



vehicles to 121 – proof that the impact on a business can be severe. But 2017 looks set to be the year where bigger moves are being made. Veolia's head of fleet for the north of England – and IRTE stalwart – Chris Grime has been given the task of reviewing his company's national wheel security policy covering a Veolia fleet numbering more than 6,000, which is turning into quite a challenge. He explains: "We've got a robust policy at the moment, but in the process of changing our tyre supplier, the heads of fleet all realised that we each had slight differences in our approach to wheel security. So I'm now looking at the policy as a whole to make sure it is common throughout our regions and matches industry guidelines."

Grime says he will be making recommendations as to where Veolia needs to change, in order to make it work throughout the company, as well as the wider industry. Having only started working on it in March 2017, Grime has been swift to set up a focus group with fleet engineers, brought in a compliance expert, and consulted health and safety as to the best way to proceed.

MANUFACTURER DIFFERENCES

As part of the consultation process, Grime invited four vehicle manufacturers to a meeting to talk about their experiences and realised that each of the four had very different approaches to wheel security. He says: "One said they torqued to 700Nm and then re-torqued to 700Nm after either 30 minutes or 40-80km. For another, the approach was 200Nm plus 90°, then a re-torque to 670Nm after 20-30km. The third one was an initial torque to 700Nm and then two re-torques – one after 100km and another at 500km; while the final one

The issue of wheel security has been long-debated in the transport sector and within the IRTE. The topic has now picked up some serious traction and new work could revise existing guidance, explains John Challen

Following publication of the IRTE's guide to best practice in wheel security (<https://is.gd/uhuliy>), there have been numerous efforts to improve safety levels when it comes to wheel fitment and ultimately to reduce the number of detachments seen on UK roads. As such it is often difficult to find examples, but when they do end up in the public domain – such as in the case of recycling firm William Tracey – companies and individuals are made an example of.

In that case, from 31 December 2015, two nearside wheels came off a refuse collection vehicle on the M8, one of them hitting a hearse, though no one was injured. During the inquiry that followed, Scottish transport commissioner Joan Aitken highlighted that "had there been proper

wheel security processes, the loss of these wheels simply would not have happened". At the time, Aitken also temporarily reduced the William Tracey group's licence authority from 144

WHAT HAPPENED?

Fitted with two Prolock wheel nut locking clamps and 10 indicators, in November 2009 the wheel above lost one nut and one Prolock device, although fortunately the wheel stayed on. An investigation by the vendor, Parma, found that fitters at the operator – an unnamed large national fleet – had installed the clamps too forcefully, deforming them. In response, Parma rewrote some instructions, redesigned the fitting tool with a depth stop, and added a manual fitment check: after installation the engineer should grasp the Prolock at sides and in the centre to confirm that it is secure.

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Chris Grime

said it torqued to 600Nm and re-torqued at 50-100km. All of them used the same wheel size and the wheel configurations, in terms of studs and nuts, were the same.” (IRTE guidance advises following manufacturers’ torque recommendations in tightening the wheels initially, and then, using a calibrated torque wrench, checking for tightness after 30 minutes, or after 40-80km.)

Lubrication of the nuts and bolts was another example of variation, because one manufacturer said they did lubricate, two said they didn’t know whether they lubricated and one said they used no lubrication at all. (The IRTE guide advises lubrication, unless contravened by the manufacturer’s recommendations.)

In talking to two of the people behind the original IRTE wheel security guide,

Grime learned that lubricating the washer, the nut interface and the thread increased clamping forces by at least 20%, by reducing losses due to friction. He adds: “As such, we feel it is very important to lubricate the threads on the stud as well as the washer interface, so that is what we’ll be recommending.”

The challenge for Grime and his team is to take all this evidence and create something that builds on what is already available – and very highly regarded. “Within the IRTE, we’ve written a policy that is industry-wide and we think it’s actually better than what the manufacturers have at the moment,” he adds. “But there is a dilemma in terms of whether you follow the manufacturer or industry best practice. While I’m still working on the new standard for

Veolia, I couldn’t say which is the best option, but what I’m trying to create is something that meets our requirements as a company and that will also feed into the IRTE best practice guide.” His recommendations are scheduled to be delivered by the end of September.

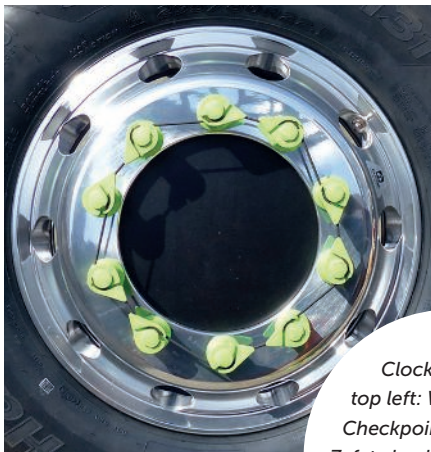
In addition to these measures, Grime reports that Veolia also favours a secondary wheel security approach: using Ric Clips, for example, that secure two adjacent nuts together to stop them coming loose (it and other examples are shown below). But that is not necessarily as uncontroversial as it might seem, he points out. He says: “Some OEMs have said that they can’t be fitted to vehicles with embellishments such as wheel nut covers because they are fitted as part of Whole Vehicle Type Approval, so that is another hurdle to overcome.”

AN EYE ON EU

One company that has been a constant force in discussions about wheel security for some time is MWheels (formerly known as Motor Wheel Service Distribution). MWheels is trying to raise awareness of the seriousness of the issue, on which it published a white paper last month: <http://is.gd/kitopu>. It also stressed the importance of attention to detail in the EU Roadworthiness Package legislation coming into force in May 2018 (see also the FTA’s overview: <http://is.gd/qamawu>).

Although legal changes enabling the legislation scheduled to be completed by 20 May have been delayed, there are no plans to stop the work post-Brexit, according to a DfT spokeswoman.

Matthew Mardle, chief operating officer of MWheels, concludes: “The wheel is a safety-critical item and those are the words used in the [legislation] document. It has been signed off and in reality countries have a year to prepare for it. However most UK fleets have no perception of what is coming.” 



Clockwise from top left: Wheel Sentry; Checkpoint’s Checklink; Safety lug lock from Parma Group UK; Ric Clips from Techeurope (among other suppliers)

