

## Over-Tightening of Wheel Nuts

Over tightening of wheel lug nuts can distort the disc rotor resulting in uneven rotor wear and eventually disc thickness variation **DTV**.

There's only one simple rule when tightening the lug/wheel nuts on a vehicle: The rotors need to be tightened evenly onto the hub to avoid distortion. Do not use rattle guns to torque wheel nuts without a correct torque stick/extension to limit the intensity of the blow from the rattle-gun.

When tightening the lug/wheel nuts, it is best to follow the directions included in your manual.

The ideal method to tighten wheel nuts when using pneumatic or battery impact wrenches is to select a torque stick approximately 60% of the final torque and apply using the recommended star pattern. Finish to the final setting with a torque bar/wrench by hand also using a star pattern to ensure even distribution of load.



Torque stick extensions are color coded and engraved with ft/lb and Nm settings for quick reference.



### Star Pattern for wheel nuts

#### Tightening Wheel Nuts

Tighten the nuts following the criss-cross sequence shown on the right. Failure to tighten nuts in the criss-cross sequence will cause misalignment of the wheel. Continue this process until all nuts are tightened to the torque recommended by the vehicle manufacturer. Wheels supplied as aftermarket accessories may require different wheel nut tightening torques. If in doubt seek advice from the manufacturer or supplier.

