

Intelligent speed assistance and alcohol interlock devices

New cars to have breathalyser interfaces and speed limiters by 2022 following new EU rule

Reports of a new EU regulation says that all new cars must have an **interface installed which enables the fitment of aftermarket alcohol interlock devices** (integrated breathalysers) and **speed-limiters** by 2022 but also existing models sold after 2024 must also have this updated safety technology.

Extract from relevant EU document

Extract below is from Chapter 1, Subject matter, scope and definitions, **Article 3, sections (3) and (4)** in the Regulations of the European Parliament and the Council on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users, amending Regulation (EU) 2018 and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009.

<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52018PC0286&from=EN>

Article 3, Sections (3) and (4) are reproduced below

(3) Intelligent speed assistance means a system to aid the driver in observing the appropriate speed for the road environment by providing haptic feedback through the accelerator pedal with speed limit information obtained through observation of road signs and signals, based on infrastructure signals or electronic map data, or both, made available in-vehicle. [More](#) & [More](#)

(4) Alcohol interlock installation facilitation means a standardised interface facilitating the fitment of aftermarket alcohol interlock devices in motor vehicles. [More](#)

What is intelligent speed assistance?

ISA is a system which informs, warns and discourages the driver to exceed the statutory local speed limit. The in-vehicle speed limit is set automatically as a function of the speed limits indicated on the road. GPS allied to digital speed limit maps allows ISA technology to continuously update the vehicle speed limit to the road speed limit. There are three types of ISA:

- **Informative or advisory ISA** gives the driver a feedback through a visual or audio signal. A Speed Alert System is an informative version of ISA; it is able to inform the driver of current speed limits and speeding.
- **Supportive or warning ISA** increases the upward pressure on the accelerator pedal. It is possible to override the supportive system by pressing the accelerator harder.
- **Intervening or mandatory ISA** prevents any speeding, for example, by reducing fuel injection or by requiring a "kick-down" by the driver if he or she wishes to exceed the limit.

[Information on intelligent speed assistance](#)

What is an alcohol interlock device?

Alcohol interlocks are automatic control systems which are designed to prevent driving with excess alcohol by requiring the driver to blow into an in-car breathalyser before starting the ignition. The alcohol interlock can be set at different levels and limits. The alcohol interlock device is connected to a vehicle's ignition system. The vehicle will not start until a breath sample has been provided. This is given in the same way as any other breathalyser, there is a small mouthpiece on the device for the driver to blow into. The unit will then analyse the sample and if it is below the set limit the ignition will start, if it is over the set limit the car will not start.

[Information on alcohol interlocks](#)



What road safety problem do alcohol interlocks address?

Excess alcohol contributes to about 25% of all road deaths in Europe. A large part of the problem consists of 'high risk offenders' who offend regularly and/or exceed legal blood alcohol levels by a large amount. With a BAC of 1.5 g/l the crash rate for fatal crashes is about 200 times that of sober drivers. In some countries e.g. Britain, levels of police enforcement of legal limits has dropped in recent years, leading to increases in drinking and driving. Alcohol interlocks address excess alcohol in the driving population at large, as well as repeat offenders.

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How effective?

Large scale quantitative research on alcohol ignition interlocks in use has shown that alcohol interlocks are 40 to 95 percent more effective in preventing drink driving recidivism than traditional measures such as license withdrawal or fines. A literature review (UK Department for Transport, 2004) showed a recidivism reduction of about 28% - 65% in the period where the alcohol interlock is installed compared with the control groups who were not using the alcohol interlock. An EU study indicated that alcohol interlocks need to be fitted permanently to have an effect, for after removal of the lock recidivism increases again. Alcohol interlocks clearly have an important role to play within rehabilitation programmes.

There has been no evaluation of the impact that alcohol interlocks used in commercial transport have on road safety but Swedish companies report that fitting alcohol interlocks prevented excess alcohol amongst fleet drivers.

Benefits to cost?

In a recent cost benefit analysis, estimates are made for implementing alcohol interlocks for drivers caught twice with a Blood Alcohol Concentration (**BCA**) between 0.5g/l and 1.3g/l and for drivers caught with a BAC above 1.3g/l in several countries. The Benefits/Cost ratio in the Netherlands and Norway are:

For the Netherlands, the reduction of 35 traffic fatalities annually is valued at Euro 4.8 million per death, leading to a benefit of Euro 168 million pa. The Benefit/cost ratio = **4.1**

For Norway, the benefits are calculated as 5.5 deaths less per year a rate of Euro 5.9 million per death, or at Euro 32.5 million pa. Benefit/cost ratio = **4.5**

Who uses alcohol interlocks now?

These have been used widely in North America and Sweden in rehabilitation schemes for repeat offenders driving with a BCA over the legal limit. They are also used in government and company fleet cars in Sweden. Trials have been taking place in various countries such as the US, Australia, Canada, Belgium and Sweden.

Next steps for implementation?

Sweden has recently introduced a strategy on alcohol interlocks and the rehabilitation of offenders. It proposed that from the year 2012, all new cars should have an alcohol ignition interlock installed. However, Sweden is the only EU Member State that uses alcohol locks at present, even in rehabilitation programmes, although experiments are being carried out in Spain, Belgium, Germany, and Norway. More widespread application will require a technical specification to be devised for alcohol interlocks as well as debate about their use, whether for rehabilitation or in normal use.