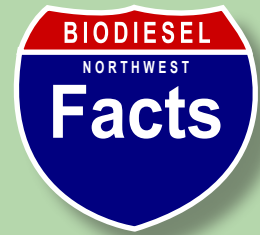


BIODIESEL

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Engines: Fuel & Warranty Issues

ACCEPTANCE AS A FUEL

Engine manufacturers explain that fuel is not a warranty issue. Still, they typically define what fuel the engine was designed for and recommend which fuel to use. As biodiesel has gained in popularity, Original Equipment Manufacturers (OEMs) have been testing their diesel equipment with different blends of biodiesel. OEMs have agreed that a blend of 5% biodiesel and 95% petroleum diesel (B5) is approved as a recommended fuel, provided that the biodiesel fully adheres to the quality standards specified by the American Society of Testing and Materials (ASTM) D 6751. Note that all commercially sold biodiesel has been rigorously tested to assure that it meets ASTM standards.

While all major engine companies have approved B5, a number have taken the next step and have accepted B20 as a recommended fuel for their engines. These include Cummins Power Systems, Detroit Diesel, International Truck and Engine Corporation and others.¹

ABOUT WARRANTIES

Whether or not a biodiesel blend is “recommended” is separate from the question of whether the use of biodiesel affects engine warranty coverage. Manufacturer warranties do not cover fuel, whether it’s regular diesel, ultra low sulfur diesel or biodiesel. Warranties only cover the manufacturers’ own workmanship and materials.

According to the National Renewable Energy Laboratory, “OEMs provide a material and workmanship warranty on their products. In general, use of a particular fuel should have no effect on the materials and workmanship warranty. Such warranties do not cover damage caused by external conditions, such as fuel. Thus, if an engine using biodiesel experiences a failure unrelated to the biodiesel use, it must be covered by the OEM’s warranty. Federal law prohibits the voiding of a warranty just because biodiesel was used – it has to be the cause of the failure.² If an engine experiences a failure caused by biodiesel

(or any other external condition, such as bad petroleum diesel fuel), it will not be covered by the OEM’s warranty.”

Just as with petroleum diesel, reputable biodiesel suppliers stand behind their product. If a problem is caused by defective biodiesel, the fuel supplier will generally support the user in correcting the problem. Be sure to check with your supplier about their product guarantee policies. Also, since biodiesel is new to many mechanics and repair shops, it is occasionally blamed for problems that have nothing to do with the fuel. Again, your fuel supplier can be of assistance in working through these issues.

MANUFACTURER POSITIONS

The following are excerpts from some manufacturer’s recent position statements on biodiesel:

| Manufacturers | Position |
|---|---|
| Engine Manufacturers Assn. | Up to 5% biodiesel, must meet ASTM D6751 |
| New Holland | Approved up to 100% biodiesel (B100) in all equipment, including electronic injection engines with common rail technology. Must meet ASTM D 6751. |
| Cummins Power Systems | Approved 20% biodiesel (B20) for a wide range of on-highway vehicles including medium and heavy duty trucks, motor homes, school buses, fire and emergency vehicles, and urban buses and shuttles. Formal, written warranty support for B20 for 2002 and later emissions-compliant ISX, ISM, ISL, ISC and ISB engines, including recently released 2007 products. All engines approved for up to 5% biodiesel, must meet ASTM D6751 |
| Detroit Diesel | Approved up to 20% biodiesel. Must meet DDC specific diesel fuel specification |
| International Truck & Engine Corporation and others | Approved up to 20% biodiesel, must meet ASTM D 6751 |

| Fuel Injection Equipment | Position |
|--------------------------|---|
| Bosch | Up to 5% biodiesel, must meet EN 14214 |
| Delphi | Up to 5% biodiesel, must meet ASTM D6751 |
| Stanadyne | Up to 20% biodiesel, must meet ASTM D6751 |

¹ Iowa Department of Agriculture, Office of Renewable Fuels and Co-products. National Biodiesel Board website, www.biodiesel.org/resources/fuelfactsheets/standards_and_warranties.shtm

² Magnuson-Moss Warranty Act, www.ftc.gov/bcp/conline/pubs/buspubs/warranty.shtm

Go to www.nwbiofuels.org for information on: Biodiesel distributors • Maintenance procedures • Engine performance • Fleet success stories • Using B20 and B99 blends • Fuel quality • Air quality and health benefits • Engine warranties

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