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Comments on IWG R55 proposal to GRRF

A document explaining the rational behind the proposal of a new Annex 8 to the R55 introduced in the working document GRRF/2017/03

Submitted by the informal working group on R55

- At the 79th session of the GRRF the IWG got support for the new Annex 8 containing all application requirements necessary to type approve a vehicle equipped with a given coupling device. This support was based on the informal document GRRF-79-03.
- At the 82nd session of GRRF working documents GRRF/2016/29 and GRRF/2016/30 got comments on being too much "In use" oriented
- The comments focused on that the regulation is about type approval.
- As a consequence the working group has reassessed the proposal.

- In the reassessment the working group focused on what is the situation in the current version.
 - Do we need the D- and V-value formulae at all for type approval?
 - For component type approval the answer is NO.
 - For vehicle type approval the answer is <u>YES</u>.
 - Special care has to be taken for center axle trailers
 - Special care is also needed for fifth wheels applications
- Vehicle type approval:
 - The formulae shall be used by technical services to <u>verify</u> maximum towable mass declared by VM in Annex 2:
 - The paragraph 5.3.5.1. currently reads "The characteristic values shall be at least equal to those applicable to the maximum permissible towing vehicle, trailer and combination masses."
 - Annex 2 paragraph 6 requires VM to provide technical information necessary to perform this check.
 - The new proposal from IWG R55 is found in the working document GRRF/2017/03: it clarifies current wording and refers to new Annex 8.

Clarifications

- Annex 8 does not define any in-use requirement for the driver.
 The driver shall only take care that the trailer(s) mass does not exceed the maximum towable mass of the towing vehicle(s), the same way as today for two-vehicles combinations.
- Annex 8 only contains technical requirements necessary to type approve a vehicle equipped with a given coupling device.
 At 79th session of GRRF, these requirements were called "application requirements", since they deal with the vehicle application of R55 approved coupling components. Maybe this generated confusion with in-use requirements.

Annex 8 will be used:

- by technical services at the time of type approval, to check the maximum towable mass specified by the Vehicle Manufacturer (VM) in Annex 2.
- by VM to define max towable mass (and V).
- Possibly by fleet managers to configure new combinations.
- Annex 8 won't be used by drivers.

- The new formulation of Annex 8 states a process how to verify those maximum permissible masses for:
 - Two-vehicle combinations
 - Multi-vehicle combinations
- Two-vehicle combinations
 - Clarity is gained as the new proposal tells how the requirement in paragraph 5.3.5.1. shall be verified. In current version of R55 this is up to the reader to understand.

- Multi-vehicle combinations
 - New formulae are added to cover vehicles involved in multi-vehicle combinations.
 - In addition to the formulae above, the Annex 8 provides a trade-off process between Dc and V values, based on that coupling equipment in a multivehicle combination is relatively less stressed as compared to a two-vehicle combination.
 - As the towable mass and combination mass permissible is different for a two-vehicle combination as opposed to a multi-vehicle combination the paragraph 6 of the annex 2 is changed accordingly.

- Application of the new Annex 8
 - The process outlined in Annex 8 is to be used by the manufacturer and the technical services to verify that the permissible masses stated in the information document is consistent with the performance values of the coupling equipment specified in the same document.
 - Fleet managers may also benefit from these processes when configuring new combination.

Conclusion

- The proposal gives the regulation a form where not only the multi-vehicle combinations are accounted for but where the two-vehicle combination verification process is made transparent.
- Hence an improvement also to the current sphere of application for R55.