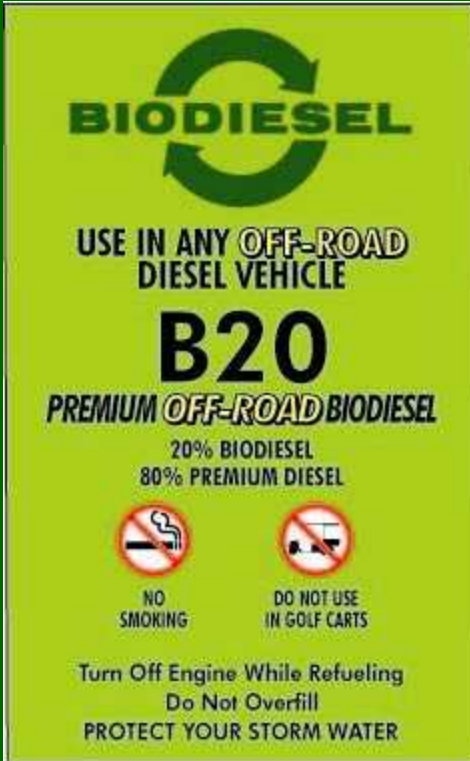


Universal Orlando B20

- Since March of 2007, all of Universal Orlando Resort's diesel equipment has been fueled with "Biodiesel B20," a mix of 20% Biodiesel and 80% petroleum diesel.





BIODIESEL

USE IN ANY **OFF-ROAD**
DIESEL VEHICLE

B20

PREMIUM OFF-ROAD BIODIESEL

20% BIODIESEL
80% PREMIUM DIESEL

 **NO SMOKING**  **DO NOT USE
IN GOLF CARTS**

Turn Off Engine While Refueling
Do Not Overfill
PROTECT YOUR STORM WATER



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Biodiesel Fuel

Biodiesel is:

- Fatty Acid Alkyl Ester made from vegetable oil
- More biodegradable than sugar
- Less toxic than salt
- EPA approved and controlled to ASTM standard

Biodiesel:

- Reduces emissions (B100 - carbon neutral)
- Reduces Green House Gases (GHG)
- Renewable fuel, grown and manufactured in the USA
- Generates US jobs
- Reduces our dependence on foreign oil
- Safer: higher flash point
- Better lubricity



Biodiesel Challenges

- Warranty
- Lease agreement
- Maintenance
- Fuel tank compatibility
- Fuel costs
- Supplier
- Fuel storage life
- Air permits
- Summary



Agriculture Commissioner
Charles Bronson

“Yes, if...” rather than “No,
because...”

Universal Diesel Fleet

- Many different makes and types of diesel engines
- Excellent opportunity to evaluate Biodiesel
- Equipment is used extensively each day





JAWS boats
Biodiesel fuel – an environmentally friendly, cleaner-burning fuel.





Comments from Users

- “I didn’t know we were using Biodiesel”
- “Can not tell any difference in pickup”
- “Smokes less, almost unnoticeable.”
- “Smell is much better.”
- “It might be a little quieter.”
- “No starting differences.”
- “No delivery problems.”



UO B20 GHG Reduction

- Diesel annual use
 - On-Road 40,729 Gallons
 - Off-Road 59,798 Gallons
 - Total 100,527 Gallons

- Emission Factor 10.15 kg CO2/gal

- Annual GHG 1,050,000 kg CO2

- B20 C02 Reduction x 15%

- Annual C02 Reduction 157,700 kg GHG Reduction

- Reduction of GHG = 158 Metric Tons

- This is equivalent to:
 - Planting 143 acres of trees, or
 - Removing 26 automobiles from the road



Summary

Universal Orlando President Bill Davis

- “We’ve switched to Biodiesel because it’s the right thing to do for our environment.”
- “Universal Orlando Resort is running smoother, cleaner, and *greener*, thanks to Biodiesel fuel.”



What's Next

VOLKSWAGEN **marine**
SUPERIOR TECHNOLOGY

SDI 60-4



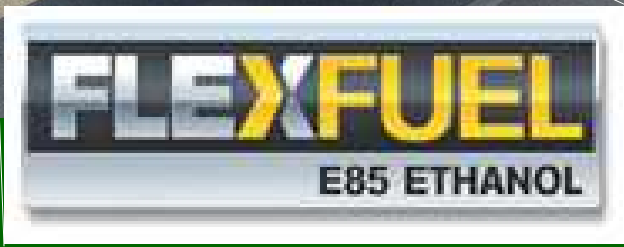
B20 → B50



That's Not All




E85 Fueled Equipment



e85
ethanol FLEX-FUEL

**USE IN FLEX FUEL
VEHICLE ONLY**

E85
85% ETHANOL
15% UNLEADED GASOLINE

 **NO SMOKING**  **DO NOT USE IN GOLF CARTS**

Turn Off Engine While Refueling
Do Not Overfill
PROTECT YOUR STORM WATER

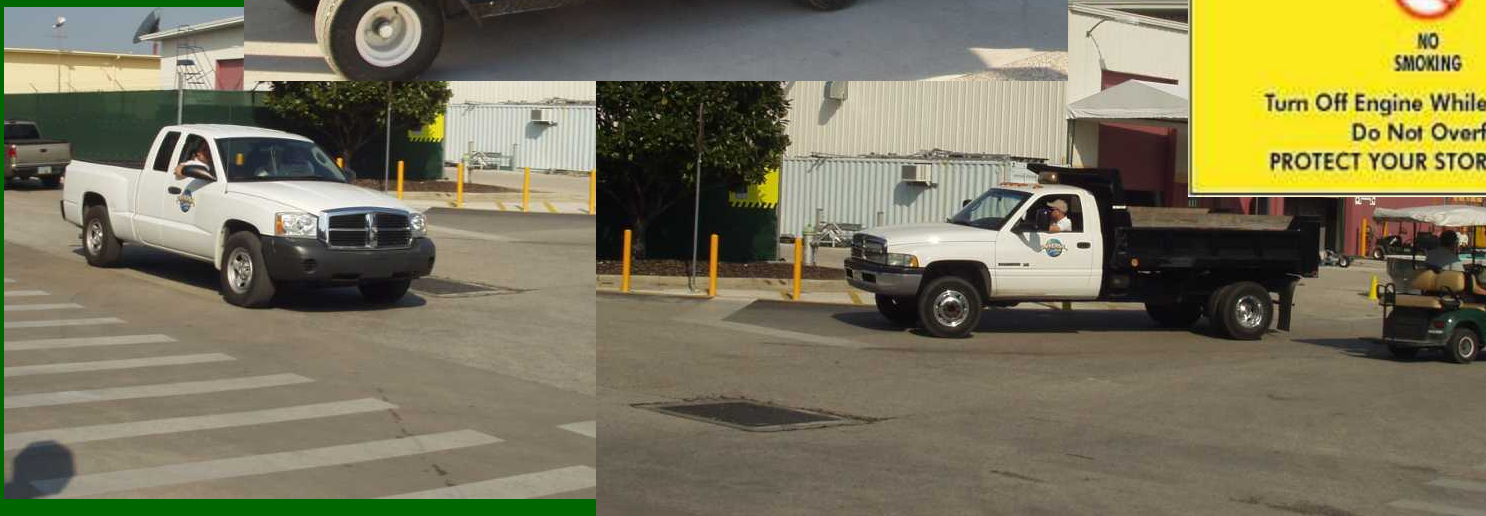


UO E85 GHG Reduction

- Gasoline annual use
 - E85 30,000 Gallons
- Emission Factor 8.87 kg CO₂/gal
- Annual E85 GHG 266,100 kg CO₂
- E10 CO₂ Reduction x 30%
- Annual CO₂ Reduction 79,830 kg GHG Reduction
- Reduction of GHG = 80 Metric Tons
- This is equivalent to:
 - Planting 50 acres of trees, or
 - Removing 13 automobiles from the road



E10 Fueled Equipment



USE IN ANY GASOLINE VEHICLE

E10

**UNLEADED
10% ETHANOL
90% UNLEADED GASOLINE**



**NO
SMOKING**

**Turn Off Engine While Refueling
Do Not Overfill
PROTECT YOUR STORM WATER**



UO E10 GHG Reduction

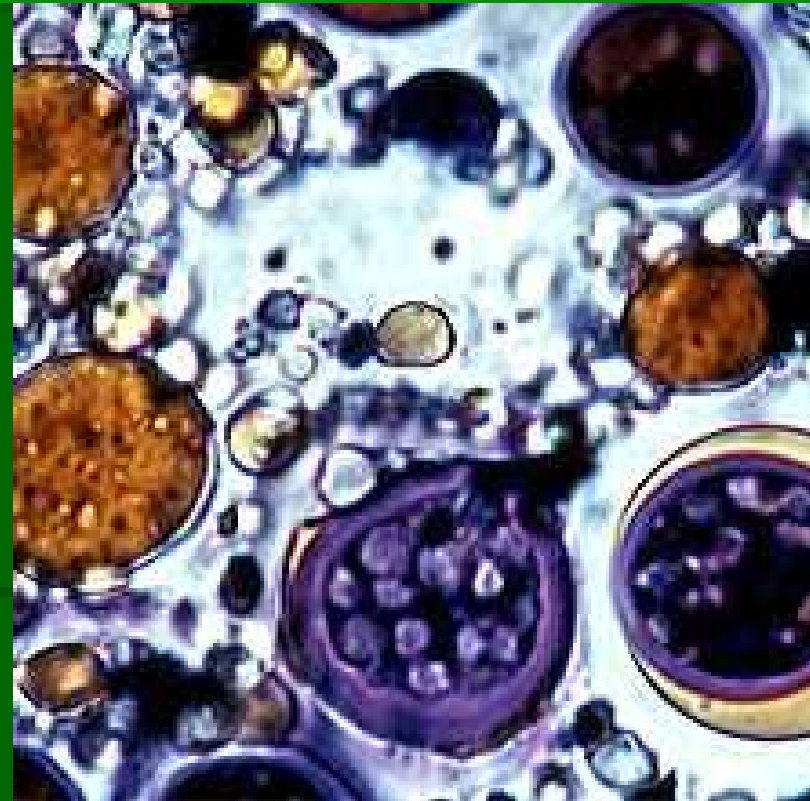
- Gasoline annual use
 - E10 120,000 Gallons
- Emission Factor 8.87 kg CO₂/gal
- Annual E10 GHG 1,064,400 kg CO₂
- E10 CO₂ Reduction x 2%
- Annual CO₂ Reduction 21,288 kg GHG Reduction
- Reduction of GHG = 21 Metric Tons
- This is equivalent to:
 - Planting 19 acres of trees, or
 - Removing 4 automobiles from the road



Request of the Community



Florida Grown Biodiesel Feedstock



Florida Grown Ethanol Feedstock



Environmental Sustainability



UN
Green Council



Energy Group

- Bio-Fuels
 - Universal's use of Biodiesel and Ethanol
 - Procurement of FlexFuel and Diesel vehicles
 - Expand the use of Bio-Fuels to others
- Power
 - Power - education and conservation
 - Power management
 - Explore GREEN power generation



Procurement

- Incorporate GREEN into the day-to-day considerations of procurement activities
 - Examples include:
 - Lighting
 - Paper products
 - Local vendors – less shipping
 - Support “GREEN” vendors
 - Recyclable products



Recycling

- Improve existing recycling programs
- Expand recycling efforts both Back of House and Front of House
- Explore food waste stream opportunities



Construction

- **Evaluate new construction**
 - **Energy efficient HVAC**
 - **Insulation**
 - **Plumbing fixtures – reduce water use**
 - **Energy efficient lighting**
 - **Local sourced products**



Awareness

- Employee
 - U-News, Tech Soup, EHS News
 - GREEN related TSAT, Productivity Plus
 - Energy conservation suggestions
 - Promote environmental responsibility
- Public
 - Conferences
 - Local companies
 - Government GREEN programs



Contact info

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