AVL GEM COMPACT™

Manufacturers of IC Engines for the NonRoad market are confronted with demanding emissions regulations. Tight rules, emission limits and complex testing procedures require reliable solutions to enable our customers to be successful.

AVL designed GEM COMPACT to manage the complexity of emissions system preconditioning, test sequencing, system monitoring, troubleshooting, data processing, data archiving and validation.

AVL GEM COMPACT provides fully validated and tailored applications as well as a framework for discrete mode B-Type ISO 8178 test cycles. Within this framework test cycles are easily configurable, no programming skills are required.

Benefits at a Glance

- §1065 Engine-Testing Procedures in compliance to NonRoad discrete mode applications
- Transparent & validated certification application configurations, data processing and reporting bundles
- Configurable application framework with Emissions Device Abstraction
- Easy configurable 1-11 mode Steady State emission cycles based on ISO 8178
- Sophisticated emission device error handling wizard

AVL, the technology leader for automotive testing systems provides AVL COMPACT™, an out-of-the-box easy to install and cost effective solution for the engine development, component testing and performance market.

Ready. Set. Go.

AUTOMATED CERTIFICATION TESTING PROCEDURES

Based on the US EPA §1065 Steady State emission procedures GEM COMPACT comes with fully automated and preconfigured default procedures.

- §1039 – NonRoad CI
- §1042 – Marine CI
- §1045 – Marine SI
- §1048 – NonRoad SI >19kW
- §1051 – Recreational Vehicles
- §1054 – NonRoad SI ≤ 19kW

§1065 Testing Procedures

Online Status Screen

Automated Certification Printouts

Every certification application bundle come with an automated data processing and reporting component. The printout consists of a single summary page to visualize all application relevant emission result data as well as a validation summary based of the applicable US regulation.
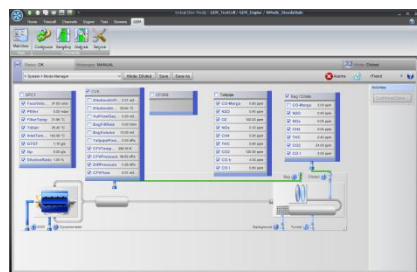
Overview of the sampling system
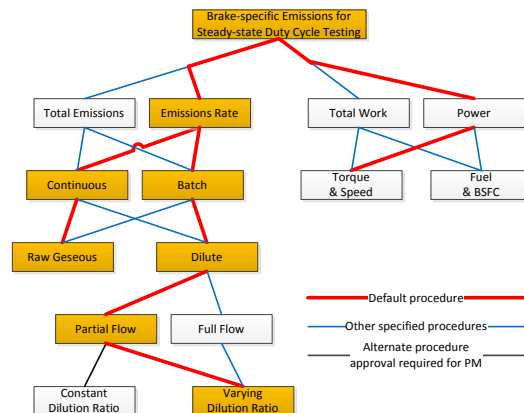
EMISSION MEASUREMENT POINT CONFIGURATIONS

The emission test environment is configured in the GUI of the device abstraction component. The editor visualizes the active configuration. Only devices which are enabled in this configuration are used for the emissions test. This enables the user to utilize alternative equipment or to deactivate equipment that has a malfunction. The component maps device channels to the physical probe point. The sampled data is stored in relation to the probe point. It allows manual interaction with the emissions devices as well.

Test result report

Sophisticated Emission Device Error Handling

Every integrated device relevant to emissions testing comes with a sophisticated troubleshooting wizard. This wizard enables guided user interaction between the operator and the equipment. All interaction with the equipment during an emissions test is logged and reported on the final printout.