

Bosch Engineering System Validation



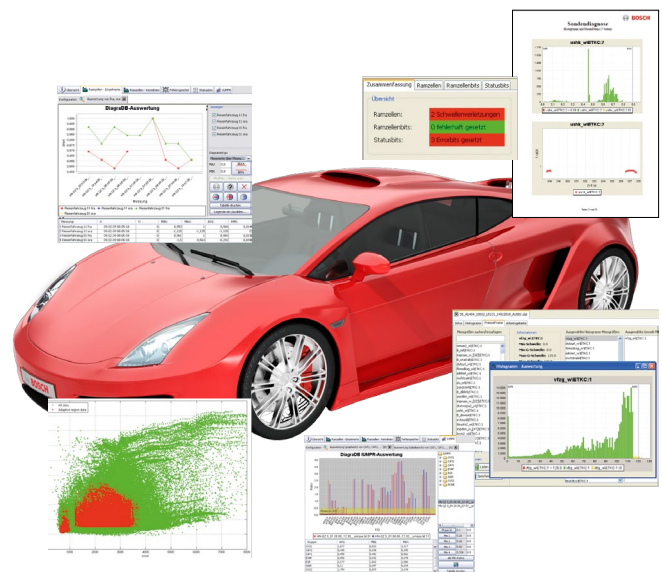
BOSCH
Invented for life

System Validation

The legislative demands regarding exhaust emissions and on-board diagnostics continuously are increasing. This results in higher effort and more complexity in the design of engine control systems and components. Additionally most of the components relevant for the emission control system have to fulfil a legal required warranty of 120k miles / 12 years for CARB LEVII legislation or even 150k miles / 15 years for CARB LEVIII regulation.

To ensure the durability for these components over the whole legal required vehicle lifetime and under all ambient conditions the components have to be tested on ambient simulation test beds and in the vehicle under different ambient conditions.

The software and parameters are checked and calibrated for the different variants by driving tests on various test tracks, test benches and public roads. For protection of the software and the parameters the vehicles have to be finally evaluated under all ambient and driving conditions relevant for customer requests.



Scope of Service of Bosch Engineering

The services of Bosch Engineering encompass:

- ▶ Evaluation of the engine control management robustness
- ▶ Validation of OBD-System
- ▶ Endurance run of components



Scope of Service in Detail

Bosch Engineering is pleased to offer the following customized technical services:

Evaluation of the engine control management robustness

- ▶ Planning, support, execution and detailed evaluation of robustness measurements of the engine control management
- ▶ Recommendations for solving finding issues and preparation of a final report

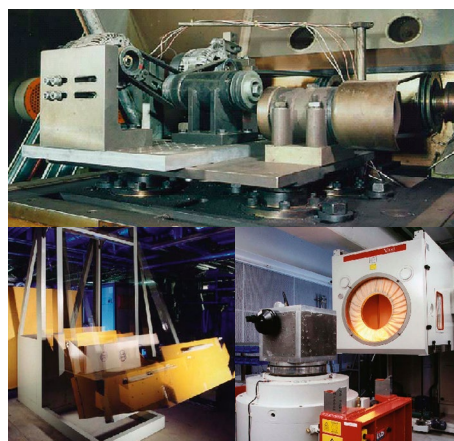
Validation of the OBD-System

- ▶ Fault simulation of all legal related faults (e.g. MIL relevant) including emissions tests on vehicle test beds
- ▶ Check of whole Scantool communication including J1699-Test
- ▶ Validation of statistical requirements for diagnostic functions regarding IU(M)PR legislation
- ▶ Detailed evaluation of all measurements and preparation of a final report

Endurance Run of Components

- ▶ Planning, support and execution of the following endurance runs on test bed or in the vehicle:
 - 3D-Random Vibration Test
 - Vibration Test
 - Rotation Test
 - Shock Test
 - Transport Test
 - Drop Test
 - Climatic Test
 - Corrosion Test
- ▶ Evaluation of the test results in cooperation with the customer or component supplier and preparation of a final report.

We're looking forward to get in contact with you to discuss your specific system validation needs.



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