УДК 629.05/.35=111

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Road safety: the digital tachograph

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Tiredness and speeding are common causes of accidents among drivers of lorries and coaches. To address this issue, the digital tachograph became mandatory in 2006 on all newly registered commercial trucks and buses across the EU.

The digital tachograph includes driving, working, on-call and rest periods for the driver and the front passenger and stores this information on the personal driver card. It helps to find out when the maximum permissible driving time has been reached and how long the next break needs to be. In addition, the device records vehicle-related data such as the truck speed and driven distance.

The remaining travel time and upcoming rest periods are displayed for the driver on the display. Thus, drivers can always see how long they can remain behind the wheel, how long the subsequent break must be and how long they may continue driving after the break.

As well as automatically receiving speed data, the tachograph records the driver's activity selected from a choice of modes. The 'drive mode' is activated automatically when the vehicle is in motion, and digital tachograph heads usually default to the 'other work' mode upon coming to rest. The 'rest' and 'availability' modes can be manually selected by the driver whilst stationary. Time spent travelling on ferries and trains is recorded in the calculation as rest periods.

You can access daily and weekly figures just by pressing a button, and you can obtain an overview of upcoming compensation times.

Also this device provides reliable information to the inspectors responsible for enforcing EU policy through road and company checks.

Digital tachograph generally consists of a motion sensor protected inside the gearbox, which transmits its signal to the vehicle unit using a secure channel. The vehicle unit processes the motion signal together with its own clock signal and stores the results internally (black box) and on the driver's personal smartcard.

The records are stored for up to 365 days and should be downloaded every 28 days (in Belarus) for reviews by public authorities or accident investigations.

Information on calibration is also stored in the mass storage device and the driver is periodically reminded of test intervals and the remaining validity of the tachograph card.

There are several types of digital card, depending on the function of the card owner: driver cards used by drivers to record driving information, company cards used by operators to retrieve data regarding their employees from the tachograph head, control cards used by law enforcement agencies to retrieve data from the tachograph head, workshop cards used by authorised tachograph technicians to fit and calibrate tachographs.

Using digital tachographs it is possible to record a vehicle's fuel consumption with the help of the additional monitoring device (Fuel Gate). Drivers can print out a report covering up to three months. Fleet managers simply analyze this data on the screen. This shows you and your drivers when and where unusually large amounts of fuel were consumed.

Fuel Gate is a ready-to-install package, i.e. it can be installed by specialist personnel in vehicle work garages and fleets. A subsequent check is not necessary. This device will help save fuel and ensure a competitive advantage.