
Tire pressure monitoring system

Many models from Audi are equipped with a tire pressure monitoring system that is integrated into the electronic stabilization program (ESP). This is a system that measures indirectly, has no sensors of its own in the tire and thus adds no weight and requires no maintenance. It alerts the driver in the event of pressure loss by displaying a warning on the onboard monitor. If only one tire is affected, the position of the tire is indicated. The system also detects a gradual loss of pressure through diffusion in all four tires, resulting in a higher rolling resistance and increased fuel consumption.

These functions are possible because the tire pressure monitoring system not only compares the rotational speeds of all four tires picked up by the ABS sensors, but also analyzes vibrational changes in the tires produced by excitation from the street. The amplitude and natural frequency of the tires change significantly in the event of pressure loss.

Status: 2011