Turning Trap Grease into Gold

Trap Grease  -->  Brown Grease  -->  $$$ $
Plant Oil Powered Diesel Fuel Systems, Inc.

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Overview

• Introduction
• Trap waste collection
• Trap waste processing
• Uses for brown grease
• Brown grease sales
• Summary
Trap Waste Processing

- Grease standards
- Delivering from truck into system
- Heating, settling, and separation
- Draining
- Finishing and storing
Grease Standards

• Brown grease
  – Less than 50% FFA (though in practice, higher)
  – Less than 2% MIU

• Yellow grease
  – Less than 15 % FFA
  – Less than 2 % MIU
Trap Waste Collection

• Collecting trap waste
Delivery From Truck

• Trap waste is pumped from truck into cone-bottomed tank
Heating, Settling, and Separation

• Trap waste is heated to 165°F-185°F
• First separation causes water, trash, and large particulates to fall to the bottom of the cone-bottomed tank
Draining

• A valve at the bottom of the tank is opened and slurry is passed through an expanded metal screen into a waste tank
Finish and Storage

• Grease is placed in finish tank and heated again
• Final separation occurs and water/particulates drained
Brown Grease Plant

Screen Tank

Heating/Settling Tanks

Heating Elements

To heat source

Finish Tank
Uses for Brown Grease

• POP Diesel Fuel™

• Burner fuel

• Heavy fuel oil substitute
Vehicle Example 1
Vehicle Example 2
Emissions Testing

Canola Oil Emissions Testing Results
Testing by POP Diesel, PlantDrive and VO Control Systems on a 2002 VW Golf TDI at the National Center for Vehicle Emissions Control and Safety (EPA certified) on 19 Jan 07.

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<th></th>
<th>THC</th>
<th>CO</th>
<th>NOx</th>
<th>CO2x100</th>
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<tr>
<td>V100 (Canola)</td>
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<td>Diesel (ULSD)</td>
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<td>EPA Limit</td>
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POP Diesel Fuel™ Pricing

Price advantage of POP Diesel Fuel™

![Graph showing the price advantage of POP Diesel Fuel™ over #2 Diesel from May 2008 to January 2009. The graph illustrates a significant drop in price difference after August 2008.](image-url)
Savings per Vehicle

with Use of POP Diesel Fuel Fuel™

- Gallons of #2 diesel used per month = 1,000
- Price of #2 diesel per gallon = $2.09
- Price of POP Diesel Fuel™ = $1.09
- Savings per gallon with POP Diesel Fuel™ = $1.00
- Savings per month on 1,000 gallons = $1,000
Summary

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Questions and thank you!

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