

British Bio-diesel UK 2006

Scania's Green Light for 100 Percent Renewable Fuel Engines

Scania is meeting the increased demand for engines that can run on renewable fuels and is paving the way now for operation on 100-percent RME, Rapeseed Methyl Ester.



After completing long-term tests, Scania can now guarantee operating reliability on 100 percent RME for all its trucks with engines featuring unit injectors.

This means that most Scania trucks built during the past eight years - more than 300,000 vehicles - are able to reduce their net contribution of carbon dioxide to the atmosphere

RME is a fuel with diesel-like properties that is made from rapeseed oil in a chemical process. It can be used as a fuel in Scania's diesel engines without any modifications at all. The fuel is renewable and thus makes no net contribution to carbon dioxide emissions.

Compared with diesel, rapeseed fuel has a somewhat lower energy content, which in turn means slightly higher fuel consumption and lower engine power output.

Scania's own field and laboratory tests show that RME has somewhat higher emissions of nitrogen oxides (NOx), while emissions of carbon monoxide and soot particles are lower than for diesel

The biggest obstacle for RME appears to be that rapeseed cultivation capacity is insufficient to cover the transport industry's considerable needs.

"Calculations in Europe show that utilisation of all land available for

rapeseed cultivation within the EU would result in fuel production to meet no more than 10-15 percent of the demand for commercial vehicle fuel requirements," says Scania's engine development manager, Jonas Hofstedt.

Against this background, a standardised blend of 5 percent RME in diesel fuel is at present the most viable prospect today from the environmental and economic viewpoints.

"From the Swedish viewpoint, it is therefore highly positive that the government has set a target for permitting a 3-percent blend of RME in diesel fuel, and in the longer term to increase this to 5 percent, which is standard practice in Europe," adds Hofstedt.

Since RME has higher viscosity and greater density than diesel fuel, more frequent oil-change intervals are required to ensure that the engine oil does not become diluted.

As an alternative to running on 100-percent RME, Scania has already previously guaranteed operating reliability with RME blends of up to 5 percent in regular diesel fuel.

"The comprehensive tests we have conducted show that the quality of RME as a fuel is decisive for the engine's performance and operating reliability," explains Jonas Hofstedt.

One condition is therefore imposed, that the RME used must meet the applicable European standards, EN14212 for 100-percent use or the regular diesel standard EN590 for a 5-percent blend.

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31/05/2006
