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ANALYSIS OF THE METHODS AND MEANS OF DIAGNOSING THE SYSTEM OF VEHICLE STABILITY

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Stability system (Electronic Stability Programme) is designed to preserve the stability and controllability of the vehicle by defining in advance and eliminating the critical situation. Since 2011, equipping the system of stability of new passenger cars has been mandatory in the United States, Canada and the European Union countries.

The system allows you to keep the car within the specified trajectory of the driver in various driving modes (acceleration, braking, driving in a straight line, in turns and with free rolling).

Stability is a higher-level active safety system and includes anti-lock braking system (ABS), Electronic brakeforce distribution (EBD), electronic differential system (EDS), Anti-Slip Regulation (ASR), Motor Slip Regulation (MSR) and some other subsystems.

General diagnosis of brake systems includes:

- measuring control of vehicle braking efficiency;
- organoleptic and measuring control of the pneumatic or hydraulic brake drive tightness and the elements of the wheel brake mechanisms.

The braking performance of the vehicle is measured by the stand method using a roller brake stand for testing brake systems or by the road method.

Measuring control of the technical condition and performance parameters of the elements of the braking system of the car include:

- tests on static power stands;
- tests on inertial platform stands;
- tests on roller stands.

Recently, with the computerization of the vehicle, the easiest way is to use onboard diagnostics using scanning testers connected to the vehicle's diagnostic connector.

For deep diagnosis of individual elements of the ABS, an oscilloscope is used, which will allow determining the parameters of the sensors and actuators with high accuracy.