



# REWARD

REal World Advanced Technologies for Diesel Engines

EUROPEAN COMMISSION

Horizon 2020

H2020-MG-2014-2015

GA No. 636380



<b>Deliverable No.</b>	REWARD D3.1	
<b>Deliverable Title</b>	Coating requirements	
<b>Deliverable Type</b>	REPORT	
<b>Dissemination level</b>	Confidential – member only (CO)	
<b>Written by</b>	Flavia Gilli (CRF) Dr. Ricardo H. Brugnara (SCF)	2016-06-01 until 2016-08-17
<b>Status</b>	<b>Final</b>	2016-08-17
<b>Checked by</b>	Dr. Ricardo H. Brugnara (SCF) WP3 Leader	2016-08-17
<b>Submitted to Executive Board</b>	Submitted to meeting EB13	2016-09-15
<b>Approved by Executive Board (EB)</b>	Approved and accepted by all members of Executive Board at meeting EB13	2016-09-15

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 - Istituto 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 research and innovation programme under grant agreement No 636380.*



## Publishable Executive summary

Within the REWARD project, there is a subtask, which is focused on tribological investigation of coated parts and low viscosity lubricants using lab scale test rigs simulating valve train operating conditions. Therefore, different tribological test rigs were used to explore the friction and wear performance of several coating systems with the objective to identify the most promising combinations of coating/lubricant to minimise friction and wear. Three coating/lubricant combinations were identified and proposed for real valve train tests.