



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

Innovation Action

**EUROPEAN COMMISSION**

Grant Agreement No. 874972

HORIZON 2020 PROGRAMME

Topic LC-GV-04-2019

Low-emissions propulsion for long-distance trucks and coaches

<b>Deliverable No.</b>	<b>LONGRUN D2.13</b>	
<b>Related WP</b>	WP2	
<b>Deliverable Title</b>	Modelling of exhaust aftertreatment system for HD Diesel engine in hybrid electric powertrain	
<b>Deliverable Date</b>	2022-12-31	
<b>Deliverable Type</b>	Report / Documentation	
<b>Dissemination level</b>	Confidential – member only (CO)	
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<b>Status</b>	Final	2023-01-10



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 874972.

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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.

## 9 Acknowledgement

The author(s) would like to thank the partners in the project for their valuable comments on previous drafts and for performing the review.

### Project partners:

#	Partner	Partner Full Name
1	FEV	FEV EUROPE GMBH
2	DAF	DAF TRUCKS NV
3	FPT	FPT INDUSTRIAL SPA
4	FORD	FORD OTOMOTIV SANAYI ANONIM SIRKETI
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20	TECHNA	FUNDACION TECHNIALIA RESEARCH & INNOVATION
21	TOTAL	TOTAL MARKETING SERVICES
22	UMIC	UMICORE AG & CO KG
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 874972. The information and views set out in this publication does not necessarily reflect the official opinion of the European Commission. Neither the European Union institutions and bodies nor any person acting on their behalf, may be held responsible for the use which may be made of the information contained therein.