

# One Point Lesson for Tire Maintenance

## Replacing Tires of P-metric or metric tire on Light Trucks

**When P-metric or metric tire are installed on light trucks (SUV, pickup or minivan), the load rating/capacity of the tire is reduced by a factor of 1.10 as prescribed by the Federal Motor Vehicle Safety Standards (FMVSS). This load reduction is mandated by Federal motor Vehicle Safety Standards (571.120). This is based on the expectation that passenger type tires (P-metric) tires which are designed mainly for passenger cars may experience more severe use and overloading when used on light trucks.**

Example	Size	Air Pressure (PSI) / Load (LBS) recommended by vehicle manufacturer (Vehicle : 2004 Dodge Ram 2500 SLT 4x4 Reg. Cab)	
		Front	Rear
Original Tire equipped by vehicle manufacturer	LT265/70 R17 E (E means 10 ply)	50 PSI / 2,470 lbs.	70 PSI / 3,005 lbs.
Nexen Tire mounted	RO-HT SUV <b>P</b> 265/70 R17 113 S	Max 44 PSI / 2,535 lbs. is derated to 2,305 lbs. on the light truck. Results: Based on the OE LT tire the P-metric tire <u>CANNOT</u> withstand the vehicle load. Severe overloading of the tire may occur.	

*The Nexen P-metric tires have been derated by the vehicle manufacturer by a factor of 1.10 to account for its installation on a light truck.*

(DETAILED CALCULATION: 2,535 lbs. divided by 1.10 = 2,305 lbs. at max air pressure 44 PSI)

Nexen RO-HT SUV P265/70R17 load capacity on a light truck max: 44 PSI, Load: 2,305 lbs. (NOT 2,535 lbs.)

If a light truck is fitted with P-metric tires, the load at any pressure is reduced by the 1.10 factor. Using the above example, a light truck fitted with Nexen RO-HT SUV P265/70 R17 113S inflated at the maximum 44 PSI is actually only accommodating a load of 2,305 lbs, not the max load for this size of 2,535 lbs; this load capacity with Nexen P-metric tires cannot reach the original load capacity recommended by the vehicle manufacturer.

### Safety Concerns:

Severe bending or flexing of the sidewalls of the tires due to under inflation or over loading can cause heat buildup on the sidewall. This movement is due to overloading from incorrect vehicle application and results in stress and heat buildup that can lead to sidewall discoloration as well as separation of the inner layers of the tire. Eventually, it can possibly lead to catastrophic tire failure including tire separation and/or tire blow out.

Misapplication is not a warrantable condition as stated in the Nexen Tire Replacement Limited Warranty. It is the vehicle owner's responsibility to check with the vehicle manufacturer or tire installer to ensure that the proper application tires are being mounted and/or replaced on the vehicle.

Nexen cannot recommend this type of application to the vehicle due to shortened tire life and for safety reasons. If usage of misapplication tire continues it can lead to more severe issues such as serious injury and/or death.

### \*RECAP\* Replacing Original Equipment LT-metric Tires:

When replacing O.E. LT-metric with another LT-metric size, they must be able to carry equivalent loads. All tires should be properly inflated to the pressure stated on the vehicle's tire information placard located on the driver's side door or in the vehicles owners' manual. If you choose to replace an O.E. LT-metric tire with P-metric tire, check the load requirements carefully. Many times, the P-metric tire cannot provide adequate load capacity. Also remember that you must reduce the P-metric loads by a factor of 1.10 when replacing O.E. LT tires.

