

Virtual ECUs Used to Develop Renault's Engine Management Software



In 2016, Renault started to use virtual Electronic Control Units to aid the development of engine management software. Developers of the OEM can now simulate and calibrate the entire engine control

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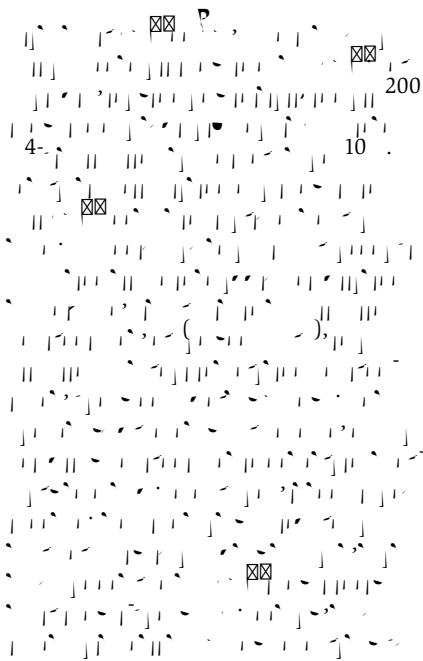


FIGURE 2.

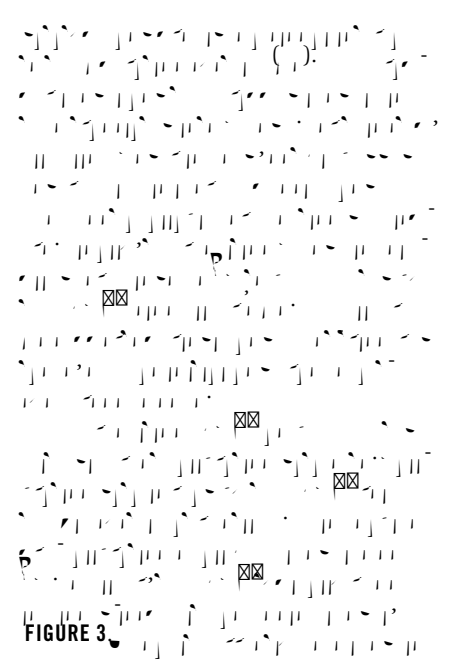
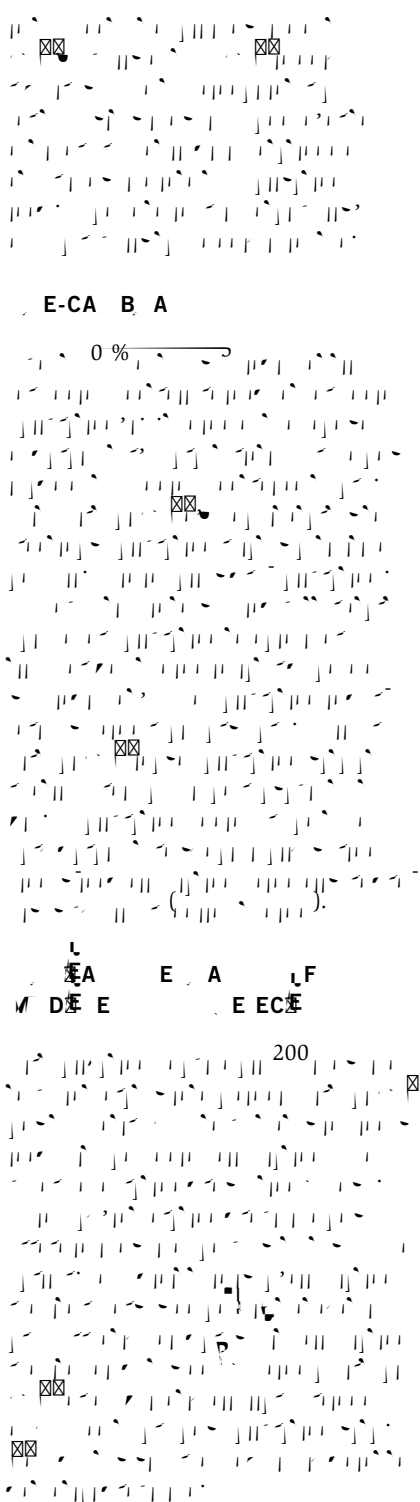
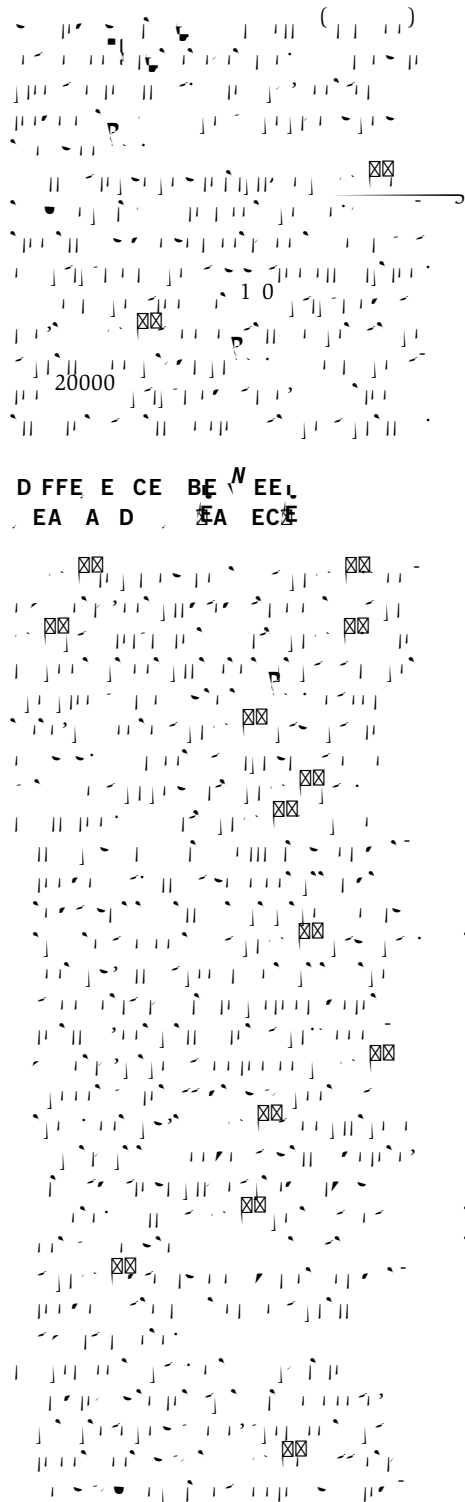


FIGURE 3.



FIGURE 2 A

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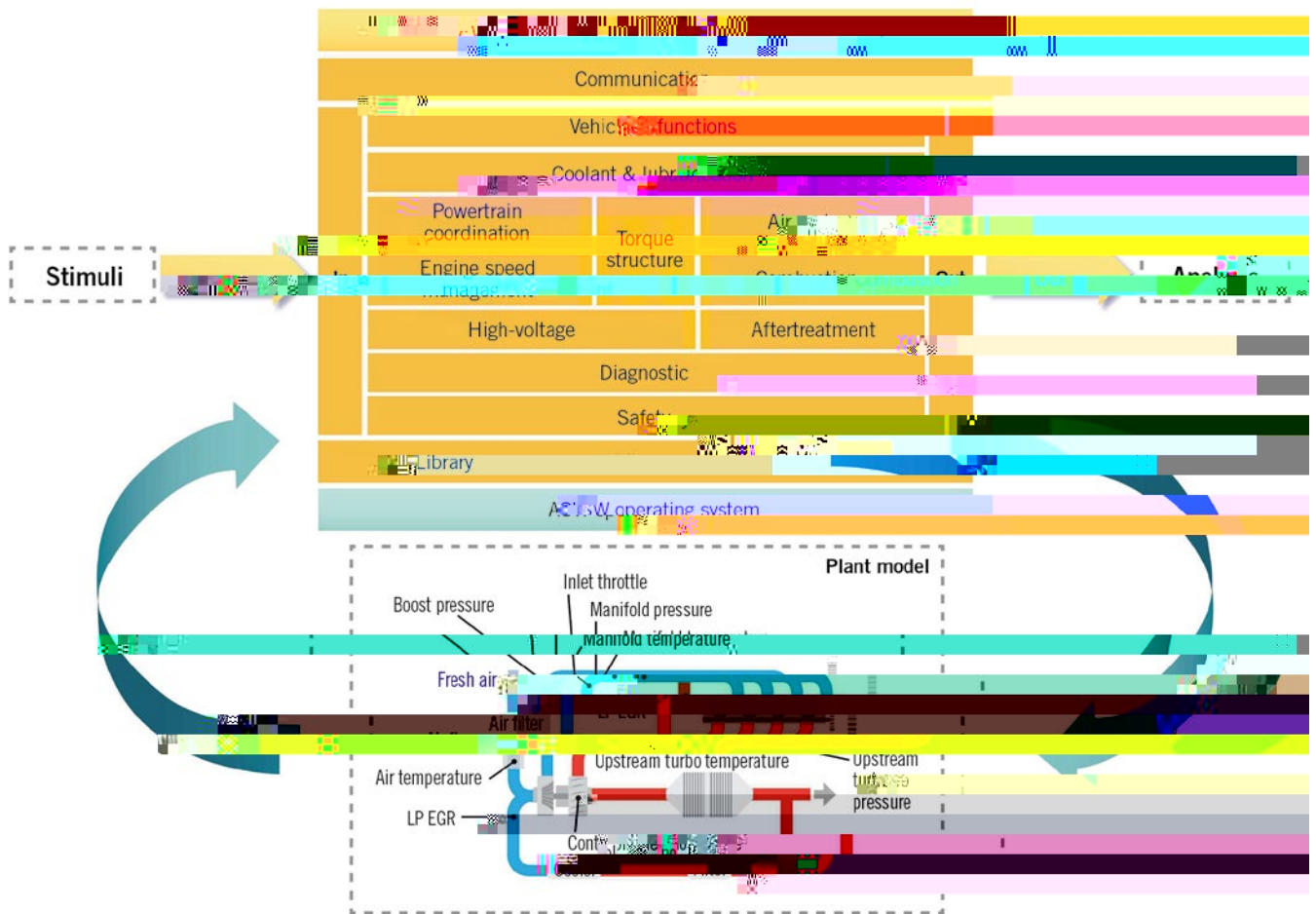


FIGURE 3

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1 Linsen, R.; Uphaus, F.; Mauss, J.: Simulation of Networked ECUs for Drivability Calibration. In: ATZelektronik worldwide (2011), No. 4, pp. 16-21

2 von Wissel, D.; Moreno Lahore, P.: Renault Model-Based Design – Powertrain control development process. 23rd International AVL Conference Engine & Environment, Graz, Austria, September 8 to 9, 2011

3 Dressler, J. M.: A Walk through EMS 2010 Modular Software Development. 4th European Congress ERTS, Toulouse, 2008

4 von Wissel, D.; Quelin, J.-M.: Industrial use of HIL Engine Management System validation. 9th Symposium Automotive Powertrain Control Systems, Berlin, September 20 to 21, 2012

5 Watanabe, A.; Sotome, A.: Functional Development Methodology for On-Board Distributed ECU Systems for Production Vehicle Application. In: SAE Int. J. Passeng. Cars – Electron. Electr. Syst. 5(2):492-500, 2012, <https://doi.org/10.4271/2012-01-0929>