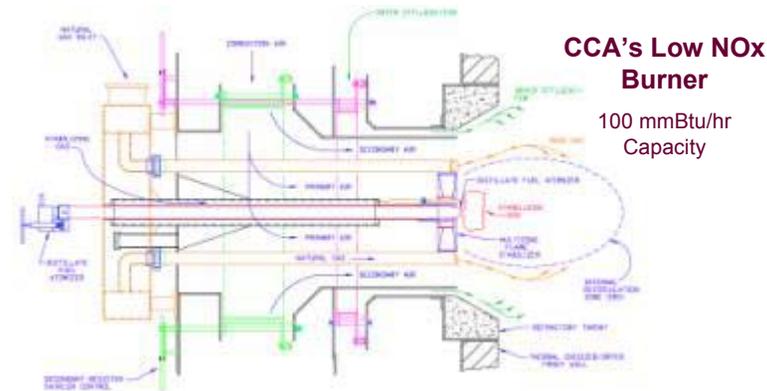


Engineered Combustion Products

- **Retrofit Burner Equipment**
 - Flame Stabilizers
 - Fuel Injectors, Oil Atomizers, Gas Spuds & Coal Injectors
 - Air Flow Balancing Equipment, Air slides
 - Fuel Balancing Equipment
- **Complete Combustion & Emission Systems**
 - Low NOx Burners
 - Overfire Air & Flue Gas Recirculation Systems
 - SNCR & RRI Systems for Boilers
 - SCR for Diesel Engines & Boilers

Application: CCA's Low NOx Burner in a Thermal Oxidizer

- CCA's Low NOx Burners Were Requested for a Thermal Oxidizer (TO)
- CFD Modeling of CCA's Burner in the TO was Modeled to Insure Optimum VOC Oxidation
- Based on Modeling Results, Changes were Recommended and Implemented in the TO Design
- CCA's Burner along with the Improved TO Design:
 - ✓ Reduced NOx and CO emissions
 - ✓ Lowered the required TO exit temperature (due to better CO oxidation)
 - ✓ Reduced Fuel Consumption by 10% (resulting from lower O₂, and temperature operation)





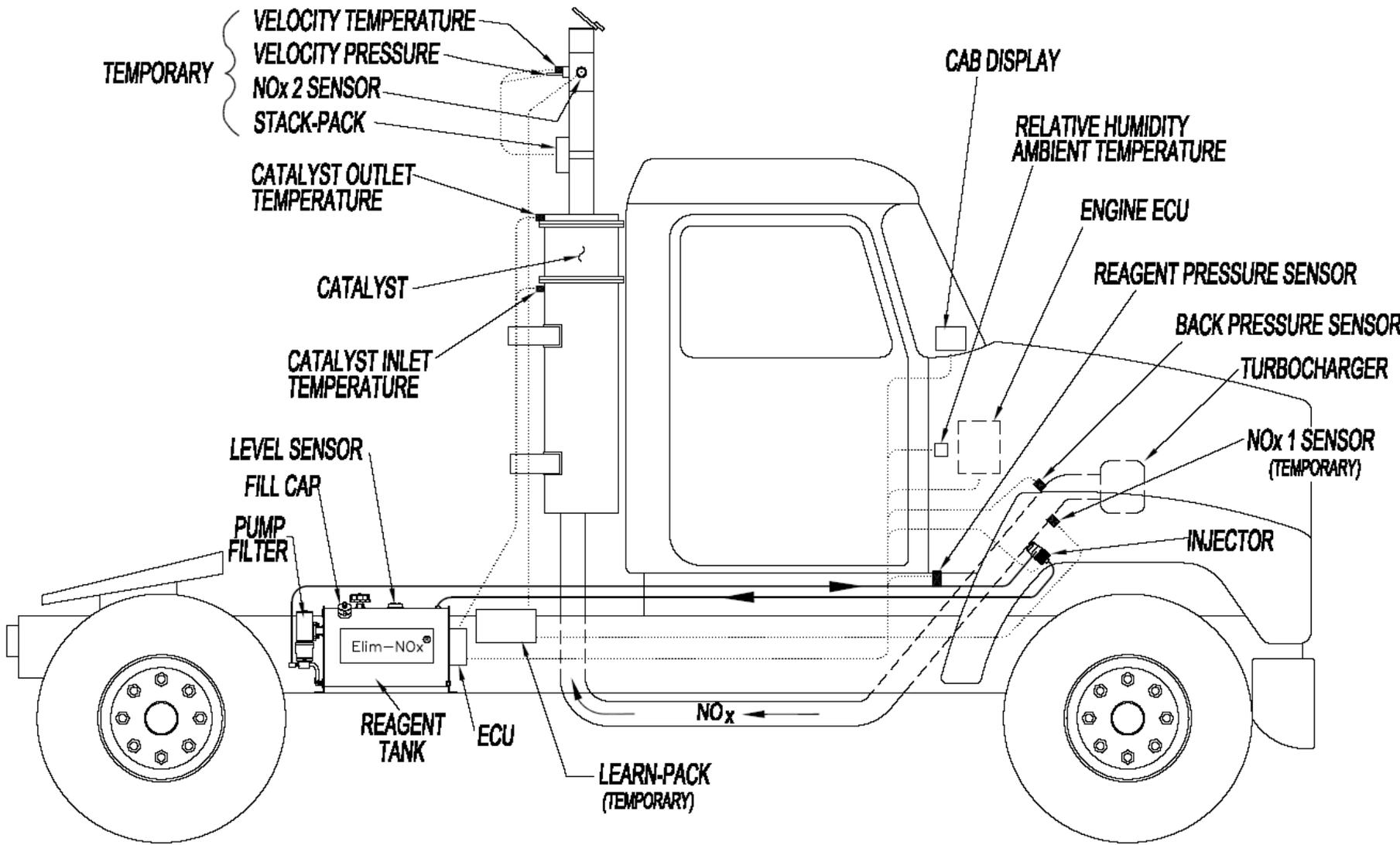
ELIM-NO_x[™] SCR System

- 70%+ NO_x Reduction
 - Low Cost/Ton of NO_x Removed
 - Maximum Fuel Economy
 - Uses Urea - Non-Hazardous
 - No Steam or Compressed Air for Atomization of Urea
 - Superior to EGR
 - Simple & Quick Installation
 - Easy Access to Catalyst & Injector for Maintenance
 - Short Delivery Schedule - < 2 months
- 
- Pay for the System with NO_x Credits
 - ELIM-NO_x[™] Allows Continued Use of Older Trucks

Environmental Compliance at the Lowest Cost

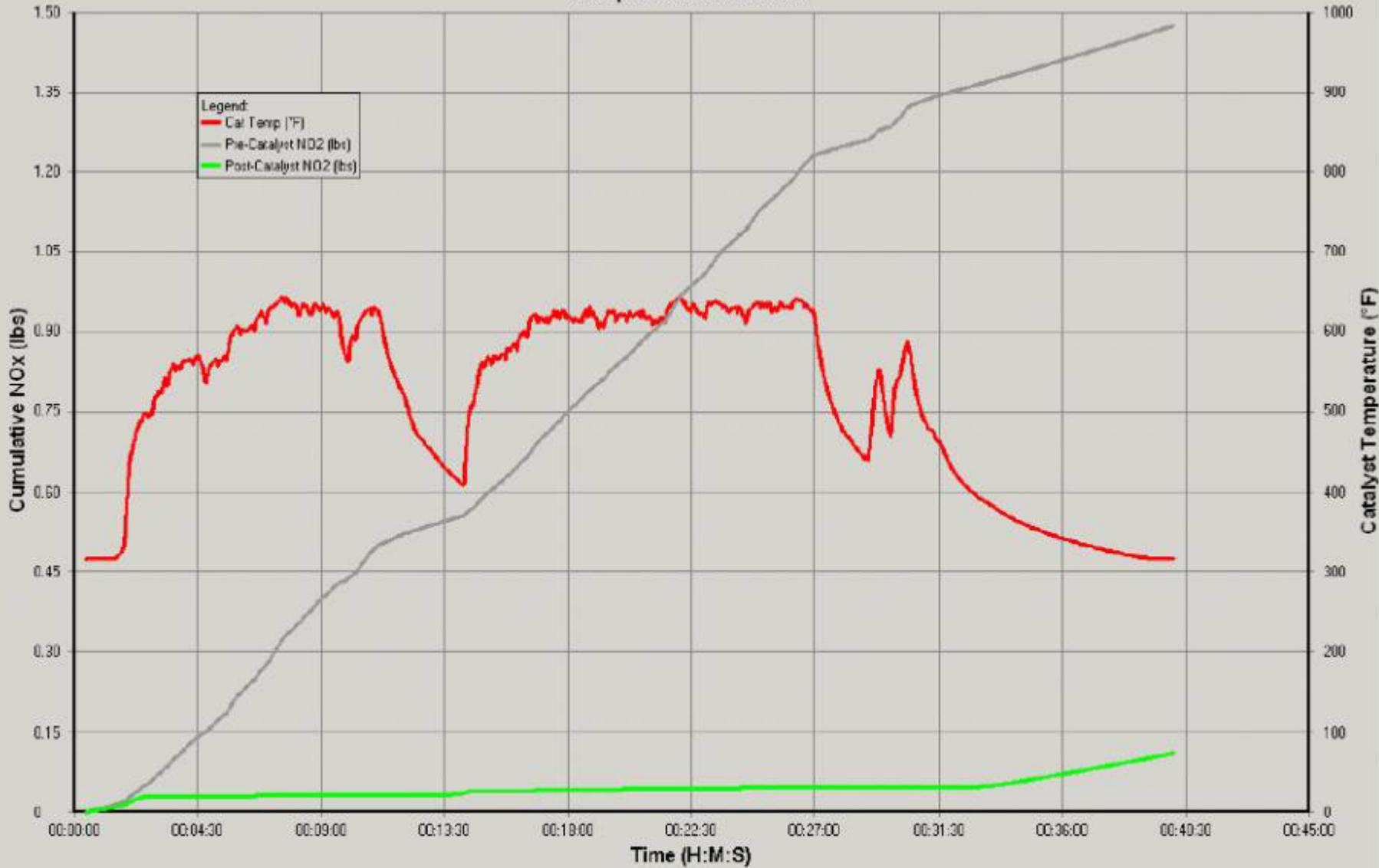


ELIM-NOx[®] SCR

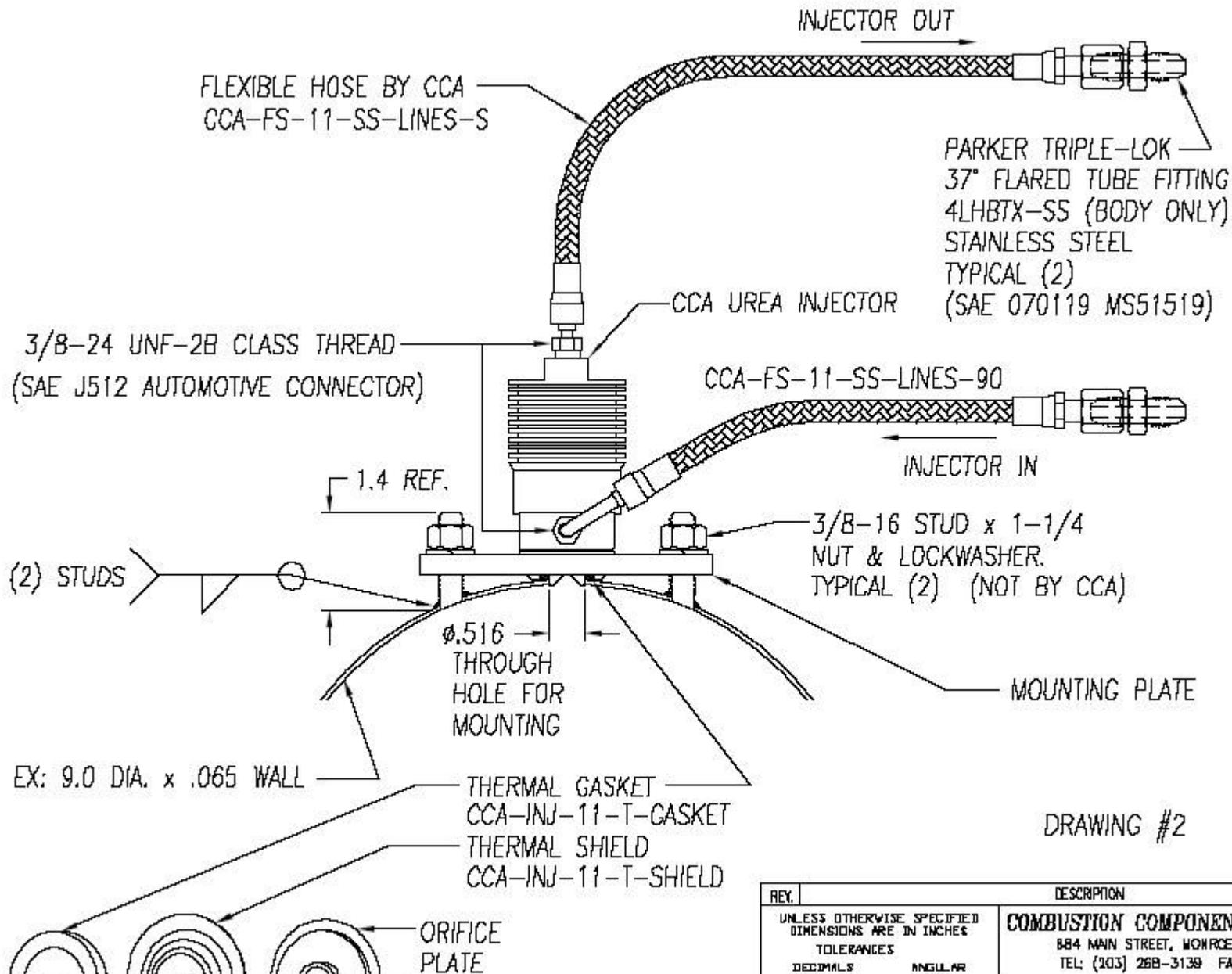


Elim - NOx™ System Performance

Caterpillar 826G Veh ID 810520



Avg Pre-Catalyst NO2 (lb/hr): 2.234	Percent Reduction: 92.5%	Started: 05/04/05; Duration: 00 hrs 40 min. 04 sec.
Avg Post-Catalyst NO2 (lb/hr): 0.167	Eliminated NOx (lb/8 hrs-day): 16.530	



DRAWING #2

REV.	DESCRIPTION	BY	DATE
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	COMBUSTION COMPONENTS ASSOCIATES, INC. 884 MAIN STREET, WORRCE CONNECTICUT, 06468 TEL: (203) 268-3139 FAX: (203) 261-7687	
	TOLERANCES		
	DECIMALS ANGULAR .X ± .061 ± 5° .XX ± .031 CHAMFER .XXX ± .005 ± 5°		
TITLE		INJECTOR MOUNTING INFORMATION	
DRAWN BY	DATE	SCALE	DWG NO.
BD.	10-21-04		INJ-MTG-2
APPROV BY	DATE	CUSTOMER	REV.

ALL TECHNICAL DATA ENCLOSED HEREIN IS NOT TO BE USED FOR MANUFACTURE, PROCUREMENT OR DISCLOSURE TO OTHERS FOR ANY PURPOSE WITHOUT THE WRITTEN PERMISSION OF COMBUSTION COMPONENTS ASSOCIATES, INC.

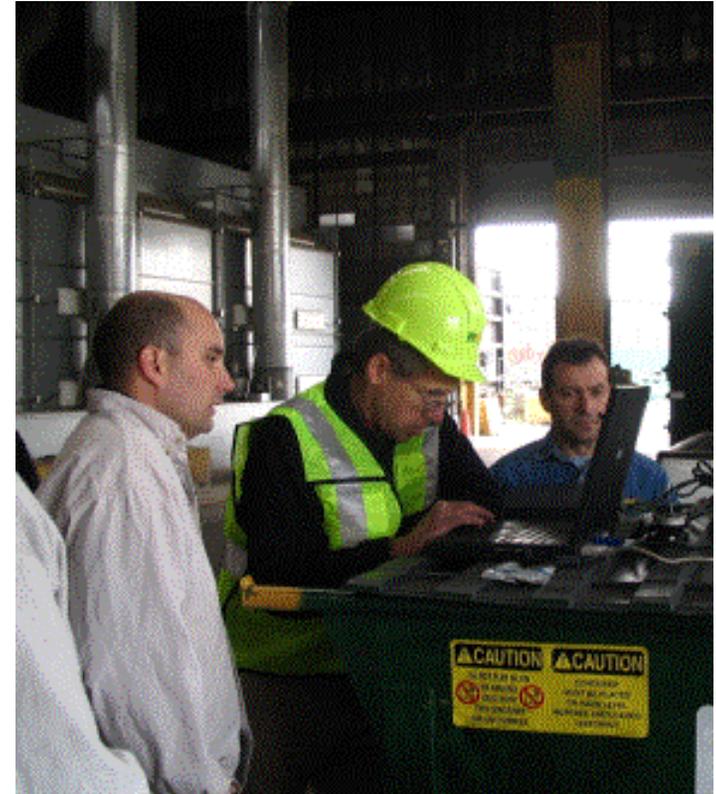
Patented Improved Urea Injector for SCR Applications

- Reduced heat transfer
- Atomization < 50 μ Sauter Mean Diameter (SMD)
- Improved corrosion resistance
- Compact design
- Inlet and outlet location have 360° position capability
- Integral coil provides internal heating
- Removable orifice plates



ELIM-NOx[®] Retrofit

- CCA engineered systems and installation process
- Patented mapping process
- Training, support and tools for:
 - Installation
 - Mapping
 - Validation
- Catalyst sized for
 - 90% NOx reduction @ rated power
 - 25%PM reduction over HDTT
 - 60-80% NOx reduction over HDTT





- EPA & ARB Verification by Feb 2006 1998-2002 on-highway class 8 vehicles
- Caterpillar 826G off-highway verification 2006-7
- Volvo L220E Complete retrofit kits available today for L220E







Retrofit ELIM-NOx Bill of Materials

- Injector and fluid lines
- Tank, filter, pump, controller package
- Wiring Harness
- CAN-Link, exhaust temperature sensor, backpressure sensor,
- Adaptive learn and initial fit engineering services provided by CCA or trained distributors