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# **Key Benefits in Using Ethanol-Diesel Blends**

### Range of Ethanol Diesel Fuels in Program

#### **Ethanol-Diesel Fuel**

7.7 vol% Fuel Ethanol

0.6 vol% Additive

91.7 vol% Regular Diesel

#### **Ethanol-Biodiesel-Diesel Fuel**

7.7 vol% Fuel Ethanol

0.6 vol% Additive

20.0 vol% Biodiesel

71.7 vol% Regular Diesel













## Summary

- Verified Ethanol-Diesel blends are fully compatible with at least B20
- Quantified Ethanol-Diesel blends consistently provide benefits regarding the key emissions of PM and NOx vs. "cleanest" ULSD base fuel on a variety of heavy duty engines
- Demonstrated renewable fuel combinations can be complementary
  - B12.3 and B20 can boost PM reduction synergistically
  - Increased NOx emissions can be ameliorated
- Established after treatment devices with Ethanol-Diesel consistently provide synergistic emissions benefits for all regulated emissions
- Determined Ethanol-Diesel and Ethanol-Biodiesel blends respond to cold flow improver technology









