REWARD

REal World Advanced Technologies foR Diesel Engines

EUROPEAN COMMISSION
Horizon 2020
H2020-MG-2014-2015
GA No. 636380

Deliverable No.	REWARD D7.1	
Deliverable Title	Baseline for fuel consumption and emission	
Dissemination level	CO	
Written By	Bernhard Lechner (ViF)	2016-06-14
Checked by	Bernhard Lechner (ViF)	2016-06-14
Approved by	Tobias Stalfors (VCC) Ludwig Bürgler (AVL) Herwig Ofner (AVL) – Coordinator Executive Board	2016-06-18 2016-06-30 2016-07-21 2016-07-21
Status	Final	2016-07-21

H2020-MG-2014-2015 – 636380 – REal World Advanced Technologies foR Diesel Engines

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:
1 - AVL - AVL List GmbH - AT
2 - REN - Renault SAS - FR
3 - VCC - Volvo Car Corporation - SE
4 - CRF - CRF SCpA - IT
5 - CNRIM - Instituto Motori – Consiglio Nazionale delle Ricerche (CNR) - IT
6 - JM - Johnson Matthey Plc - UK
7 - RIC - Ricardo Plc - UK
8 - SCF - Schaeffler AG - DE
9 - LMM - Le Moteur Moderne - FR
10 - DELPHI - Delphi Automotive Systems Luxembourg S.A. - LU
11 - UNR - Uniresearch BV - NL
12 - IFPEN - IFP Energies Nouvelles - FR
13 - VIF - Virtual Vehicle Research Center - AT
14 - CTH - Chalmers Tekniska Högskola - SE
15 - CTU - Czech Technical University - CZ
16 - UPVLC - Universitat Politecnica de Valencia – Motores Termicos - ES

Disclaimer:
This project has received funding from the European Union's Horizon 2020, programme for research, technological development and demonstration under grant agreement no 636380.

Executive summary

The objective of the project REWARD is the development of highly efficient, clean and cost effective Diesel powertrains up to a Technology Readiness Level (TRL) of 7. Many of the technologies developed in the framework of the REWARD project will be integrated in two demonstration vehicles. One demonstration vehicle will be driven by a 1.6 L engine with a power rating of 60 kW/L. This demonstration car will serve as a reference for B/C class vehicles. The second demonstrator vehicle refers to D/E class passenger cars and will be driven by a 2.0 L engine with a power density of more than 100 kW/L. The project targets with these two demonstration vehicles are to go appreciably below the Euro 6 emissions legislation as well as to reduce the fuel consumption by 5% compared to model year 2013 best in class vehicles under real driving conditions.

Definition of the baseline vehicles

- The 1.6 l engine demonstration vehicle of WP 5 will be based on a Renault Kadjar Energy dcI 130, model year 2015.
- The baseline vehicle of WP 6 will be a Volvo XC90 model year 2015.

Baseline for emissions

The baseline for the emissions is Euro 6b.

Baseline for fuel consumption

The target of the REWARD project is to decrease the fuel consumption by 5% compared to model year 2013 vehicles which refer to the NEDC test procedure. As the REWARD targets refer to other test procedures a realistic and reproducible analogy between the different test procedures was defined.