D2.13 – Modelling of exhaust aftertreatment system for HD Diesel engine in hybrid electric powertrain

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Publishable summary

The work described in this report builds upon sub-task ST2.3.2 and results and developments that were reported in D2.7 [1]. An exhaust aftertreatment model for engines operated with Diesel and/or HVO was set up in AVL Cruise™ M and calibrated based on state-of-the art catalyst performance data provided by Umicore. In D2.7 the EATS model was used in standalone mode and various measurement traces were utilized as input data for a simulation-based layout of an exhaust aftertreatment system. The aftertreatment system defined in D2.7 (2-stage SCR with electrical heater) was afterwards procured and provided in hardware to VOLVO for testing on an engine testbench in WP3.

In addition to the EATS layout and hardware tests, the Cruise™ M aftertreatment model is compiled as a Matlab S-function and provided to VOLVO as a black box for integration into their hybrid vehicle simulation platform. The report at hand will give an overview of the model functionalities and will therefore serve as a documentation for further use.

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1	FEV	FEV EUROPE GMBH
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