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**EFFECT OF BIODIESEL IMPURITIES ON FILTERABILITY AND PHASE
SEPARATION FROM BIODIESEL AND BIODIESEL BLENDS**

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Biodiesel is gaining importance as a complement to the supply of diesel fuel for compression ignition engines. Diesel engines continue to be the dominant source of power for commercial transportation. Because of their superior energy efficiency they are expected to make an even greater contribution in the future with a growing contribution to the enormous passenger car application.

Biodiesel is produced by transesterification of natural triglycerides with alcohol, primarily methyl alcohol. The resulting biodiesel product consists of a mixture of compounds primarily the methylesters of the fatty acid moieties in the triglycerides. In addition to the methyl esters, other compounds can be present. Among these is a family of impurities referred to as total glycerin impurities. The total glycerin impurities consist of free glycerin, tri glycerides, diglycerides, and monoglycerides. These are reported as their weight percent based on glycerin content (hence total glycerin). Published biodiesel specifications place a limit on the total glycerin impurities.

The phase separation of biodiesel can exhibit time temperature effects that are different from that of typical diesel fuels. These time temperature effects can affect the filtration characteristics of both biodiesel and biodiesel blends. This paper reports experience from field performance and laboratory evaluation of different biodiesel and biodiesel/diesel fuel blends. Differences in performance are related to differences in impurity levels in biodiesel and biodiesel/diesel fuel blends.