

## **Technical Recommendations for B20 Fleet Use Based on Existing Data** **B20 Fleet Evaluation Team: June 2005**

Biodiesel is the pure, or 100 percent, biodiesel fuel. It is referred to as B100 or “neat” biodiesel.

A biodiesel blend is pure biodiesel blended with petrodiesel. Biodiesel blends are referred to as BXX. The XX indicates the amount of biodiesel in the blend (i.e., a B20 blend is 20 percent by volume biodiesel and 80 percent by volume petrodiesel ).

**Ensure the biodiesel meets the ASTM specification for pure biodiesel (ASTM D 6751) before blending with petrodiesel.** Purchase biodiesel and biodiesel blends only from companies that have been registered under the BQ-9000 fuel quality program.

**Ensure the B20 blend meets properties for ASTM D 975, Standard Specification for Diesel Fuel Oils or the ASTM specification for B20 once it is approved.**

**Ensure your B20 supplier provides a homogenous product.**

**Avoid long term storage of B20 to prevent degradation.** Biodiesel should be used within six months.

**Prior to transitioning to B20, it is recommended that tanks be cleaned and free from sediment and water.** Check for water and drain regularly if needed. Monitor for microbial growth and treat with biocides as recommended by the biocide manufacturer. See the NREL Biodiesel Storage and Handling Guidelines for further information <http://www.nrel.gov/vehiclesandfuels/npcf/pdfs/tp36182.pdf>.

**Fuel filters on the vehicles and in the delivery system may need to be changed more frequently upon initial B20 use.** Biodiesel and biodiesel blends have excellent cleaning properties. The use of B20 can dissolve sediments in the fuel system and result in the need to change filters more frequently when first using biodiesel until the whole system has been cleaned of the deposits left by the petrodiesel.

**Be aware of B20’s cold weather properties and take appropriate precautions.** When operating in winter climates, use winter blended diesel fuel. If B20 is to be used in winter months, make sure the B20 cloud point is adequate for the geographical region and time of year the fuel will be used.

**Perform regularly scheduled maintenance** as dictated by the engine operation and maintenance manual. If using B20 in seasonal operations where fuel is not used within 6 months, consider storage enhancing additives or flushing with diesel fuel prior to storage.

These recommendations on use of B20 are preliminary and are not provided to extend or supplant warranty limitation provided by an individual engine or equipment supplier. Use of B20 blends is solely at the discretion and risk of the customer and any harm effect caused by the use of B20 are not the responsibility of the engine or equipment maker.

### B20 Fleet Evaluation Team Members

Cummins, John Deere, International Truck and Engine Corp, DaimlerChrysler, Caterpillar, Ford Motor Company, General Motors, Department of Defense, Siemens, Delphi Automotive Systems, Volkswagen, Engine Manufacturers Association, MARC-IV Consulting, ASG Renaissance, Bosch, FleetGuard, NREL, BMW of North America, Mack Trucks, Stanadyne Automotive Corporation, Suncor, CNH Global, Parker-Hannifin-Racor Division, and DENSO International America.