

# TACHO BELL



**The next generation of digital tachographs are scheduled to be fitted to new vehicles from March 2019. Toby Clark delves into the EU legislation to forecast what they will be like - assuming that Brexit does not affect their implementation**

**T**he next generation of digital tachographs should at last start to make proper use of the possibilities of modern technology. Although they will start to be introduced in two years' time, there is no requirement for older tachographs to be replaced until 2034, and then perhaps only for vehicles travelling to the continent.

Some of the changes are being made not for benefit of hauliers, but for law enforcement agencies. When the relevant legislation came into force in March 2016, then under-secretary of state for transport Andrew Jones said: "These... regulations will ensure that the enforcement of EU drivers' hours and tachograph rules can continue. If we do not make those changes, the UK enforcement agencies – the Driver and Vehicle Standards Agency and the police – risk no longer being able to enforce against tachograph offences. That would not be acceptable; it would compromise road safety and driver welfare."

There is some confusion about what to call 'smart' tachographs – some manufacturers refer to them as fourth-generation, but the reference EU Regulation 165/2014 itself calls them 'second-generation' units. No manufacturer has yet revealed a model of a smart tachograph, although there

have been hints that they will be smaller than previous models. The only specific requirements set out in legislation are that they should include two card readers, have a 20-character display and – something of a throwback – a printer.

They will also include GPS tracking

## LATEST TACHOGRAPHS AND ACCESSORIES

The new regulations will doubtless bring changes, but there are still developments in the current generation of products.

VDO's Digital Tachograph 3.0 (pictured p38; \* denotes future features) was shown for the first time at the CV Show in April. It is intended to be a precursor to the smart tachograph in 2019, offers greater functionality and more integration with smartphone 'app' technology. It is half the weight and uses less power than before.

Hardware manufacturer Tachosys previewed upcoming tachograph products at the CV Show in April, including a standalone card reader called 'digicard' that hosts a company card for remote authentication over Wifi. It is compatible with digiDL remote tachograph products.

TruTac's TruLocation service combines real-time GPS vehicle tracking, remote tach downloading, accurate maps, geo-location, and records harsh braking and excess speed, all in one web-based system.

taken at least every 10 seconds – or, strictly speaking, GNSS (Global Navigation Satellite System), which encompasses the EU's Galileo satellites and (optionally) the Russian GLONASS system and others, as well as the US-supported GPS network. This should be built into the tachograph itself, or provided by an external unit via a specific interface. The main purpose is to record the vehicle's position automatically during operation. Partly, this should help deter fraud, by corroborating data from the vehicle's motion sensor, but it is also intended to improve recordkeeping.

Drivers will not routinely have to state their start and end areas (as they did with pre-digital tachographs) or even the country they are in, because their location will have been recorded relatively precisely – to 6 seconds of arc, which ranges from 100-200 metres (as longitude arc-seconds depend on latitude, decrease with increasing latitude). Recording only takes place at a few specific points: where the driver (and/or co-driver) begins their daily work period; after each three hours of accumulated driving time (the actual phrase is "where the continuous driving time of the driver reaches a multiple of three hours"); at the end of the driver/co-driver's daily work period.

Drivers will also be able to enter

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Andrew Jones



some positions manually, to indicate “a place where a previous daily work period ended”, or that they are undertaking a ferry or train transfer.

### REMOTE CONTROL

The second new feature allows a roadside traffic control officer to read tacho data “to perform targeted roadside checks”, according to the legislation. That word ‘targeted’ might be the subject of debate, and the document even stresses that “this functionality is intended to serve only as a pre-filter in order to select vehicles for closer inspection, and it does not replace the formal inspection process”. The tachograph data transferred during a check is limited (see panel, right). The remote reading device can be ‘hand aimed’ or vehicle-mounted – there is no mention of fixed roadside or gantry-mounted readers. According to tachograph manufacturer VDO, there are no plans to levy automatic fines based on transmitted data.

Third, an ITS (intelligent transport systems) interface will enable smart tachographs to transfer information to

## DATA COLLECTED IN ROADSIDE VEHICLE SCAN

During a remote reading, future digital tachographs, updated once per minute, will transmit the latest values of these:

- Vehicle registration plate
- Valid driver card
- Second driver card
- Current activity (driving or not)
- Last session closed
- Time adjustment
- Security breach attempt
- Previous calibration
- Date tachograph connected
- Current speed
- Time stamp

Also transmitted are any instances of the below items from the last 10 days:

- Speeding event
- Driving without valid card
- Card insertion while driving
- Motion data error
- Vehicle motion conflict
- Power supply interruption
- Sensor fault

telematics systems to help with fleet and driver management. The primary interface is intended to be a Bluetooth link, but other wired or wireless interfaces will be allowed with the right safeguards such as an additional PIN code. The law also prevents data classed as ‘personal’ that is stored on the tacho being transferred through ITS without the driver’s consent. The majority of the 70-odd types of ITS-transferable data are in fact ‘personal’, according to VDO.

With the potential to report all of the truck’s comings and goings, including loading points and route information traceable from the GPS information stored by the tachograph, data security is a concern. Operators will need to implement best practice data-handling measures, both on board their vehicles and in the office. For the unit itself, the legislation also states that “new security mechanisms for maintaining the level of security of the digital tachograph should be introduced ... to address current security vulnerabilities”.

Continuing with that subject, smart tachographs will also come with second-generation cards; for example, they will require a second-generation workshop card for calibration. However, to ease the transition, drivers’ cards will be backward compatible, and valid first-generation cards will also work – so drivers can keep their driver card to use with both systems.

VDO points out that the new digital tachograph is also set up to facilitate future features, such as wireless transmission of on-board measurements of axle loads that are required from 2021 across Europe. [IE](#)

### FURTHER INFORMATION

*EU Regulation 165/2014* (<https://is.gd/exubet>) and *detailed implementing regulation 2016/799* (<https://is.gd/qunewa>)

*Current drivers’ hours and tachograph rules for goods vehicles* – <https://is.gd/uyalop>  
*‘Another generation?’* – <https://is.gd/ekesen>