LIQUID PROPANE INJECTION APPLICATIONS

September 30, 2010

Thomas E. Arnold
Product Development & Commercialization
CleanFuel North America, Inc
Liquid Propane Injection Technology Enables

- **Commercial System Expectations**
  - Quality Design
  - Manufacture & Assembly
  - Regulatory Requirements
  - Maintenance & Repair

- **Uncompromised Functionality**
  - Same Power & Torque
  - Same Environmental Vehicle Performance

- **Reduced Dependency on Foreign Oil**
  - 90% of US supply is domestic
  - 55% from natural gas
  - 45% from refining crude
  - Readily available

- **Environmentally Friendly**
  - Reduction in GHG
  - Reduction in PM, HC, CO2, NOx

- **Sustainable Propane Transportation Fuel Market Economy**
System Description

– Fuel Delivery System

– Fuel Storage System

– Fuel Lines & Fittings
System Description

- Fuel Delivery System
  - Fuel Rail
  - Fuel Injectors
System Description

– Fuel Storage System

• Tank
• MultiValve
System Description
– Fuel Storage System
  • Baffle
  • Fuel Pump
System Description

Fuel Lines & Fittings

<table>
<thead>
<tr>
<th>Callout</th>
<th>Description</th>
<th>Qty</th>
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<tbody>
<tr>
<td>A</td>
<td>Fuel Tank Twin 16” x 34”</td>
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<tr>
<td>B</td>
<td>Fuel Fill Port and Line</td>
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<tr>
<td>C</td>
<td>Multivalve</td>
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<tr>
<td>D</td>
<td>Fill Line Fuel Filter</td>
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<tr>
<td>E</td>
<td>Fuel Tank Harness</td>
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<td>Powertrain Control Module</td>
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<td>G</td>
<td>Fuel Injector Harness</td>
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<td>H</td>
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<tr>
<td>I</td>
<td>Fuel Injectors</td>
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<td>J</td>
<td>Fuel Rail Supply/Return Lines</td>
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<td>Fuel Distribution Block</td>
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<tr>
<td>L</td>
<td>In Tank Liquid Fuel Pump</td>
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</tbody>
</table>
MARKET

- Type A School Bus
- Shuttle Bus
- Utility Van

G4500 Series 610 Cut Van
• Automotive Industry standards and processes;
  – Engineering & Design
  – Testing
  – Manufacturing

• Testing, Verification & Validation;
  – Engine Tests
  – Component Tests
  – Vehicle Tests