

<p>Report of the ad-hoc GRRF meeting on EVSC Stuttgart 6-7 July 2005.</p>
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Chairman: Mr. Laszlo PALKOVICS

Secretary Mr. Peter Koleszar

Participants: see list of participants EVSC05-26.

Associated documents: *EVSC04-01 Rev 3 Amendment to R13*
EVSC04-01 Rev 4 Amendment to R13
EVSC05-23 Japan's comment on EVSC
EVSC05-24 Boxberg Agenda
EVSC05-25 Boxberg Attendance
EVSC05-27 Volvo 3P Proposal
EVSC05-29 Boxberg pictures

FIRST DAY meeting – 6 July 2005

Mr. Jennison opened the informal discussion on the Boxberg EVSC presentation

The chairman greets the participants who attended the Boxberg EVSC presentation, where unfortunately the majority of the “aimed” delegates were absent.

A roll call of the delegates is done.

The chairman asked the delegates to make comments on the EVSC presentation.

Mr. Dyrelund and others were pleased about the demonstration seen in Boxberg proving ground and based on the experience gained during this presentation recommended to make EVSC mandatory on every HGV.

Chairman's comment: making EVSC mandatory is not the task of the ad-hoc working group.

Mr. Beyer concludes the EVSC situation at the market: EVSC is one of the most safety-increasing systems ever invented and still its equipment rate is less than 5 % of the overall new built trucks and buses. This contains a relatively high equipment rate for coaches since 2003. This high equipment rate of coaches happened after a series of unfortunate accidents with coaches in 2003 which went through the press and lead to initiative of the bus fleets. Although the “bad press” helped the case of driving up equipment rates of this important safety system, still bad press is the worst way for the

industry to achieve higher safety standards. By being proactive, bad press should not be the reason why equipment rates go up for the majority of the commercial vehicles, but proactive initiative of the industry partners and legislators. Also the business case in Europe doesn't help the situation. Mr. Beyer pointed out that the EVSC system potentially will penetrate to the HVG market much faster in the US than in Europe. The reason is the different business model: the US truck market is mostly fleet driven, and the fleets are self insured. This results in a fact that the accident cost reduction is a primary issue, which drives the application of the EVSC systems. Mr Beyer asks the delegates for helping the distribution of EVSC in every country.

The chairman described the dispute between EVSC developers, industry people and legislation. Quantitizing EVSC is not trivial as seen during Boxberg demonstration.

Mr. Gaupp, Mr Straub pointed that solution can only be reached if parties are ready for a compromise and also asked if political representatives have any proposal for this. Solution may be a compromise between design and performance criteria - short term result needed.

Mr. de Haes commented that if we want to make EVSC widespread, first we have to make it understandable; first step is to define, clarify EVSC within the regulation, and this might be a sort of compromise.

Mr. Hidvegi thinks that this time the industry is more active pushing the regulators to make a decision. Practical approach is needed to allow both design and performance criteria.

Mr. Zastrow asked if there is official statement for the already defined NHTSA tests.

The chairman's answer: the point is still the same, the main concern is to be able to repeat the same test the same way always with the same result.

Mr. Galvarro: tests have proven that EVSC enables going into a curve with higher speed, this is quantity, that can be measured – performance criteria -, going faster is "better".

Mr Heess, Mr Hecker: safety does not mean going quicker in a turn, safety does not correlate with speed.

SECOND DAY meeting – 7 July 2005

The chairman opened the discussion, reviewed the agenda to come to a more consistent program. He reviewed the results of the Brussels meeting.

PHASE I: Discussion of proposals

Mr. TEYSSIER presented the proposal of Volvo 3P, document saved under reference *EVSC05-27*

This presentation contains 3 proposals based on document EVSC04-01 rev3

PROPOSAL 1.

Design requirements: selective braking and automatically controlled braking should be on the same level with “OR” relation. Calculating input values for EVSC should be possible in order to enable system development in the future, since measuring is not the only possibility for determining e.g. vehicle yaw-rate and lateral acceleration.

Mr. Brauningner, Mr. Gaupp, Mr. Galvarro, Mr. Teyssier, Mr. Hidvegi: slight dispute about the proposal. Agreement made: also during the roll-over detection no vertical wheel-load is measured, only calculated from other vehicle variables.

Consent: Technical Services need to witness that EVSC gets accurate input signals and this must be somehow guaranteed. For technical services it is enough to show the correlation between measured (with additionally installed reference sensor if needed) and calculated values.

Chairman: proposal for text modification: if the input signals are not directly measured but derived from other measured signals, correlation should be proved. Modification to the text is done.

PROPOSAL 2.

Justification of the demonstration of EVSC to technical services. There should be one representative vehicle selected for EVSC functional demonstration, and the test reports for other vehicles should be submitted. In this case all these (described in test reports) vehicles should be homologated provided they are equipped with the same EVSC as the demonstrated one. These tests should be done during the development process and not during the type approval,

Dispute.

Mr Gaupp, Mr. Teyssier, no need to find worst case vehicle (as e.g. for ABS tests) since because of the huge variety of HGV and EVSC tests it is also a problem to define worst case vehicles/tests. If there is no performance criteria, how to pick a worst case? Also finding a meaningful test is very challenging, but very important.

Chairman: for demonstration no worst case selection is needed, still the function test should be defined.

Mr. Gaupp: tests should be called function tests, the aim should be the function of the system, the capability of intervening in certain critical situations.

Mr. Heess: Demonstration should be the correct phrase, as the goal is to show the control, to demonstrate its operation.

Chairman: the specified test for category N3 is not needed at this phase of the amendment.

Mr. de Haes: Annex 18 could also include the needed modifications.

Mr. Jennison, Mr. Gaupp, Mr Teyssier: Annex 18 is not for performance criteria. It is more an audit approach, mainly on design tasks.

Mr. Galvarro: why not to use a defined ISO test available for EVSC demonstration?

Mr Brett: although there are some ISO tests existing, they are not easy to be executed.

Dr. Heess: There is no single ISO test that says what is a 'good' EVSC system. Focusing on a achieving a 'good' result in one test may mean that other aspects which are more important will be reduced. The result could then be that the highest potential is not achieved.

Mr. Gaupp, Mr. de Haes: demonstration is extremely expensive and also dangerous, even if safety equipment (outriggers, roll cage, etc.) is installed. Technical service would never do EVSC test without this equipment anyway.

Everybody agreed, that the demonstration can also be done – as a part of the approval process – also during development phase in order to save resources (e.g. Technical Service might join to the winter test for a certain time and observe a low-mu test.

The text of the amendment has been modified: only one vehicle configuration is needed for demonstration, and the submission of the test results of other configurations. If a common EVSC system is used on each combination, there is no need for repeated demonstration.

PROPOSAL 3 .

Warning light for EVSC during intervention should not be yellow as it is not a malfunction of the EVSC.

As a result “yellow” has been deleted from the text, the warning signal should be a “specific optical warning”.

Mr. Jennison: warning light should work as we already used to: system failure is signalled with permanent light, functionality (intervention) should be signalled as a blinking during the intervention.

Mr. Dyrelund, Mr. de Haes: amendment should contain the definition VSF activity, intervention, etc.

Mr. Heess: ISO 11992 will be revised in the near future, till that point trailer EVSC has other means of signalling operation/activity. After receiving this document some definitions for warning signals, drive-torque reduction and other functions may be revised.

Mr. Hirano presented slides about Japan's comments on EVSC – **EVSC05-23**

Japan thinks it is too hasty to make EVSC mandatory for different categories. The reason is that the share of roll-over accidents is very small in Japan.

In the presentation there was no data for injuries/fatalities in roll-over accidents available that would describe the severity of those accidents. Also the causes of accidents other than roll-overs are not known, but still may also be dynamic instability causes.

Participants of the meeting asked for a more detailed statistics and sees dangerous to present data in this form, since they might give a wrong impression about the severity of the accident situation.

Mr. Hirano will try to get more detailed statistics for the next meeting.

PHASE II: Editorial section – review of document EVSC04-01 rev3 starting with the first paragraph

Mr. Jennison: “Vehicle Stability Function”: function, not system, it can be a part of a brake system (like EBS) or other system. Includes one or both of

- Directional control
- Roll-over control

Mr. Gaupp: motor vehicle EVSC should include at least directional control; trailer EVSC should include at least roll-over control. This definition contains no mandation, and also freedom is maintained – still needed to define which system is thought for which vehicle kind.

The rev2 document had contained separate motor vehicle and trailer definitions and they were combined into a single definition at the last meeting (rev3). It was agreed to make no change. In mandating a vehicle stability function its content could also be mandated.

Mr. Dyrelund suggested that new function definitions should be created: e.g. EVSC1 for directional control, EVSC2 for roll-over control, EVSC3 for both functions. This would

help regulation institutions to use definitions easier. This did not gain general support and it was agreed to retain the current approach.

Mr. Brett proposed to exclude GPS and other external sensors and devices from EVSC input sensors. Paragraph 5.2.1.31.2 has been modified accordingly.

Paragraph 5.2.1.31.3 has been deleted as it was felt that the revisions to paragraph 5.2.1.31.2 now ment that it covered future developments.

Taking into account the earlier Volvo 3P proposal 2 discussions, paragraph 5.2.1.31.4 was amended by deleting the 'a dynamic test' demonstration possibility and adding more detail to the other two demonstration possibilities.

Paragraph 5.2.1.31.5. amended so that the operation of the EVSC is indicated to the driver rather than the driver being warned and the colour yellow being deleted.

New paragraph 5.2.1.31.6 about function of the optical warning (operation, system failure) has been created. Old paragraph renumbered as 5.2.1.31.7. and the colour yellow deleted.

Due to a lack of time the following paragraphs relating the trailers were not reviewed and are carried-over to the next meeting.

At the end of the meeting the chairman summarized the results of the meeting. One target of the meeting has been achieved, the definition of EVSC has been made with not a hard design requirement. Unfortunately concerning the performance requirements (function/demonstration) no steps have been made, which was to be expected. The chairman is going to organize further meetings with government representatives in order to understand the motivation, and move towards the compromise.

The chairman then closed the meeting thanking all participants for the contributions and their positive attitude.

Next meeting: in GENEVA on October 11 2005, 08:30; venue to be cleared soon.

Enclosed documents and presentations:

EVSC05-23 Japan's comment on EVSC

EVSC05-24 Boxberg agenda

EVSC05-27 Volvo 3P proposal

Peter Koleszar

Secretary EVSC ad hoc Meeting.