



Every™ Advantage.

Biodiesel Fuel For Cummins Engines.



What Is Biodiesel?

Biodiesel is a methyl/ethyl ester fuel that is derived from organic sources, most commonly from soybeans in the United States and rapeseed in Europe. Because it uses renewable resources as its origin, biodiesel can help reduce the world's dependence on petroleum-based diesel fuel. It is biodegradable and nontoxic, and it reduces carbon monoxide, unburned hydrocarbons and particulate matter in the atmosphere. It also reduces carbon dioxide emissions in a life-cycle basis.

Biodiesel is most often blended with petroleum-based fuel, with the percentage identified in its name. B5 is fuel with 5% biodiesel and 95% petroleum-based diesel. B20 is a blend of 20% biodiesel and 80% diesel.

Biodiesel has physical and chemical properties different from those of traditional diesel fuel. For instance, it has a higher cetane number, no sulfur and no aromatics. Blends up to B20 are fully compatible with many Cummins engines and their aftertreatment systems. Biodiesel also has a higher lubricity than diesel fuel.

In order for Cummins to approve biodiesel use in its engines (with the full warranty in effect), there had to be thorough testing to gain scientific evidence and to ensure that the fuel is being produced to stringent quality standards.

How Is The Quality Measured?

In the United States there is a National Biodiesel Accreditation Commission, which has set up a quality systems program for both producers and certified marketers of biodiesel fuel. This is known as BQ-9000® accreditation. Cummins requires that the biodiesel fuel blend be purchased from a BQ-9000 certified marketer (distributor). The B100 biodiesel fuel used in the blend must be sourced from a BQ-9000 accredited producer. This ensures that it will meet ASTM D6751* and ASTM D7467** standards. A list of BQ-9000 certified marketers and accredited producers can be found at www.bq-9000.org.

In Europe, specifications are issued under EN 14214, published by the European Committee for Standardization.

*Revised to include B100 cold soak test requirement.

**New specification including an oxidation stability requirement for blends B6-B20.



Making The Switch To Biodiesel.

The first step is to confirm that your Cummins engine is approved for biodiesel use. Then, before you pump the first gallon into your tank, you need to install a new fuel filter(s). The first two fuel filter changes will have to be performed at half the standard interval; after that you can return to the normal change interval. Biodiesel doesn't have as long of a shelf life as petrodiesel, and it should be used within six months of its manufacture. Equipment should not be stored longer than three months with biodiesel blends in the fuel system. Complete details can be found in Fuels for Cummins Engines – Service Bulletin 3379001, which is available through Cummins dealers and distributors and at quickserve.cummins.com.

You should also contact your equipment manufacturer to make sure that all of the supplied components are compatible, including fuel tanks and lines.

Cummins-Approved Biodiesel Blends.

- **B5** – Any Cummins diesel can be run safely on B5 biodiesel blend and be fully covered under its original warranty.
- **B20** – In the on-highway market, Cummins MidRange and Heavy-Duty engines that are certified to EPA '02 emissions standards or later are approved for the use of B20 biodiesel, along with ISL, ISC and ISB engines certified to Euro III or later.

In off-highway use, B20 is approved for Tier 3/Stage IIIA or later QSX, QSM, QSL, QSC, QSB6.7, QSB4.5 and QSB3.3 engines, along with QSM Marine and QSM G-Drive engines.

In High-Horsepower use, B20 is approved for engines built after Jan. 1, 2008, including QSK78, QSK60, QSK50, K2000E, K50, QSK45, QSK38, K1500E, K38, QST30, QSK23, QSK19 and K19; Marine engines include QSK60, QSK50, K50, QSK45, QSK38, K38, QSK19 and K19.

For Cummins engines in Ram trucks, B20 may be used in municipal, government and commercial fleets only. This applies to selected model-year vehicles. Please consult an authorized Ram service center for specific requirements and approved vehicle models.



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