Headline: AAA puts tire-pressure sensors to test

Deckhead: Don’t let vehicle’s monitoring system leave you feeling flat

A new study by AAA found that in-vehicle tire-pressure-monitoring systems (TPMS) generally are accurate, but drivers still should check their tire pressure manually.

Why keep tabs on your tires? They are the only part of your vehicle in contact with the road and proper inflation is the key to safety and better gas mileage.

“Whether in rain, sleet, snow, or dry conditions, tires are the unsung heroes of your car,” said Greg Brannon, AAA’s director of automotive engineering. “They are designed to work best when properly inflated. Our research found that the pressure-monitoring systems that provide data for instrument displays or trigger the amber dashboard warning worked as intended. But we recommend always having a dependable old-school manual pressure gauge to check them once a month because a tire can be more than 20% deflated before it triggers the dashboard warning.”

AAA engineers evaluated 11 passenger vehicles from 2022-24 models, including sedans, pickups and SUVs with “direct” TPMS, which uses air-pressure sensors mounted in each wheel. The AAA survey found that the average percentage difference between displayed and actual tire pressure was between 1.2% and minus-1.5%, depending on the tire location.

Additionally, the amber warning TPMS light illuminated when tires were underinflated to 75% of the posted pressure (located on the sticker inside the door jamb) for five of the 11 test vehicles. Five of the six remaining test vehicles Illuminated the TPMS warning dashboard light when tires deflated to 70.3% to 72.9% of the posted pressure, depending on the test vehicle.

Key findings from the study:

* No significant error in displayed tire pressure readings was noted for any vehicles evaluated within the study.
* The largest percentage difference in reported vs. actual tire pressure was 3.3%. This large pickup truck had a significantly higher posted pressure than other test vehicles.
* One vehicle did not illuminate the TPMS warning light even when one of its tires was deflated to only 65% of the recommended posted pressure, despite the immediate update of pressure readings in the instrument cluster.

AAA urges drivers to utilize displayed tire pressures in the instrument cluster and keep tires inflated to the vehicle’s posted pressure rather than relying solely on the TPMS light to determine when a tire needs to be reinflated.

TPMS lights only illuminate when one or more tires are severely underinflated. Drivers should regularly check the displayed tire pressure at each corner. In addition, not all vehicle TPMS provide pressure readings. Some systems, particularly on older vehicles, only have a warning light if one or more tires are low.

AAA encourages drivers to regularly check their tire pressure (either in the instrument cluster or using a gauge), even if their TPMS light is not illuminated. And with winter approaching, it’s important to remember that cold weather makes the air denser, so the pressure in the tire is reduced, triggering a dashboard warning. Do not ignore the warning even if the light goes off after driving because the tire is likely low. For this reason, tire pressure should be checked when cold.

Cutline: AIR SUPPLY – AAA recommends regularly using a tire gauge to monitor the tire pressure. Image: NongAsimo. Adobe Stock.