

Whole Cycle Tuesday

Bottom Line

Biodiesel is not a future concept, it's a current, working solution that reduces emissions while using existing diesel infrastructure.

Whether derived from crops or recycled cooking oil, biodiesel provides a renewable alternative that supports domestic production, waste diversion, and cleaner combustion.

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"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share." — Lady Bird Johnson

Biodiesel: What It Is and How It's Used Today

What Is Biodiesel?

Biodiesel is a renewable fuel made from natural oils and fats. Common feedstocks include:

- Soybean oil
- Used cooking oil (yellow grease)
- Animal fats
- Canola oil
- Other vegetable oils

Through a chemical process called transesterification, these oils and fats are converted into fatty acid methyl esters (FAME), the technical name for biodiesel.

The key advantage? Biodiesel can be used in conventional diesel engines with little or no modification.

Biodiesel vs. Renewable Diesel

While often grouped together, biodiesel and renewable diesel are not identical. Biodiesel is typically blended with petroleum diesel and labeled by blend level:

- **B5** – 5% biodiesel
- **B20** – 20% biodiesel
- **B100** – 100% biodiesel

B20 is one of the most common blends used today because it balances performance, emissions reductions, and cold-weather operability.

How Biodiesel Is Used Today

Transportation Fleets

Municipal fleets, school buses, long-haul trucks, and delivery vehicles frequently use biodiesel blends. Many states have adopted biodiesel requirements or incentives to support renewable fuel use.

Construction & Heavy Equipment

Diesel-powered equipment, including loaders, excavators, and generators can operate on biodiesel blends. For industries with significant fuel consumption, this provides an immediate way to reduce lifecycle greenhouse gas emissions without replacing equipment.

Agriculture

Farm equipment often runs on biodiesel, particularly in regions where soybean production supports local feedstock supply.

Heating Oil

In the Northeast, biodiesel is blended into heating oil, sometimes marketed as "Bioheat® fuel," reducing emissions from residential and commercial heating systems.

