Meeting Report (2nd meeting)

Report on the second meeting of the GRRF Informal Working Group on Alternative Method Electronic Vehicle Stability Control (AMEVSC) held 7th-8th July 2010.

Venue: CLEPA Offices, 87 Boulevard Brand Whitlock; BE- 1200 Brussels, Belgium

Chairman: Dr. Michel LOCCUFIER (Belgium Ministry of Transport)

Secretariat: Mr. Paul JENNISON (CLEPA/Knorr-Bremse)

Participants: See document AMEVSC-02-02e

1. Chairman welcomed everyone to the meeting, especially Mr. Lescail and Mr. Thatcher who were attending for the first time, and the draft agenda was adopted without modification.

2. The report of the first meeting (document AMEVSC-01-08e) was reviewed and the following points noted.

   - The reference numbers of other AMEVSC documents were incorrect. The first pair of numbers "00" should have been "01". The Secretary apologised, explaining that a late change in the numbering structure had not been fed through to the report.

   - Item 4 did not fully reflect the view that a "separate technical unit" (STU) EVSC type-approval did not fit the ECE "1958 Agreement" structure, as it is not possible for the EVSC manufacturer to meet the conformity of production (CoP) requirements. For EVSC to fit within the "1958 Agreement", a new separate "EVSC" regulation would be required so that an EVSC type-approval certificate could be obtained. However, as EVSC is a function (not a component) that is vehicle dependant, the information document and conformity of production (CoP) requirements that go with a regulation would also be vehicle dependant. As a result the EVSC manufacturer could not show conformity with regard to the vehicles equipped as the vehicle manufacturing process is not under his control.

   - Item 2 did not make it clear that the availability of buses with outriggers is very limited due to the outriggers having to be integrated in the bus structure, while the outriggers are a "bolt-on" feature with regard to trucks and semi-trailer tractors. Therefore, tests would be typically carried-out concurrently on a collection of trucks, buses and semi-trailer tractors with the results being read across from truck to bus due to the very many common features between trucks and buses with regard to EVSC. The concurrent testing and the reading across of applicable results also minimises costs.

   It was agreed that the report would be amended to reflect the above points.

3. No new documents received for consideration.

4. The proposed amendment draft (document AMEVSC-01-07e) was further developed under the document number AMEVSC-02-03e as detailed below.

   - References in the information document to “system/vehicle manufacturer” and “manufacturer” amended to “system manufacturer” so that it is clear who is responsible for the document content.

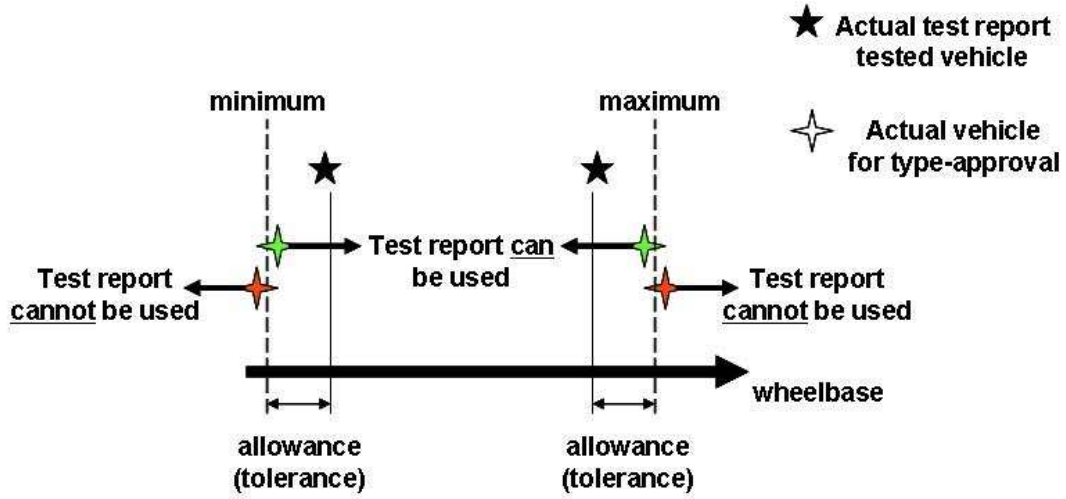
   - The single front axle steering – paragraph 2.3.2.(f) – was agreed not to be a limiting factor on the basis that critical aspect is the steering ratio and this is covered under (h) to which a reference was added.

   - Regarding any additional steering axles – paragraph 2.3.2.(g) – it was agreed that for simplicity all types should be evaluated, although a twin steer vehicle would be a different vehicle configuration to a single steer vehicle and the relationship between the twin steer axles would be covered by the steering ratio requirement (h).

   - The need for a tolerance on the wheelbase – paragraph 2.3.2.(s) – between that actually tested for the report and that allowed for the type-approval of a vehicle when using the report was the subject of much discussion, with the result that 2 possible texts are in square brackets [].

     The collecting together of different vehicles at the time of test report testing that represent all the variables that need to be evaluated and also cover the maximum and minimum wheelbases is a major logistical problem and may not be possible as maximum and minimum wheelbase vehicle are not typically mainstream vehicles. Therefore, it would be appropriate to give an allowance between that actually tested for the report and that which can be used in terms of a vehicle type approval.

     I.e.



     The discussion is to continue at the next meeting, with industry to provide a justification for the proposed 20% tolerance.

- The requirement wording for wheel type – paragraph 2.3.2.(t) – aligned with that for tyre type (paragraph 2.3.2.(u) so as to have standard wording wherever possible.

- Tyre type descriptions in paragraph 2.3.2.(u) aligned with those used in the tyre regulations.

- Tyre size – paragraph 2.3.2.(v) – deleted as it is in the first instant an ABS wheel/vehicle speed parameter. Remaining sub-paragraphs renumbered.

- Regarding suspension type – paragraph 2.3.2.(x (old)) – square bracket [] content deleted as not considered appropriate in the selection of vehicles.

- Same vehicle availability situation with regard to centre of gravity height – paragraph 2.3.2.(y (old)) – as with wheelbase. Especially the case with buses as it is not feasible to have an adjustable centre of gravity height device as with trucks due to the enclosed body work.

  Minimum value deleted as a lower centre of gravity height will always improve the situation. A similar text to one of those proposed for the "wheelbase" placed in square brackets [] for further discussion at the next meeting, with industry to provide a justification for the proposed 20% tolerance.

- Test objectives for lift axles, power train management and drive train options added to the test schedule – paragraphs 2.4.1.1., 2.4.1.2. and 2.4.1.3.. Secretary to review the need for any other test objectives, based on the content of paragraph 2.3.2., and present them for consideration at the next meeting.

- Modifications made to the information document content list – Annex 19, Appendix 11 – to align with the paragraph 2.3.2.. The secretary to review and propose any further changes to ensure alignment, for consideration at the next meeting.

- Test report listing – Annex 19, Appendix 12 – to be review by the secretary and changes to ensure alignment proposed for consideration at the next meeting.

5. In response to the question "what is the advantage for the vehicle manufacturer of the proposed amendment to Annex 19" it was explained that it is seen as a 3rd option which can provide the Technical Service with a higher level of confidence in the system than the existing methods as there are specific test results that can be evaluated.

   The 1st option is to carry-out a demonstration (2x to show repeatability), at different load conditions, on <u>each</u> vehicle to be type-approved (Annex 21 paragraph 2.1.3.). As it is a demonstration there are no pass/fail values. Only an improvement must be shown with EVSC 'on'.

   The 2nd option is to carry-out a demonstration (2x to show repeatability) at <u>one</u> load condition on <u>one</u> vehicle requiring type-approval. Other load conditions and other vehicles requiring type-approval, which utilise the same EVSC system, can be evaluated/approved using a simulation tool. There is no requirement in the use or the validation of the

simulation tool (Annex 21, Appendixes 1 and 2) that restricts its use to the parameters of the vehicles that were used in the validated of the tool.

In the light of the possible unlimited extrapolation between the vehicles used to validate the tool and the vehicles the tool is used to type-approve, a new item "simulation tool limitations" will be added to the agenda for the next meeting.

6. To help in the understanding of how the proposed Annex 19 method would work, the secretary undertook to construct a flow diagram for consideration at the next meeting.

7. In considering the content of paragraph 2.3.2., the conflicted with regard to "on one vehicle" (Annex 21 paragraph 2.1.3.), "vehicle type" in Annex 21 Appendix 2 paragraph 2,3, (Annex 21 Appendix 3 paragraph 2.1.) and paragraph 2.2. was once again highlighted (see item 5 of the first meeting report).

   Mr. Thatcher undertook to look at an amendment to paragraph 2.1.3. of Annex 21 for consideration at the next meeting

8. Next meeting:

Date: 7th September 2010 – starting 09.00 hrs and finishing 16.00 hrs.

Venue: CLEPA Offices, 87 Boulevard Brand Whitlock; BE- 1200 Brussels, Belgium

Input: Any comments or documents relating to this meeting should be sent to the CLEPA Secretariat (Techsec@clepa.be) with a copy to paul.jennison@knorr-bremse.com in e-format as early as possible prior to the meeting.
