



## Biodiesel Myths and Facts

**Myth:** Biodiesel is an experimental fuel and has not been thoroughly tested.

**Fact:** Biodiesel is one of the most thoroughly tested alternative fuels on the market. A number of independent studies have been completed with the results showing biodiesel performs similar to petroleum diesel while benefiting the environment and human health compared to diesel. That research includes studies performed by the U.S. Department of Energy, the U.S. Department of Agriculture, Stanadyne Automotive Corp. (the largest diesel fuel injection equipment manufacturer in the U.S.), Lovelace Respiratory Research Institute, and Southwest Research Institute. Biodiesel is the first and only alternative fuel to have completed the rigorous Health Effects testing requirements of the Clean Air Act. Biodiesel has been proven to perform similarly to diesel in more 50 million successful road miles in virtually all types of diesel engines, countless off-road miles and countless marine hours. Currently more than 300 major fleets use the fuel.

**Myth:** Biodiesel does not perform as well as diesel.

**Fact:** One of the major advantages of biodiesel is the fact that it can be used in existing engines and fuel injection equipment with little impact to operating performance. Biodiesel has a higher cetane number than U.S. diesel fuel. In more than 50 million miles of in-field demonstrations, B20 showed similar fuel consumption, horsepower, torque, and haulage rates as conventional diesel fuel. Biodiesel also has superior lubricity and it has the highest BTU content of any alternative fuel (falling in the range between #1 and #2 diesel fuel).

**Myth:** Biodiesel doesn't perform well in cold weather.

**Fact:** Biodiesel will gel in very cold temperatures, just as the common #2 diesel does. Although pure biodiesel has a higher cloud point than #2 diesel fuel, typical blends of 20% biodiesel are managed with the same fuel management techniques as #2 diesel. Blends of 5% biodiesel and less have virtually no impact on cold flow.

**Myth:** Biodiesel causes filters to plug.

**Fact:** Biodiesel can be operated in any diesel engine with little or no modification to the engine or the fuel system. Pure biodiesel (B100) has a solvent effect, which may release deposits accumulated on tank walls and pipes from previous diesel fuel use. With high blends of biodiesel, the release of deposits may clog filters initially and precautions should be taken to replace fuel filters until the petroleum build-up is eliminated. This issue is less prevalent with B20 blends, and there is no evidence that lower-blend levels such as B2 have caused filters to plug.

**Myth:** A low-blend of biodiesel in diesel fuel will cost too much.

**Fact:** Using a 2% blend of biodiesel is estimated to increase the cost of diesel by 2 or 3 cents per gallon, including the fuel, transportation, storage and blending costs. Any increase in cost will be accompanied by an increase in diesel quality since low-blend levels of biodiesel greatly enhance the lubricity of diesel fuel.

**Myth:** Biodiesel causes degradation of engine gaskets and seals.



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**Fact:** The recent switch to low-sulfur diesel fuel has caused most Original Equipment Manufacturers (OEMs) to switch to components that are also suitable for use with biodiesel. In general, biodiesel used in pure form can soften and degrade certain types of elastomers and natural rubber compounds over time. Using high percent blends can impact fuel system components (primarily fuel hoses and fuel pump seals) that contain elastomer compounds incompatible with biodiesel, although the effect is lessened as the biodiesel blend level is decreased. Experience with B20 has found that no changes to gaskets or hoses are necessary.

**Myth:** No objective biodiesel fuel formulation standard exists.

**Fact:** The biodiesel industry has been active in setting standards for biodiesel since 1994 when the first biodiesel taskforce was formed within the American Society for Testing and Materials (ASTM). ASTM approved a provisional standard for biodiesel (ASTM PS 121) in July of 1999. The final specification (D-6751) was issued in December 2001. Copies of specifications are available from ASTM at <http://www.astm.org>.

**Myth:** Biodiesel does not have sufficient shelf life.

**Fact:** Most fuel today is used up long before six months, and many petroleum companies do not recommend storing petroleum diesel for more than six months. The current industry recommendation is that biodiesel be used within six months, or reanalyzed after six months to ensure the fuel meets ASTM specifications (D-6751). A longer shelf life is possible depending on the fuel composition and the use of storage-enhancing additives.

**Myth:** Engine warranty coverage would be at risk.

**Fact:** The use of biodiesel in existing diesel engines does not void parts and materials workmanship warranties of any major US engine manufacturer.

**Myth:** The U.S. lacks the infrastructure to prevent shortages of the product.

**Fact:** There are presently more than 14 companies that have invested millions of dollars into the development of the biodiesel manufacturing plants actively marketing biodiesel. Based on existing dedicated biodiesel processing capacity and long-term production agreements, more than 200 million gallons of biodiesel capacity currently exists. Many facilities are capable of doubling their production capacity within 18 months.

**Myth:** There is no government program to support development of a biodiesel industry.

**Fact:** The U.S. Department of Agriculture announced in January 2001 the implementation of the first program providing cost incentives for the production of 36 million gallons of biodiesel. Bills supporting the use of biodiesel and ethanol were also introduced to the U.S. Congress in 2003, including one that would set a renewable standard for fuel in the U.S. and one that would give biodiesel a partial fuel excise tax exemption. More than a dozen states have passed favorable biodiesel legislation.



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More information is available on the NBB Web site at [www.biodiesel.org](http://www.biodiesel.org).