



Report of 1st meeting of GRRF/IG on Automated Connections between Vehicles (ACV)

Venue: Agoria, Diamant Building, Auguste Reyerslaan 80, 1030 Brussels
Chairman: Anders Gunneriusson (anders.gunneriusson@transportstyrelsen.se)
Secretariat: Annie Luchie (annie.luchie@agoria.be)
Date and time of the session : Friday, 25th March 2011
09:00 am until 04:30 pm

1. Welcome and Introduction

The Chairman welcomed everyone to the meeting. Invitations for participation in this working group were sent to all heads of delegation participating in GRRF. 12 people presented themselves as wishing to participate in the work of this group. Meetings of this informal group will be held in Brussels and also in Geneva in conjunction with meetings of GRRF.

2. Roll call of delegates

Participants introduced themselves. For current members of this working group and participants in this meeting, see participants list.

3. Approval of the agenda

The agenda was approved with the addition of a new working document from Jost (ACV-01-02) to be discussed under agenda item 4. Also a discussion of document GRRF- 67-15 was added to the agenda.

4. Reminder of the background

The Chairman explained that it is better to have requirements for couplings that are on the market rather than to give exemptions to the current prescriptions. Hence, there is a need for some specific requirements. The Swedish technical inspection has extensive experience with these kind of couplings.

Within the ISO standards committee this has been processed for some time and more and more companies are working with this kind of coupling. There is a growing area of interest from the market so now is a good time to adapt the legislation.

Sweden asked GRRF for guidance as to how to proceed. Some documents were produced to explain the problem.

The meeting studied some detailed pictures of the VBG system. Jost have a similar requirement. The reason for the work that now needs doing is the same for every manufacturer. Not only the mechanical coupling is something that needs improving but also the electrical connections. Something on the fifth wheel is needed and something on the trailer side.

R13 is very focussed on manual connection between truck and trailer. For the last 6 or 7 years we have been trying to find something which is more optimised for automation.

The meeting studied a Jost movie to see how the system works. The triangular housing goes in the mouth of the fifth wheel. The triangular housing can turn up to 180° so that it can also pick up the trailer from the side. The fifth wheel is also allowed to oscillate.

Working document ACV – 01 – 02 was discussed. The Jost coupling does not require an amendment to R55.

Suggestion from Jost : reference to connector ISO 7638 will refer to the manual connector only and something could be added in addition, to allow the realisation of electric control lines for the automatic coupling systems. Couplings are not only fully automated but also partly automated.

Discussions will also be required on signals for combinations with more than one trailer, as this effects the point to point connections between towing vehicle and single trailer.

Jost proposed to divide the work in two steps. In a first step a towing vehicle and one trailer only and in a second step a towing vehicle with more than one trailer, as experts for each of these two steps may be different.

VBG agreed with these two steps but pointed out that we must be careful with the definitions as these effect both steps.

The group gave consideration to working in three steps but concluded that we don't need three steps for the 5th wheel coupling.

BPW remarked that if we had only been looking at the ISO, these systems would never have been introduced into the market.

5. Review of the Terms of Reference and Rules of Procedure

The informal group discussed and confirmed the objectives and the scope of the group and considered timescales and deadlines. See new draft Terms of Reference.

VBG considers that the aim of this group is adapting the regulation to the standard. The group should widen the scope, so it doesn't need to do the same exercise again in some years time. It must also allow for more systems than are available today. The definitions needed in R55 is one step.

The group considers that we need to also include N2 vehicles in the scope. The group also needs to look at the level of automation and at uncoupling in the new definitions for R55. Signals to and from the second and further trailers need also be addressed.

If the group would do the work of amending R13, ISO and R55 in parallel then the timing for the whole exercise will be much shorter. Jost thinks that doing three things at once is too much but the Chair pointed out that GRRF is already thinking along these lines and is expecting this.

The question was asked as to whether there was only an amendment needed to brake related signals or whether also lighting would need looking at. The group considered that lighting would likely need amending too. The Secretary however did not believe lighting could be in the scope of this group. The group concluded that this informal group would inform GRE if it found that lighting needed looking at.

The group considered that all types of vehicles needed to be looked at with the exception of M1.

As not all automatic coupling systems are fully automated, the group will use both the terms FACS (fully automatic) and PACS (partly automatic).

The informal group discussed and decided on a new name for the informal group : Automated Connections between Vehicles (ACV).

6. ACV in R13

6.1. Consideration of existing standards

The informal group will be looking at ISO 13044-1 when it looks at the definition for R55. Standards are available and will be looked at in this group. A document will be drafted showing the main points from the technical requirements contained within the standards. Mr Svensson will look at ISO 7638 and Mr Algeuera will look at ISO 13044-2. The Chairman will be inviting mr W. Gaupp to the next meeting of this group.

6.2. Overview of the existing technologies

The group looked at the VBG and Jost systems under agenda item 4 above. In addition, BPW is to prepare a presentation for the next meeting.

6.3. Draft outline definition of the scope and field of application

The scope and the field of application are to be outlined at the next meeting.

6.4. Draft outline definition of alternative requirements to ISO 7638

The outline in GRRF-69-14 needs to be further elaborated. Paragraph 5.1.3.6.3. and onwards needs working on.

6.5. Draft outline definition of a test method

The outline definition of a test method will be covered together with the elaboration of alternative requirements to ISO 7638

We have in the group for ISO 13044 test methods defined which could be referred to or could be used directly.

6.6. Compilation of concerns raised by the delegates

The following concerns were raised by participants :

- The need for a clear definition, point to point, response time, coil/cable length and items as contained in doc ACV-01-02
- Requirements for both ISO 7638-1 & 2.
- The comments from mr W. Gaupp
- The erroneous perception by the driver that he may not need to do certain checks given the ACV system
- How to check for wear during PTI
- The trailer being braked after accidentally getting disconnected

6.7. Roadmap for the working group's activities

Just is to provide an outline/proposal on what an appendix to R13 that handles ACS couplings should look like, as an alternative to amending R13.

This outline/proposal is to be considered by the group at its next meeting.

7. ACV in R55

7.1. Consideration of existing definitions

For the 5th wheel no changes are needed.

The level of automation (fully/partly) needs to be included.

We need a specific class for some FACS.

We need to review the current definition for class S.

7.2. Overview of the existing technologies

For the time being, this is as contained in agenda item 6.2 above.

7.3. Compilation of concerns raised by the delegates

No concerns are apparent to the group at present.

7.4. Roadmap for the working group activities Report

Document GRRF-69-13 is to be considered in detail by participants in preparation of the next meeting.

Additional proposals are welcomed.

8. Report to GRRF Next meeting

The new draft Terms of Reference are to be made available for the May session of GRRF. The Chairman is to prepare a short overview of the work done at this first meeting.

9. Other business

There were no items discussed under this agenda point.

10. List of action items

- Everyone to review GRRF-69-13
- Mr Svensson and Mr Algueera to review ISO standards as above
- Mr Manz to prepare a presentation
- Technical requirements from standards

11. Date and place of next meetings.

The next meeting of this working group will be held on 17th May 2011, commencing at 9.30 hrs, in the Diamant building in Brussels.