

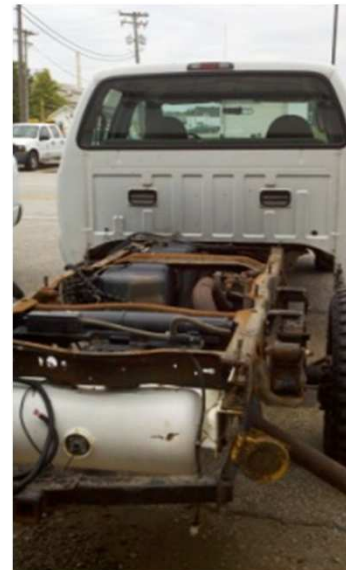
Introducing Propane to your Fleet

- Awareness/Education
- Vehicles/Equipment
- Fueling Infrastructure
- Implementation
- Sustainability
- Expansion



Awareness

- Education – Find Opportunity
 - ALL Employees
 - Properties; Gasoline vs. Propane
 - Savings
 - Environment
 - Safety; PPE
- Training
 - Evaluate Current Experience
 - Identify Needs
 - Implement and Maintain



Vehicles/Equipment

■ Conversion of Existing Fleet

- EPA Certifications
- Late Model Vehicles/Equipment
- Large Quantity of Similar Fleet
- Engine Performance

■ Acquisition of new fleet

- Analysis; ROI
- Don't Get Desperate; Research

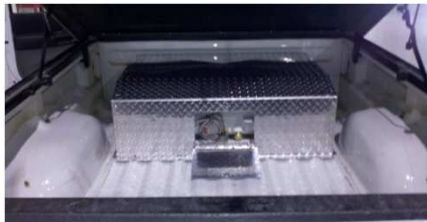


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 2011 MODEL YEAR CERTIFICATE OF CONFORMITY WITH THE CLEAN AIR ACT OF 1990		OFFICE OF TRANSPORTATION AND AIR QUALITY ANN ARBOR, MICHIGAN 48106	
Certificate Issued To: PARNELL USA, INC. (Automotive Fuel Converter)	Effective Date: 10/29/2011	 Scott E. Gorman, Director Compliance and Legislative Strategies Division	Issue Date: 10/29/2011
Certificate Number: 0PRL176-080F-003	Expiration Date: 12/31/2011		Revision Date: NA
Test Group Name: 0PRL176-080F Emissions/Testing Family Name: 0PRL00155BAH Applicable Exhaust Emission Standards: Other, ULEV Applicable Emissions/Testing Standard:		Engine Displacement: 1.4 Liter Exhaust Emission Test Fuel Type: LPG Full Useful Life Miles: Exhaust Emission: 120,000 miles Full Useful Life Miles: Exposure to Sulfating Emission: NA	
Models Covered: F250 2WD, F250 4WD, F350 2WD, F350 4WD Vehicle models covered by this certificate were originally produced by Ford Motor Company in model year 2008 to operate on gasoline and have been modified by the above named manufacturer to operate on propane or LPG. Test fuel group: FMPC00155BAH, FMPC00155BAG, FMPC00155BHH			
<small>Reference to section 208 of the Clean Air Act (42 U.S.C. 7528) and 40 CFR Parts 85, 86, and 89 as applicable, this certificate of conformity is hereby issued with respect to new vehicles which have been found to conform to the requirements of the regulations on Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines (40 CFR Parts 85, 86, and 89 as applicable) and which represent the new motor vehicle models listed above by test group and emissions/testing emissions family, specifically described in the application of the above named manufacturer. Vehicles covered by this certificate have demonstrated compliance with the applicable emission standards as more fully described in the manufacturer's application. This certificate covers the above models, which are designed to meet the applicable emission standards specified in 40 CFR Parts 85, 86, and 89 as applicable to both light and new vehicle as applicable. EPA is issuing this certificate subject to the conditions and provisions of 40 CFR 86.1840(c).</small>			
<small>REDUCED FEE CERTIFICATE: EPA is issuing this certificate under the reduced fee provisions of 40 CFR 86.187. This certificate covers up to 25 vehicles. A revised certificate and an additional fee payment are required if the number of vehicles covered by this certificate exceeds 25 vehicles. This certificate covers only those new motor vehicles or engine models which, in all material respects, to the design specifications that apply to these vehicles or engines described in the documentation required by 40 CFR Parts 85, 86, and 89 as applicable and which are produced during the 2011 model year production period stated on this certificate of the said manufacturer, as defined in 40 CFR Parts 85, 86, and 89 as applicable. The manufacturer shall obtain the approval of the California Air Resources Board (in the form of an executive order issued by the California Air Resources Board) prior to introducing any vehicle covered by this certificate into commerce (1) in the State of California, or (2) in a State that, under the authority of Section 177 of the Clean Air Act, has adopted and placed into effect the California standards to which this test group has been certified. Country-equipped vehicles designed to be operated on gasoline or flexible fuel are equipped with an emissions control device which the Administrator has determined will be significantly impaired by the use of leaded fuel. This certificate is issued subject to the conditions specified in 40 CFR 86.24. Country-equipped vehicles designed to be operated on gasoline or flexible fuel, otherwise covered by this certificate, which are driven outside the United States, Canada, Mexico, Japan, Australia, Taiwan and the British Islands will be prevented to have been approved on leaded fuel resulting in deterioration of the catalyst. If these vehicles are imported or offered for importation without removal of the catalyst, they will be converted to be within the coverage of this certificate unless included in a catalyst control program operated by manufacturer or a United States Government Agency and approved by the Administrator. In the case of completely assembled vehicles, this certificate of conformity covers only vehicles which are completely manufactured prior to January 1, 2012. Normally incompletely assembled vehicles (such as kits) which may be completed after this date, provided that the basic manufacturing (including installation of the emissions control control) was completed prior to January 1, 2012. This certificate does not cover vehicles sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.</small>			



Vehicles/Equipment

- Operational Requirements
 - Bi-Fuel or Dedicated
 - Fuel Capacity/Range
 - Functionality
 - Tank Placement



Vehicles/Equipment

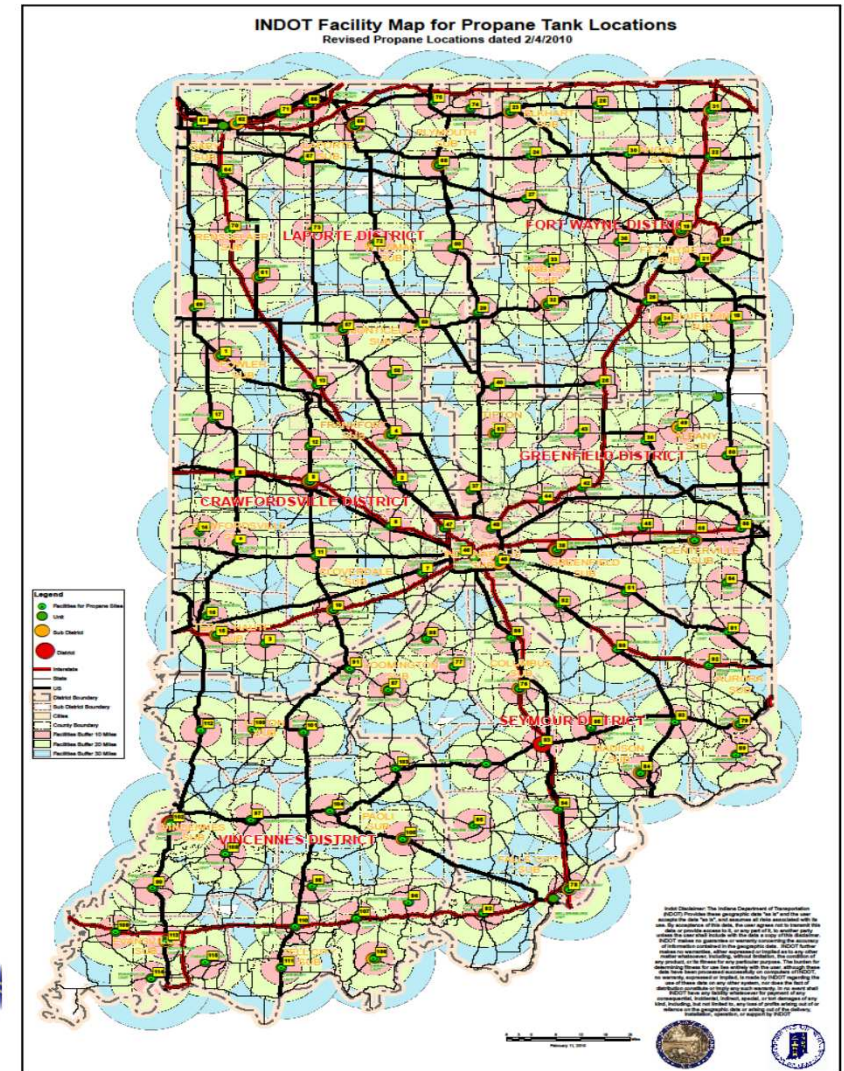
■ Specifications

- Contractor Responsibilities
- Pre Qualifications
- Compliance; EPA, CARB, FMVSS, NFPA 58
- Component Durability/Longevity
- Quality Workmanship
- Warranty
- Training/Support
- Accountability



Fueling Infrastructure

- Fueling the Fleet
 - Scope
 - Coverage
 - Accessibility



Fueling Infrastructure

- Business Requirements
 - Fuel Management Software
 - Internal Workflows
- Specifications
 - “Turn Key” Package?
 - Contractor Responsibilities
 - Accountability
- State Code Interpretation
 - NFPA, International Fire Code, and UL Listings



Fueling Infrastructure

- Fuel Management
 - Contract Development/Requirements
 - Pricing
 - Distribution
 - Inventory Management
 - Virtual vs. Physical



Implementation

- Develop Plan
 - Establish Achievable Goals
 - Minimize Operational Impact
 - Assign Responsibility
 - Integrate Training/Education



Sustainability

- Commitment
- “Champion”
- Accountability
- Recognition of Success
- Continue to Educate



MotorWeek
Television's Original Automotive Magazine



Expansion

- Future Opportunities
 - Funding – Grants/Tax Incentives
 - Replacement of Fleet
 - Technology Development - Pilot



Propane Overview

- 530 Existing Vehicles Converted
- 115 Fueling Sites
- 78 Vehicles to be converted by Fall, 2011
- 40 Dedicated Vehicles by Spring, 2012
- Projected Annual Fuel \$aving\$ Exceed \$1 Millon!



Compressed Natural Gas (CNG)

- 19 Kenworth T440 T/A Dumps
 - Cummins ISL CNG Engines (75DGE)
- Utilizing Commercial Infrastructure
- 50K Gallons/Year
- \$aving\$ - \$150K



Questions?

Joe Rudolph

Director, Division of Technical Services
Indiana Department of Transportation

317-232-5077

josephrudolph@indot.in.gov

