Proposal for amendments to ECE/TRANS/WP.29/GRVA/2020/3 and ECE/TRANS/WP.29/GRVA/2020/4

Proposal 1 (Draft Regulation on Cyber Security)

The amendments to the text contained in document ECE/TRANS/WP.29/GRVA/2020/03 are in bold for new and in strikethrough for deleted text.

Paragraph 1.1., amend to read:

This Regulation applies to vehicles, with regard to cybersecurity, of the categories M, N, [O, ~~R, S and~~ ~~T~~].

Proposal 2 (Draft Regulation on software update processes)

The amendments to the text contained in document ECE/TRANS/WP.29/GRVA/2020/04 are in bold for new and in strikethrough for deleted text.

Paragraph 1.1., amend to read:

This UN Regulation applies to vehicles of the categories M, N, [O, ~~R, S and~~ ~~T~~] that permit software updates.

Justification:

1. CEMA requests to temporarily exclude and postpone to a future stage the inclusion of R-S-T-categories in the draft new UN Regulations on Cybersecurity and on Software Update Processes.
2. CEMA suggests extending the scope of the new UN Regulations to these categories as a possible second step, after experience is gained following the application of the requirements for other categories, through a new Series of Amendments and after proper analysis by the Agricultural machinery industry.
3. CEMA has so far **not** been monitoring the work of the Task Force on Cybersecurity and Software Management and the drafting of the new UN Regulations, and is unfortunately not yet familiar with the nuances contained within them.
4. Feasibility for their application to T-category vehicles requires a comprehensive review through test phases within industry. The portfolio of R-S-T-categories is diverse and specific issues for these vehicles need to be carefully evaluated.
5. T-category vehicles generally use advanced connectivity for operational management with GPS and functional control of in field operations. This entails a specific approach. Software updates for both on-road and in-field functional control will be done in the same manner. Any legislation should take this into account. The software updates may require either a recalibration or configuration of the tractor and/or trailed implements.
6. Although R-S-T categories are seen as 'vehicles' in the regulatory context, they are agricultural 'machines'. These highly specialised, purely application-based machines, do not work on public roads and do not require a dynamic or immediate software update mechanism. Their presence on roads is almost negligible, limited in overall numbers and on road driving time compared to M-N vehicle categories.
7. R-S category vehicles are considered machines and are subject to the Machinery Directive 2006/42/EC, which is not related to type approval and which does not apply for road circulation. EU type approval for R-S categories is optional, meaning road circulation can be achieved within an EU member state with a national approval or by compliance to national requirements. The proposed UNECE regulations for these vehicles would therefore not be applicable.
8. Categories R-S are always towed by category T in the agriculture domain. They should therefore be included in scope only alongside category T at a later stage, if deemed appropriate.

9. The technical capacity and added economic burden on SME's producing R-S category equipment by these new regulatory provisions requires analysis whilst being cognizant of the fact that the majority of the equipment has very limited electronic content.

10. CEMA believes that potential safety issues related to software updates and cyber security are most critical for autonomous driving 'vehicles', because the control of the vehicle is performed by the Automated Driving system 'on public roads'. T-category, can currently be equipped only with automated 'functions' for the convenience of farmers during field operations. The environmental and ethical conditions are therefore completely different. CEMA is working on specific levels of automated functions that differ greatly from the automotive. Currently these highly automated machines are not intended for autonomous driving on public roads, and are therefore trailing behind in terms of research and analysis related to partial or fully autonomous functions or self-driving modes for on-road use.

11. Digital protection is very sophisticated for these machines. The agricultural machinery industry needs time to understand the changing vulnerabilities in its machines. Cyberattack countermeasures to the electronic architecture and interfaces need to be identified and tested. For these in-depth analyses CEMA is working closely with AEF, the Agricultural industry Electronics Foundation, a global organisation with the expertise and organisational structure to deliver the necessary data.

12. T-category vehicles are different in design and use from vehicles of category M and N, as already mentioned. Hence, risks and threats related to cybersecurity are also different. After assessment of the application of the new UN Regulations for vehicles of category M and N, CEMA will study the specific risks and threats and introduce, if deemed appropriate, a proposal to extend the scope addressing necessary considerations.