

General Motors selects LMS for exterior pass-by noise testing

New investment complements extensive installation of
LMS testing and analysis systems for NVH at General Motors





General Motors Corporation recently selected LMS to replace its exterior pass-by noise testing installation at the GM Proving Grounds in Mesa, AZ and Milford, MI. LMS delivered a fully integrated testing and analysis system to perform pass-by noise certification of newly developed GM vehicles. GM selected the LMS solutions for its strong support of the upcoming revision of the ISO 362 standard. GM also valued the LMS system for its efficient execution of exterior noise tests and related troubleshooting analyses. The strong integration of the new system in the extensive installation of LMS systems for noise and vibration engineering at GM will enable its engineers to easily reuse and leverage exterior noise test data throughout the vehicle development process.

Environmental regulations in terms of vehicle exterior noise emissions have become one of the most stringent requirements in vehicle development projects. Manufacturers have to certify that their vehicles comply with noise

emission standards by measuring pass-by noise using internationally defined procedures. In addition, noise emission characteristics and the exterior sound impression of a vehicle have become strong competitive differentiators in the automotive industry. Vehicle manufacturers perform extensive tests throughout the development process to analyze the acoustic performance of components and subsystems that strongly contribute to exterior noise. Extensive analysis of test data helps engineers to gradually refine the exterior noise characteristics of the vehicle and to prepare for final certification tests.

In selecting a new system for exterior pass-by noise testing, GM looked for a solution with an integrated support of the ISO 362 standard and its upcoming successor and state-of-the-art capabilities to support the single-person operation of their pass-by noise testing center. After an extensive evaluation, GM engineers selected the LMS solution as the best fit for these requirements. GM particularly valued the “driver’s

aid” functionality that provides the test technician with real-time information regarding weather conditions, engine speed, vehicle speed and vehicle position on the test track. This information is critical to the efficient execution of an exterior noise test sequence and has a direct impact on the productivity of the exterior noise test facility.

LMS was also selected for its fast and reliable technical support, including a 24-hour response time on hardware issues, besides offering a complete, productive and state-of-the-art solution for GM’s current and future needs in exterior pass-by noise testing. In addition, LMS offers extensive experience in this field and is proactively integrating future industry standards and innovative measurement and analysis techniques. The tight integration with GM’s extensive installation of LMS systems for noise and vibration engineering supports the efficient analysis of test data, gradually refining the exterior noise characteristics of the vehicle and preparing its final certification tests. ■



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