



Report of 4th 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 : Monday, 19th September 2011
10:00 am until 04:30 pm

1. Welcome and Introduction

The Chairman welcomed everyone to the meeting. Given that new members joined the working group, all members introduced themselves.

2. Approval of the agenda

Under agenda item 7 discussion of document ACV-01-04 Rev 1, Terms of Reference was added.

3. Outcome of the 3rd meeting of the IG/ACV

The list of action items resulting from the 3rd meeting of this working group was run through. Some progress had been made on mixed voltages but this was still being worked on.

4. ACV in R13:

Document ACV-04-02

Knorr-Bremse expressed the opinion that this working document was written more like an ISO standard than as a piece of legislation. The question was asked as to why we needed to delete the references to ISO 7638 given that a simpler solution would be to have an alternative reference to an automatic coupling system. Wabco shared this view.

The Chairman confirmed that this item was looked at and that ISO 7638 was still in there. The document was written in this way on the recommendation of Mr Wilfried Gaupp who may join the group next year as a private individual.

We need a definition of an automatic coupling system between vehicles and if we have an alternative, then in annex 22 we have the special requirements.

The Chairman explained that we have a three step approach :

- Introduce an interface
- Put a definition in R55
- Specify which vehicles will use ISO 7638 and which vehicles will use ACV

Durability appears in this document and in R55. Durability can be handled separately.

In R13 there are 46 references to ISO 7638. 44 of those are there because the signals have not been defined. ISO 7638 is not a pure interface. In future maybe other signals will be added. The text as we have it now is robust against future changes.

In R55 there are references to R13. Currently the proposal is to add a level of automation in R55. We could refer to R55 every time FACS is mentioned in R13.

VBG feels that if we go the shortcut way, there may be a misinterpretation and this is what we should try to avoid. Knorr-Bremse however feels that each regulation should stand on its own given that Contracting Parties may sign up to one regulation and not to the other.

The Chairman concludes that we must have a solution for the technical requirements. We should consider this first and write it one way or the other afterwards.

BPW would like to speak about functionality rather than about pins. The text wants to go towards specifying functionality.

ISO 13044 is the interface of FACS. This reference standard was not available yet when this working group started its work. ISO13044 is still not established so we can't use that.

Two options were identified : carry on with the technical requirements or talk about the approach.

The Netherlands was unclear as to whether on durability ISO7638 is only the pins or also the robustness of it.

The working group concluded that the group would talk about the technical requirements first and would look at where to put it later.

The technical requirements for ISO 13044 have now been voted but the process is still going on. It will be the autumn of next year before we have a standard.

Knorr-Bremse will draft a proposal for an automated connector as an alternative to the ISO 7638 in R13.

12/24 volt

There is always a technical solution but all have disadvantages.

Europe and South America have 24v, The USA has 12 volt, Australia have both but with more 24v, they use a converter. The Australian Design Rule (ADR) 35-03 gives an option. Japan has 24v.

On FACS it is difficult to make 12v and 24v such that they mechanically do not fit. The Regulation needs to mention safety critical points and the driver needs a sign to say which is which on a type plate or on a sticker.

Response time

There is no longer a need to discuss this, the approval authority or the test house will get an agreement on this with the vehicle manufacturer. This has been taken out of the proposal.

Solid connection of hoses

The semi-trailer flexible hose is part of the truck, the full trailer flexible hose is part of the trailer. For FACS we don't need to regulate as for non-automated vehicles. We need to add to R13 that flexible hoses are not needed in the case of automated connections.

In annex 6, point 2.5 : add : This requirement for flexible hoses and cables does not need to be applied to fully automatic coupling systems.

References to R55

Given that every regulation should stand on its own, it is better to amend RE3 with the definition of fully automatic coupling systems. But the definition should be in R13 also. In R13 we also need to define "automated connector".

Example of truck and trailer drawing

The drawings need to be updated so they look different from the ISO drawings. Jost took it upon himself to do that.

In 5.1.3.6.2. we need to add a sentence and a link to the drawings saying "A manual option for ..." VBG agreed to circulate a draft to the group. We need an automatic switch between manual coupling and automated coupling.

5. ACV in R55

This agenda item is to be got back to.

6. Vehicle combination

In Australia there are two Australian Design Rules specifically for road trains. ADR 63 for the towing vehicle and ADR 64 for the trailer. The Australian representative will distribute these and the links to this working group. All possible vehicle combinations have been tried in Australia. Single axle trailers can only be the last vehicle in a combination.

The R55 tell-tale must be in the cab. This needs to be added.

The working group discussed trailer combinations and the signals between them. We need a distinct address for each trailer and for its position in the train.

R13 says that one must have a 'suitable' tractor but where does it say what suitable is?

7. Other business

Given that the working group ran out of time for this meeting, the Chairman decided that the Terms of Reference will be discussed at the next meeting.

8. List of action items

- VBG to suggest a text for 5.1.3.6.2.
- Jost to look at amending the drawings

9. Date and place of next meetings.

The next meeting of this working group will be held on 21st November 2011 at 10 am at the offices of Agoria in Brussels.