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**GROUP:** Tires & Wheels

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**SUBJECT:**

TPM System Performance Affected When Large Ambient Temperature Changes Occur

**MODELS:**

2002 - 2004 (WJ) Grand Cherokee

**DISCUSSION:**

Some 2002 to 2004 Grand Cherokee vehicles incorporate an optional Tire Pressure Monitor (TPM) System that displays the actual tire pressure for all four (4) road tires and will also display the tire pressure for certain full size spare tires, if equipped.

The Electronic Vehicle Information Center (EVIC) is used to display TPM System messages. The TPM System message "Low Tire Pressure" will be displayed on the EVIC when at least of one of the tire pressure sensor(s) detects a tire pressure of 25 PSI (172 kPa) or less. The "Low Tire Pressure" message is designed to turn off when a tire pressure of 28 PSI (198 kPa) or higher is detected.

Tire pressure can drop approximately 1 PSI (6.8 kPa) for every 10°F (5.5 °C) drop in ambient temperature. In colder climates, significant changes in ambient temperature can influence tire pressure readings. For example, a vehicle with tire pressures initially set at 29 PSI (200 kPa) in a 70°F (21.1°C) heated garage and then allowed to set long enough outside in 20°F (-6.7°C) ambient temperature, can experience a drop of 5 PSI (34.5 kPa) in tire pressure due only to the change in ambient temperature. The tire pressure would now read approximately 24 PSI (165 kPa). In this instance, the TPM System will sense that tire pressure is below the 25 PSI (172 kPa) threshold and will display the "Low Tire Pressure" message.

To reduce the occurrence of the above condition and any unnecessary customer concern about the performance of their vehicle TPM System, dealers servicing Grand Cherokee vehicles with the optional TPM System should ensure that tire pressures are set to the recommended tire pressure. The recommended tire pressure can be found on the tire pressure label that is located on rear face of the driver's door.

**SETTING TIRE PRESSURES AT THE RECOMMENDED TIRE PRESSURE (LABEL PRESSURE) WILL MINIMIZE THE POSSIBILITY OF TRIGGERING LOW (OR HIGH) TIRE PRESSURE MESSAGES BY THE TPM SYSTEM.**

**CHECK AIR PRESSURE IN TIRES WITH AN ACCURATE TIRE PRESSURE GAUGE. DO NOT USE THE TIRE PRESSURE DISPLAY ON THE EVIC TO ADJUST TIRE PRESSURE.**

When reading actual tire pressures know that cold inflation pressure is defined as the air pressure inside the tire(s) after the vehicle has not been driven for at least a three (3) hour

period, or the air pressure inside the tire(s) when the vehicle has not been driven more than one (1) mile after the minimum three (3) hour non-driving period has occurred.

***POLICY:***

Information Only