BIODIESEL

Biodiesel is a domestically produced, clean-burning, renewable fuel that can be manufactured from vegetable oils, animal fats, or recycled restaurant grease for use in diesel vehicles or any equipment that operates on diesel fuel. Using biodiesel as a vehicle fuel increases energy, security, improves air quality and the environment, and provides safety benefits.

BIODIESEL BASICS:

Biodiesel is a renewable, biodegradable fuel manufactured domestically from vegetable oils, animal fats, or recycled restaurant grease. Biodiesel meets both the biomass-based diesel and overall advanced biofuel requirement of the Renewable Fuel Standard. Renewable diesel, also called “green diesel,” is distinct from biodiesel.

Biodiesel is a liquid fuel often referred to as B100 or neat biodiesel in its pure, unblended form. Like petroleum diesel, biodiesel is used to fuel compression-ignition engines. Biodiesel performance in cold weather depends on the blend of biodiesel, the feedstock, and the petroleum diesel characteristics.

MORE INFORMATION ON BIODIESEL:

Can Biodiesel Be Blended?

Biodiesel can be blended and used in many different concentrations, including B100 (pure biodiesel), B20 (20% biodiesel, 80% petroleum diesel), B5 (5% biodiesel, 95% petroleum diesel), and B2 (2% biodiesel, 98% petroleum diesel). B20 is a common biodiesel blend in the United States.

How Well Does Biodiesel Perform?

Engines operating on B20 exhibit similar fuel consumption, horsepower, and torque to engines running on conventional diesel. Biodiesel also has a higher cetane number (a measure of the ignition value of diesel fuel) and higher lubricity (the ability to lubricate fuel pumps and fuel injectors) than conventional diesel fuel, so it combusts easier and lubricates the fuel system better. Generally, a blend of diesel fuel and biodiesel, such as B20, will have a slightly lower energy content than petroleum diesel, although the impact on fuel economy is insignificant.

BIODIESEL BENEFITS:

Energy Security and Balance

- Biodiesel is produced in the United States and used in conventional diesel engines, directly substituting for or extending supplies of traditional petroleum diesel
- Soybean biodiesel has a positive energy balance, meaning that soybean biodiesel yields 4.56 units of energy for every unit of fossil energy consumed over its life cycle

Engine Operation

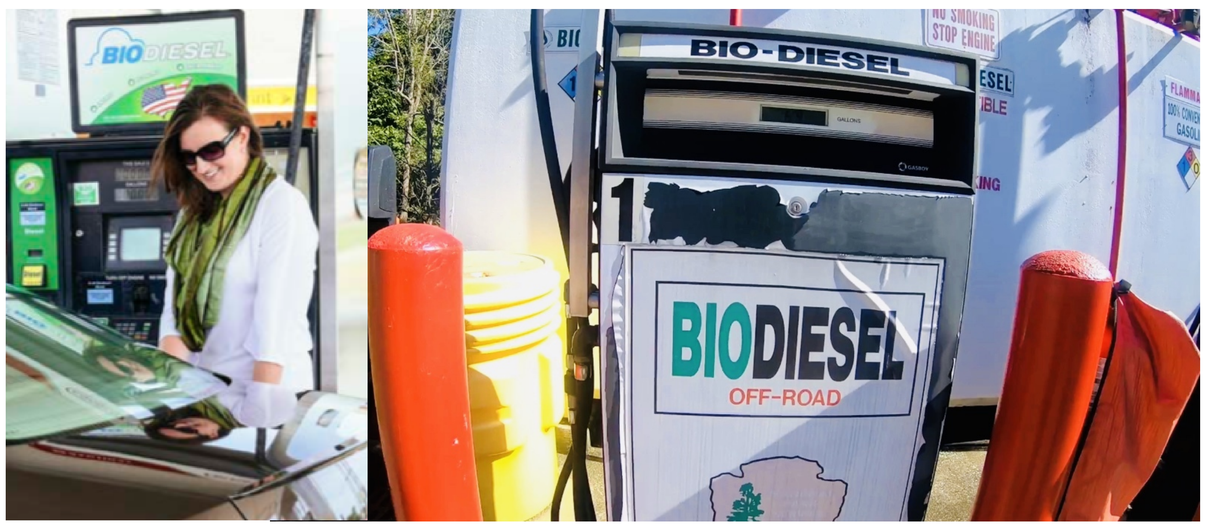
- Biodiesel improves fuel lubricity and raises the ocetane number of the fuel. Diesel engines depend on the lubricity of the fuel to keep moving parts from wearing prematurely
- Biodiesel can increase fuel lubricity to diesel fuels at blend levels as low as 1%

Safety

- Biodiesel in its pure, unblended form causes far less damage than petroleum diesel if spilled or released to the environment
- It is safer than petroleum diesel because it is less combustible
- Biodiesel is safe to handle, store, and transport

Air Quality

- Selective catalytic reduction (SCR) technology in diesel vehicles, which reduces nitrogen oxide (NOx) emissions to near-zero levels
- Using biodiesel reduces life cycle emissions because carbon dioxide released from biodiesel combustion is offset by the carbon dioxide absorbed from growing soybeans or other feedstocks used to produce the fuel
- Life cycle analysis found that B100 use reduces carbon dioxide emissions by 74% compared with petroleum diesel



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