THE KEY BENEFITS OF AVL CAMEO TRANSMISSION

Reduced number of prototypes
A reduction in measurement time and therefore in the number of prototypes needed. Unmanned operation allows overnight and weekend test runs.

Objective shift quality evaluation
The objective shift quality analysis, as obtained from the drivability analysis tool AVL DRIVE, ensures the measurability, reproducibility and traceability of a shift behavior.

One Tool
The integration of the complete calibration workflow into one tool improves the efficiency and the consistency of the calibration process.

Integration with V-Development Process
Cameo is integrated into processes in many positions of a typical V-Development cycle. It can be used to accelerate many procedures, using advanced design and modeling approaches.

HOW CAMEO TRANSMISSION WORKS IN PRACTIC

The test vehicle is connected to a frame with longitudinal force measurement equipment. Cameo Transmission controls the Chassis Dyno and the Vehicle via AVL DRICON to make the desired gearshifts and vary the Transmission Control Unit (TCU) parameters that influence the shift quality.

The AVL solution also includes AVL-DRIVE which identifies and evaluates gearshift quality. Once the test run is completed, Cameo Transmission optimizes the TCU parameters in order to reach the shift quality requirements (comfort, dynamic, shift delay etc.).

Cameo Transmission has simplified the test plan and test run on chassis dyno systems by using an embedded vehicle model, a transmission DoE wizard and an intelligent test optimization procedure.
A STEP-BY-STEP GUIDE

Step 1. Test Plan
Plan the shift types you want to calibrate with easy and intelligent test planning using a simplified vehicle model. A DoE wizard provides DoE list generation in easy steps. It is supported by an automatic drivable range calculator and variation limits also defined by maps.

Step 2. Test Run
Run your planned test automatically on the chassis dyno or on the powertrain test bed. A DoE optimized test run with AVL-DRIVE connection, shift correction and error monitoring ensures an efficient number of measurements.

Step 3. Post-processing
After the test run is done all the calibration work for any desired calibration variants is done in the office. Using polynomial or neural network models the system is identified and a robust calibration, based on statistical data analysis, is generated.

AUTOMATED CALIBRATION FOR TRANSMISSION

AVL Cameo Transmission is an application extension of Cameo designed to make the transmission development process faster and more efficient.

AVL Cameo Transmission supports the calibration engineer in finding the shift quality optimization of automated transmissions by optimizing its test procedures and data generation. The integration of the complete calibration workflow into one tool ensures higher standards in calibration efficiency and consistency.

By automating the transmission process and optimizing the gear shift behavior, the Cameo application plays a key role in the reduction of CO₂ emissions and in the future of modern calibration procedures.

FOR FURTHER INFORMATION PLEASE CONTACT:

AVL List GmbH, Hans-List-Platz 1, A-8020 Graz, Austria
Phone: +43 316 787-0, Fax: +43 316 787-400
Email: info@avl.com, www.avl.com

PA3026E, Classification Public