New legislation poses new challenges

The damaging effects of noise on human health are undisputed. As noise emissions by motor vehicles are a major source of noise pollution, legislators have been passing increasingly stringent vehicle noise emission regulations.

While in the past the primary focus was on reducing propulsion noise, the aspect of tire/road noise has been gaining increasing importance in recent years.

For example, starting in October of 2009, ECE R 117 will progressively require all new tires sold or entering service in the European Union to meet certain noise limits.

In addition, changes to ECE R 51 coming into effect as of 2012 will make tire/road noise measurements an integral element of the type approval process for new vehicles in the future.

Exterior noise measurements facilitate compliance

TÜV SÜD Automotive offers advanced tire/road noise measurements using a proprietary test vehicle equipped with innovative measuring technology. The total encapsulation of the vehicle ensures that only road and tire noise is recorded during the measurements, without interference from undesirable influences such as engine or driveline noise.

In addition, a computer-controlled driving assistant ensures that the vehicle is kept at constant speed as required by the respective test parameters and specifications.
This is even more relevant in the case of electric vehicles which emit none of the traditional propulsion noises of vehicles powered by internal combustion engines. For occupants of these almost completely “silent” vehicles, tire and road noise becomes the dominant acoustic influence.

Subjective and objective

Therefore, TÜV SÜD Automotive offers tire and road noise measurements also for vehicle interiors based on its advanced technology.

The combination of certified exterior noise measurements with measurements addressing interior comfort gives vehicle as well as tire manufacturers optimum prerequisites to meet the requirements of more stringent noise control regulations as well as the demands of the market.

Key benefits at a glance:

- Independent partner to achieve “tire labeling” limits
- Measurements on TÜV SÜD Automotive’s own ISO track or other track anywhere in the world, as needed
- Extremely low residual noise of test vehicle due to encapsulation
- Fast and reproducible measurements using computer-controlled driving assistant

Interior noise measurements ensure comfort

In an effort to meet more stringent noise emission standards as well as consumer demands for higher interior comfort, automobile manufacturers have achieved significant progress in reducing propulsion-related exterior and interior noise in recent years. The downside of this progress is that tire and road noise is often more perceptible in the vehicle’s interior.