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Project

Titel: Performance of engines of industrial and agricultural machinery (emission standard EU TIER IV) operated on Biodiesel (B100)

Project Number: **550_2013_2**

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Project Status: Project in progress

Contact: AGQM Office, Berlin

Project Supervisor: University of Rostock

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Outline: The use of Biodiesel (B100) is of particularly high ecological and economical interest when agricultural machinery is operated. An obstacle is the lacking approval of manufacturers of engines of emission standard EU TIER IV. Therefore, the University of Rostock – supported by industrial and agricultural engine manufacturer DEUTZ AG, Cologne – investigates the performance of Biodiesel in modern engine systems. The main objective of the project is the investigation of the effects of B100 to the exhaust gas aftertreatment systems. In this context it is an important aspect if and to which extent such systems are deactivated by trace elements such as P, K, Na and Ca which are contained in the fuels.

This shall be determined in a 1,000-hour endurance run at the Non-Road Transient Cycle (NRTC) by means of a modern DEUTZ engine of the series TCD 3.6 L4. Additional tests are for example a stationary engine test in the forklift cycle, a simulation of work in the low duty range which is frequent when agricultural machinery is operated. The investigations of the University of Rostock may pave the way for manufacturers' authorizations to use Biodiesel for the operation of agricultural and forestry machinery not only in Germany and may thus contribute to climate protection and the development of rural areas.