

Fit and remember

A new wheel nut cover highlights the importance of recording retorques, reports Will Dalrymple

Brightly coloured wheel nut covers are an increasingly common sight on UK wheels. Tapped on with a rubber hammer, these covers often include an arrow indicator, so that they can be aligned during installation to point toward their neighbour. This arrangement provides a quick way for drivers doing daily checks to check the security of the wheels. Because the tight-fitting cover can't slip around the nut, any out-of-alignment arrows show up loose wheel nuts.

A new product promises to not only perform that role, but also bring in another dimension of wheel security: retorquing. Everyone knows that vehicle wheel nuts must be installed to a specified nominal torque to ensure secure attachment without damaging or distorting the wheel.

But of course truck wheel nuts must be tightened again, shortly after wheel installation. Wheel studs stretch slightly under tension, so the fit between nut and wheel flange tends to loosen, according to 2014 joint DVSA-industry guidance 'Careless Torque Costs Lives' (www.is.gd/beguki). To compensate for that, this document recommends retorquing travelling vehicles' wheel nuts after between 40-80km (25-50 miles), and stationary vehicles' wheel nuts after 30 minutes.

New government guidance has recently increased commercial vehicle operators' wheel security



responsibilities. While the 2014 edition of DVSA's Guide to Maintaining Roadworthiness instructed operators to "use trained personnel and keep records of all wheel and fixing work, including which parts were renewed and when", the version published in November 2018 (www.is.gd/nofine) has gone further. It stipulates that "all retorque checks must be recorded and retained on file".

Keeping track of wheel replacements can be difficult to manage because, once the wheel is back on the truck, remembering the repair relies on a paper trail, points out Dick Woods, director of Automotive Design & Development, who devised the system. "If you take a wheel off, and then put it back on, the fact that it's been off is invisible; it's down to a piece of paper

to actually make its way through the system. Effectively we're just making what is currently invisible, visible."

To help identify whether or not a wheel has been re-tightened, Retorque Systems' wheel nut indicators feature a patented swivelling two-colour arrow design. Initially, they are installed on newly-changed wheels with the red side of the arrow facing out, indicating that the nut requires a retorque. When that time comes, tyre fitters use a customised pair of locking pliers to pull off the covers, a torque wrench to re-tighten the bolts, then swivel the arrows on the covers by hand so the green side is facing out, and then refit them. This indicates at a glance that the required retorque has taken place.

The first operator to trial the system is Thanet Waste in Sandwich, Kent, which has a fleet of 30 eight-wheelers, maintained from two garages. [TE](#)