Informal document **GRRF-82-02**
82nd GRRF, 20-23 September 2016
Agenda item 5

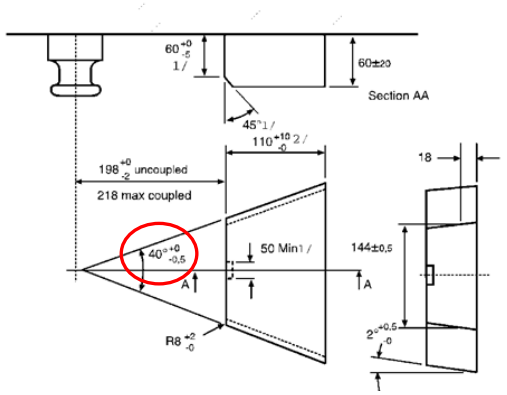
Proposals from IWG-R55 to GRRF-82

- Minor corrections and clarifications
  - Typos in Annex 5 figures 12 and 17

Amend figure 12 to read:

Change dimension sleeve bore diameter ~~Ø06H8~~ to **Ø60H8**

Amend figure 17 to read:



VBG GROUP

Proposals from IWG-R55 to GRRF-82

- Minor corrections and clarifications
  - Articulation angles as installed.
    - 5th-wheels pivoting around a transvers axis
      - 6° to the front and 7° to the rear
    - Drawbars with drawbar couplings
      - ±90° around a vertical axis
      - ±20° around a transvers axis by rear mounted couplings
      - ±6° around a transvers axis by underslung mounted couplings
        - » In this case the drawbar is considered to be an endless line starting in the coupling point

Proposals from IWG-R55 to GRRF-82

- Minor corrections and clarifications
  - Identification of worst case for testing

Annex 6

Amend paragraph 1.1. to read:

1.1. Samples of coupling devices shall be tested for both strength and function. **Tests shall be performed in relation to worst case conditions. Theoretical assessment may be carried out to determine worst case conditions** Physical testing shall be carried out wherever possible but unless

    - Clarification that worst case is supposed to be used
  - Linguistic change in relation to calculation based approval of "simple designs"
    - The word "check" is exchanged to "assessment"

Proposals from IWG-R55 to GRRF-82

- Attachment points for secondary coupling devices
  - Broadened definition of secondary coupling device
    - Addresses coupling devices in general rather than just Class B
  - Attachment point required for towing bracket/drawbeam aimed at towing of O1 and O2 trailers.
    - Location of a single or a double attachment point stated.
    - Alternatively attachment point may be integrated to the coupling mounted on the towing bracket/drawbeam
  - Attachment point required for coupling head/drawbar eye aimed at towing of O1 and O2 trailers.
  - Performance and test requirements detailed

Proposals from IWG-R55 to GRRF-82

- Separation of approval process from application assessment
  - Components can be approved without knowing anything about the vehicles where they will be installed.
    - In essence definitions and the annexes 5 and 6 set the requirements
  - The way application requirements are calculated sets the safety margin
  - All application assessment formulae are moved in the new annex 8

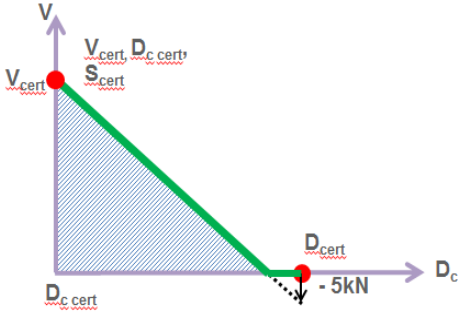
Proposals from IWG-R55 to GRRF-82

- Adding multi vehicle combination assessment formulae
  - The traditional two vehicle combination formulae are moved to annex 8
    - Note, only the formula for full trailer can be used to decide towable mass, however then it is just one out of several decisive factors.
  - Then the formulae for more than two vehicle combinations according to ISO18868 are added to annex 8
    - These formulae are by necessity more complex
      - Support structures e.g. web applications will supply easy to use vehicle combination assessment tools
      - Vehicle combinations commonly seen in the roads today can then be assessed at the same safety level in different markets

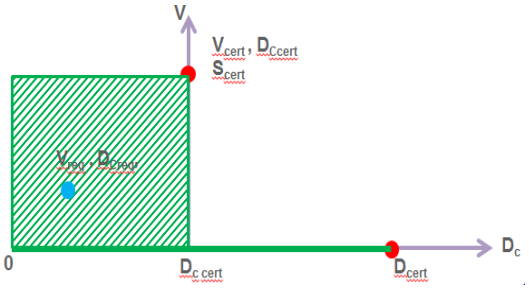

Annex 8

Proposals from IWG-R55 to GRRF-82

- Adding D_c/V-trade-off possibility to annex 8
  - Some multi vehicle combinations require high D_c-performance in combination with a low V-performance



Trade-Off



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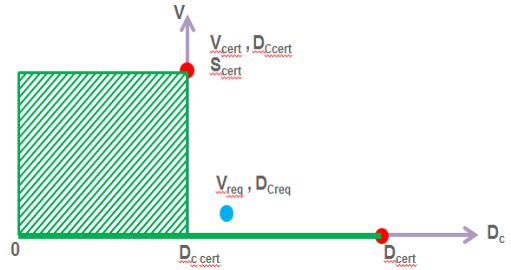

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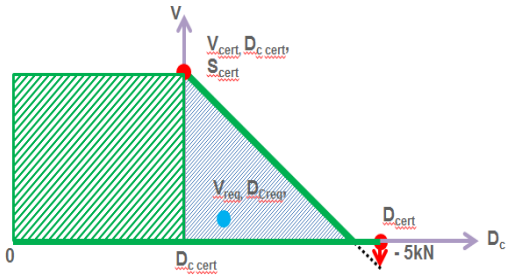

OK, Practice of tomorrow