Fleetguard Products are B20 Compatible

Fleetguard requires that all biodiesel fuel blends be comprised of petrodiesel meeting ASTM D975, and B100 meeting either ASTM D6751 or EN14214.

With increased interest in reducing the use of petroleum distillate based fuels, many governments and regulating bodies encourage the use of biofuels, such as biodiesel.

Biodiesel is the most accepted and widely used biofuel today, in part because of the ability to operate in standard diesel engines with little or no modifications. Not only is biodiesel environmental friendly, it also provides horsepower, torque, and mileage similar to conventional diesel, as well as improved lubricity.

To meet the growing customer demand for filtration products compatible with biodiesel, Fleetguard certifies many of their products for use with Biodiesel blends. The information provided should be used as a guideline to determine compatibility of Fleetguard products.

Using Biodiesel

- To successfully use biodiesel, it is imperative that the fuel be of high quality and meet or exceed the specifications outlined below, or filtration performance may be negatively impacted and engine damage will occur.

The Biodiesel must meet requirements of BQ-9000

- BQ9000 is a quality certification that certifies biodiesel suppliers that provide quality biodiesel meeting the ASTM D 6751 specification. It is a unique combination of the ASTM standard for biodiesel, ASTM D6751, and a quality systems program that includes storage, sampling, testing, blending, shipping, distribution, and fuel management practices.
- Fleetguard requires that all biodiesel fuel blends be comprised of petrodiesel meeting ASTM D975, and B100 meeting either ASTM D6751 or EN14214.
- For biodiesel blends above B5 and up to B20, Fleetguard requires that the fuel meet the specifications outlined in ASTM D7467. These specifications are summarized in Table 1: Summary of ASTM D7467 Requirements for B6 to B20 Biodiesel Blends.

Biodiesel Use & Fleetguard Warranty

Fleetguard standard product warranty applies in the event that all of the specifications included in this bulletin are met. Engine damage, service issues, and/or performance issues determined by Fleetguard to be caused by the use of biodiesel fuel not meeting the specifications outlined in this Service Bulletin and supported by the **government standards** and local regulating authorities are not considered to be defects in product material or workmanship and are not covered under Fleetguard warranty.

Limitations:

Fleetguard is not responsible for reduced service life or failure resulting from unintended applications, misuse, faulty installations, alteration, neglect, accident, or conditions resulting from actions outside Fleetguards control, including but not limited to contaminated fluid conditions. Fleetguard is not responsible for downtime, loss of income, living expenses, or other incidental or consequential damages. This Limited Warranty is the sole warranty made by Fleetguard. Fleetguard MAKES NO OTHER WARRANTIES EXPRESSED OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Specifications

Item	Performance Characteristics	Requirements	Test Procedure
	D1 Blends	D2 Blends	
Flash Point, °C minimum	38	52	ASTM D93
Water and sediment volume %, maximum	0.05	0.05	*ASTM D2709*
Physical Distillation, T90 °C, maximum	343	343	ASTM D86
Kinematic Viscosity, cST at 40°C	1.3 – 4.1	1.9 – 4.1	ASTM D445
Ash, mass %, maximum	0.01	0.01	ASTM D482
Sulfur, st %, maximum	Not to exceed 5000ppm	Not to exceed 5000ppm	ASTM D5453, D2622, OR D129, depending on sulfur content
Copper strip corrosion rating, maximum	Number 3	Number 3	ASTM D130
Cetane number minimum, [1]	40	40	ASTM 613
Cloud Point [2]	Per foot note	Per foot note	ASTM D2500, D4539, D6371
Ramsbottom carbon residue on 10% distillation residue, wt %, maximum	0.15	0.35	ASTM D524
Lubricity, HFRR at 60°	520	520	ASTM D6079
Biodiesel content % (V/V)	6-20	6-20	D7371
Oxidation stability, induction time, hours minimum	6	6	EN14112 (Rancimat)
Cetane index, minimum	40	40	D976-80
Aromaticity, %vol, maximum	35	35	D1319-03

[1] Low ambient temperatures, as well as operation at high altitudes may require the use of fuels with higher cetane ratings.

[2] The maximum cloud point temperature shall be equal to or lower than the tenth percentile minimum ambient temperature in the geographical area and seasonal time frame as defined by ASTM DA9975 975. D975

For additional information, reference:

- 3379001-17 Cummins® Service Bulletin: Fuels for Cummins Engines
- www.biodiesel.org > Market Segments > Fleets