

Summary:

Alcolocks in public busses

Trial results from Lillehammer, Norway

Alcolock or alcohol ignition interlock is a device installed in a vehicle, requiring the driver to provide a breath sample when starting the vehicle. If the driver has a breath alcohol concentration above the specified threshold value, the ignition is locked and the vehicle cannot be started.

Objective

The purpose of the Norwegian subproject was to study the acceptance of alcolocks among bus drivers, bus company management and bus passengers with the hypotheses that acceptance would depend upon the technical and practical aspects of the use of alcolocks. Consequently, the technical and practical functioning of the alcolocks also had to be studied quite thoroughly.

The drivers' acceptance

In general we found that the drivers accepted alcolocks in the busses they drive every day. Initially they worried about technical problems with the alcolocks causing delays and cancellations. Moreover, they were also concerned about possible unfounded suspicion of drinking problems because of the alcolock. These attitudes appeared in the meetings with the drivers and their representatives during the negotiation phase. The majority of the drivers were positive towards working with alcolocks as expressed in the interviews carried out right after the start of the trial period. At that time 75 per cent of the drivers expected that the alcolocks might cause technical problems. The percentage of positive drivers increased during the trial. However, if severe problems had occurred during the trial, the trial group drivers might have become more negative. No severe technical problems occurred, i.e. no delays or cancellations due to alcolock problems occurred. The trial drivers had a high degree of acceptance of alcolocks also after the trial, e.g. in the beginning of the trial 68 per cent of the drivers said that all busses in Norway should have an alcolock and after the trial 94 per cent of the drivers said so.

Alcolock data

In total 12792 initial tests were recorded. Of those, 11179 tests were accepted technically and 1613 were refused due to wrong way of blowing. There were five lockouts or positive tests of the total of 11179 technically accepted tests. Four of

these cases were followed by passed retests or had some reasonable explanation other than actual driving with BAC above 0.2 per mil. One case remains, however, without a certain explanation. As it was not possible to determine what actually happened in this case, i.e. who made this test, this case must be dismissed as uncertain and thus not accepted as a positive test. This uncertain situation led to the removal of the override buttons to avoid future uncertainty.

Management

Before the trial the main concerns of the management were driver acceptance of the alcolocks, delays or cancellations caused by malfunction of the alcolocks and suspicion of drink driving among the company drivers in Lillehammer. No severe malfunction occurred, and the drivers accepted the alcolocks. Consequently, the management wanted to keep the alcolocks as a safety measure for the passengers after the trial. At the time of writing the present report it was uncertain whether the alcolocks would be kept or not.

Passengers

In general the passenger surveys show that the passengers were so positive towards the alcolocks that the majority would accept delays caused by alcolocks, but only about a third of the passengers were willing to pay extra for the devices. A positive finding was that the alcolocks made rather few passengers suspicious of drink driving.

Local authorities

The local transport authorities were positive to the trial, and were represented in the reference group for the project. Moreover, the authorities agreed to abstain from the fine usually applied in case of cancellations if cancellations were caused by technical problems with the alcolocks. Nevertheless, the local authorities were not willing to contribute financially to the continued use of alcolocks in the busses after the conclusion of the trial.

Conclusions

The alcolock trial in public busses in Norway has shown that the alcolocks worked satisfactorily. Override switches were installed to avoid possible technical or practical problems, but these switches were removed because they could lead to uncertain conclusions as to what really happened when the switch was used. Moreover, no technical or practical problems which called for such switches occurred. The one disputable situation demonstrates the problem that override switches may cause. Reliable alcolocks remove the need for override switches.

Partly due to the well-functioning alcolocks and carefully chosen settings of the alcolocks the drivers accepted the alcolocks quite well, and so did the

management and the passengers. Another factor contributing to the drivers' acceptance was the inclusion of the drivers' unions and the drivers in the decision process from the very beginning.

In this project the bus company and the drivers agreed on a contract concerning the use of alcolocks, and the project also showed that agreed procedures are necessary. Such agreements should preferably be replaced by a legal framework if the use of alcolocks in public transport becomes mandatory by law.

The drivers' initial concern for possible drinking-and-driving suspicion seems to have been exaggerated as a large majority of the passengers said that the alcolocks did not make them suspect that the drivers may have drunk alcohol before driving.

Due to the costs of alcolocks, private transport companies cannot be expected to install alcolocks in busses or other vehicles on their own initiative. The motivation for the use of alcolocks must either be general legislation or requirements in the tendering for public transport. The mandatory use of alcolocks by law or by requirement in public transport tenders, depends on better knowledge concerning the accident reducing effects of alcolocks in public transport. Decisions about mandatory accident countermeasures should be based upon well documented effects of the countermeasures in question. However, alcolocks may also be considered a help for the drivers to avoid drinking and driving and consequent problems and a guarantee for sober driving for the passengers. Such effects can be added to the possible accident-reducing effects of alcolocks in a cost-benefit analysis.

Recommendations

Alcolocks used in public transport should have a high technical quality to avoid delays or cancellations due to technical problems with the alcolocks and to avoid the need for override switches. To prevent problems due to technical malfunction, a test or pilot phase before complete implementation is recommended. During this pilot phase, alcolocks with override switches are recommended to be installed in some of the vehicles.

It is recommended to include the drivers and their unions from the very beginning of in the implementation of alcolocks to ensure drivers' acceptance and to avoid practical problems.

Further implementation will depend upon knowledge of the accident reducing effects of alcolocks in public transport, and more research concerning this issue is needed.

Legislation concerning the use of alcolocks in public transport should be developed.

Random retests during driving are not recommended for public transport. Breaks without a retest should be as short as possible, preferably no longer than 20 minutes.

Positive or failed tests should be easily observed. Consequently, the alcolocks should give a clear signal to the driver and to the operations manager. The producers of alcolocks should consider how to have such a signal transferred quickly and easily to the operations manager. With a clear signal from the alcolocks, there is no need for the company to spend time on downloading and reading a lot of data.

Long time (30 – 90 seconds) for warming up in cold weather was one of the most annoying issues for the drivers. The producers should consequently try to reduce the time for warming up.

It is recommended that the display show only test passed or failed rather than the actual BAC value to make the feed-back as simple as possible.

In the Norwegian trial the attachment of the alcolock handsets to the dashboard of the busses was a problem and so was also the storage of the mouthpieces between tests. The practical use of the alcolocks should be taken into consideration by the producers to facilitate the daily use as much as possible.