TPMSTI-CI-01-05

1st session of the GRBP TF

TPMSTI on “Communication Interface” (TPMSTI-CI), 17 September 2020

**ECONOMIC COMMISSION FOR EUROPE**

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Noise and Tyres (GRBP)

Task Force on Tyre Pressure Monitoring System and Tyre Installation (TPMSTI)

**Draft Report of the 1st meeting of the Task Force TPMSTI**

**Amendments to UN Regulation No 141**

**regarding the “Communication Interface”**

**September 17, 2020 starting at 9:15 am ending at 11:30 am (CET)**

**WebEx only !**

[**https://ecwacs.webex.com/meet/avosinis**](https://ecwacs.webex.com/meet/avosinis)

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|  |  | Working Documents\* Documents not yet available |
|  | Welcome and opening remarks |  |
|  | *Mr. Andreas Vosinis (DG-GROW), the Chair of this TF, opened the 1st meeting of TF on TPMSTI-CI on “Communication Interface” and welcomed all participants.* |  |
|  | Introduction of participants and organizations |  |
|  | *All attendees agreed to share the information, which is available on the Attendance List, and to allow uploading of the list to the UNECE Website.**All attendees agreed that information to all experts via mail will be send in such a way that every expert can see the other experts’ mail addresses.* | [TPMSTI-CI-01-05](https://wiki.unece.org/download/attachments/109349464/TPMSTI-CI-01-05%20Attendance%20list.pdf?api=v2) |
|  | Adoption of the Agenda | [TPMSTI-CI-01-01](https://wiki.unece.org/download/attachments/109349464/TPMSTI-CI-01-01%20Draft%20Agenda%201st%20meeting%20-%20UN%20R%20No%20141.docx?api=v2) |
|  | *The Group adopted the Draft Agenda.* |  |
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|  | (EC) – Proposal for amendments to UN Regulation No. 141* Exchange of information on the documents esp. the sixth meeting of TF on TPMSTI
* Open issue: “Communication Interface” (see below)
* Key elements / Planning
* Informal document for 72nd session of GRBP
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|  | **Background information**When GRBP approved at its 72nd session [**ECE/TRANS/WP.29/GRBP/2020/20**](http://www.unece.org/fileadmin/DAM/trans/doc/2020/wp29grb/ECE-TRANS-WP.29-GRBP-2020-20e.pdf)with the additional changes proposed in[**GRBP-72-19-Rev.2**](http://www.unece.org/fileadmin/DAM/trans/doc/2020/wp29grb/GRBP-72-19e-Rev.2.pdf)except the proposal for ***Paragraph 12.7.***,.* [**ECE/TRANS/WP.29/GRBP/2020/20**](http://www.unece.org/fileadmin/DAM/trans/doc/2020/wp29grb/ECE-TRANS-WP.29-GRBP-2020-20e.pdf)- (TF TPMSTI) Proposal for a new 01 series of amendments to UN Regulation No. 141 (Tyre pressure monitoring systems)
* [**GRBP-72-19-Rev.2**](http://www.unece.org/fileadmin/DAM/trans/doc/2020/wp29grb/GRBP-72-19e-Rev.2.pdf) **–** (TF TPMSTI) Proposal for amendments to ECE/TRANS/WP.29/GRBP/2020/20

it was also noted, that there is still one open issue to be solved before the work to amend UN Regulation No. 141 is finalized (see also [**GRBP-72-21**](http://www.unece.org/fileadmin/DAM/trans/doc/2020/wp29grb/GRBP-72-21e.pdf)).**Open issue for UN Regulation No. 141*** Define the requirements for the “Communication Interface” between the towing vehicle and the to be towed vehicle(s) of category O3and O4
* Paragraph 5.6. needs to be updated and Annex 5 needs to be drafted
* Paragraphs 5.5.2. and 5.5.5. need to be reviewed and updated if needed
* ***Communication Interface between N2, N3 & O3, O4***

*§5.6.*Communications interface between towing and towed vehicles*Annex 5*Compatibility between towing vehicles and trailers with respect to ISO 11992 data communication*§5.5.2*In the case of a vehicle of category N2 or N3 towing at least one vehicle of category O3 or O4, the optical warning signal referred to in 5.5.1. must indicate whether any warning relates to the towing or to the towed vehicle.*§5.5.5.*For vehicles of category O3 and O4, the optical warning signal referred to in 5.5.1 must be displayed to the driver of the towing vehicle of category N2 or N3, as specified in paragraph 5.5.4.*Open question:**Even if the requirements for vehicles of category O3 and O4 are coming into force, a lot of trailers without any TPMS will be in traffic for a long time. How shall these trailers be connected to vehicles of category N2 and N3 where TPMS is installed?***Work to be done*** Start immediately after the 72nd session of GRBP the small working group on the “Communication interface”
* Elaborate the needed requirements, which have to be implemented in Paragraph 5.6.
* Prepare a new Annex 5; Annex 16 of UN Regulation No. 13 can be used as guideline

*Finland presented its comments to R No. 141 regarding paragraph 5.6. “Communication Interface” (TPMSTI-CI-01-02).**The Group discussed Finland’s comments and added the outcome to the document (TPMSTI-CI-01-02 Rev.1):*1. Connecting multiple trailers together and getting the TPMS-information from all the wheels to the towing vehicle.

***Comments during 1st meeting:****Yes up to a number of 5 vehicles of category O3/O4; beyond 5 vehicles?*1. Changing tyres; this probably requires visiting a repair shop in order to get the TPMS-system to recognize the new wheel?
2. The amount of wheels may be up to 30 in one vehicle combination: OK

***Comments during 1st meeting:****No problem, this is covered by the proposal up to a number of 5 vehicles of category O3/O4; beyond 5 vehicles?**The rate of the multiplexer is 100 ms. This means to check 10 tyres 1 s is needed, to check 30 tyres 3 s are needed. In other words every three seconds all 30 TPMS are checked.*1. It’s usual to change the trailers behind the towing vehicle very often. The system should be capable to “understand” the changes between (multiple) trailers.

***Comments during 1st meeting*:** ***I****f ISO11992 is used, no problem! 🡺 Is ISO11992 mandated? No!* *Open issue: What happens if ISO11992 is not used?*1. What if the trailer is old and doesn’t have TPMS? Does the system understand the lack of TPMS and is there going to be an TPMS –alarm ON all the time?

***Comments during 1st meeting*:** *For further evaluations create a table of possible combinations between N2/N3 and O3/O4(s)*1. Is the EBS-bus “closed” from all but the brake system manufacturers? So who has access to the system?

***Comments during 1st meeting*:** *A proposal will be prepared by CLEPA.*1. §5.6. in the new version of UNECE Reg. 141 may cause a situation where the towing vehicle is type-approved according to this regulation, but still isn’t compatible with another (trailers) even if they were approved acc. to this regulation too. The technology regarding the system and interface should be compatible in between towing vehicles and trailers.

***Comments during 1st meeting*:** *For further evaluations create a table of possible combinations between N2/N3 and O3/O4(s) regarding TPMS (wireless or non-wireless)**The Group asked its members to give answers to the open issues and agreed to follow-up the open issues at its 2nd meeting.**The Group agreed also to use this document to sum up new questions, when and if they arise during the coming discussions.**The “Open question”, mentioned above is already mentioned in TPMSTI-CI-01-02 Rev.1 and can therefore be deleted as a stand-alone question.**The expert “CA” presented a first draft of the to be added requirements (TPMSTI-CI-01-03). CA pointed out that this document is a proposal by an expert and not from an NGO.**The main idea of this proposal is to align the requirements with the one in Regulation No. 13 and to follow ISO11992.**The proposed Annex 5 is based on UN Regulation No. 13 (Rev.8), Annex 16 and the proposed Annex 17 is a complete copy of UN Regulation No. 13 (Rev.8), Annex 17.**Two possible communications are proposed: Either by a wired or by a wireless interface.**Again the Experts discussed the questions about “what – if”:*1. §5.6. in the new version of UNECE Reg. 141 may cause a situation where the towing vehicle is type-approved according to this regulation, but still isn’t compatible with another (trailers) even if they were approved acc. to this regulation too. The technology regarding the system and interface should be compatible in between towing vehicles and trailers.

***Comments during 1st meeting*** *(see TPMSTI-CI-01-02 Rev.1)***:** *For further evaluations create a table of possible combinations between N2/N3 and O3/O4(s) regarding TPMS (wireless or non-wireless)*1. It’s usual to change the trailers behind the towing vehicle very often. The system should be capable to “understand” the changes between (multiple) trailers.

***Comments during 1st meeting*** *(see TPMSTI-CI-01-02 Rev.1)***:** ***I****f ISO11992 is used, no problem! 🡺 Is ISO11992 mandated? No!* *Open issue: What happens if ISO11992 is not used?*1. What if the trailer is old and doesn’t have TPMS? Does the system understand the lack of TPMS and is there going to be an TPMS –alarm ON all the time?

***Comments during 1st meeting*** *(see TPMSTI-CI-01-02 Rev.1)***:** *For further evaluations create a table of possible combinations between N2/N3 and O3/O4(s)**On the question, if lights can be used on a trailer to signal the driver that all TPMS on the trailer are functioning, the general opinion of the experts was that this is not possible anymore and therefore this idea can be neglected.**On the question, if EBS 23 can be used for transferring the signals, CLEPA mentioned, that they will come back with a proposal for the next meeting.*1. Is the EBS-bus “closed” from all but the brake system manufacturers? So who has access to the system?

***Comments during 1st meeting*** *(see TPMSTI-CI-01-02 Rev.1)***:** *A proposal will be prepared by CLEPA.**On the question of Japan, what happens if ISO11992 cannot be used, the experts replied, that all Contracting Parties, having signed UN Regulation No. 13, should have access to ISO11992.**For those who have no access to ISO11992 a way has to be found to achieve the same requirements as mentioned in ISO11992.***Work to be done at the 2nd meeting*** Give your comments to CA’s proposal TPMSTI-CI-01-03
	+ regarding the needed requirements, which have to be implemented in Paragraph 5.6.
	+ regarding the new Annex 5

(see proposed Annex 5 and Annex “17” (complete copy of Annex 17 of UN Regulation No. 13)* Work on the open questions in TPMSTI-CI-01-02 Rev.1

**Work to be done after the 2nd meeting*** Prepare a document for the March session of WP.29 to correct and modify the adopted document by the 72nd session of GRBP
* Inform the 73rd session of GRBP about this document

**Timeline Schedule**Third meeting of the small working group* Date: tbd at the second meeting

9th meeting of the Task Force to review the work of the small working group * Preliminary date: 9th of October 2020

Final meeting of the small working group * Preliminary date: 23rd of October 2020

10th meeting of the Task Force to review the work of the small working group and prepare the necessary documents for GRBP and WP.29 * Preliminary date: 29th or 30th of October 2020

***Responsible****:*The 32 Experts of the Task Force on TPMSTI joining this small working group on “Communication Interface”, representing European Commission, Finland, The Netherlands, Japan, CLEPA, ETRTO & OICA. | [TPMSTI-CI-01-02](https://wiki.unece.org/download/attachments/109349464/TPMSTI-CI-01-02%20%28FL%29%20Comments%20to%20R141%20Communication%20Interface.docx?api=v2)[TPMSTI-CI-01-02 Rev.1](https://wiki.unece.org/download/attachments/109349464/TPMSTI-CI-01-02%20Rev.1%20%28FL%20%26%20Task%20Force%29%20Comments%20to%20R141%20Communication%20Interface.docx?api=v2)[TPMSTI-CI-01-03](https://wiki.unece.org/download/attachments/109349464/TPMSTI-CI-01-03%20%28CA%29%201st%20Draft%20proposal%20-%20GRBP-2020-20e%20plus%20Dta%20Com.docx?api=v2) |
|  | The above mentioned **open issue** needs to be discussed and finalized during the time period from September to October 2020, if the current COVID-19 pandemic allows normal work.* *All* ***GRBP experts*** *participating in this small working group of TF TPMSTI TF are asked to check carefully the above mentioned documents and send their comments and proposals as agreed* ***above as soon as possible*** *to the Secretary and the Chair of the Task Force:*

manfred.klopotek@scania.com andreas.vosinis@ec.europa.eu(see also [TPMSTI-01-4 Rev.1](https://wiki.unece.org/download/attachments/94047573/TPMSTI-01-04%20Rev.1%20%28Chair%29%20Proposal%20-%20Guideline%20for%20TF%20TPMSTI.docx?api=v2) - Guidelines C.3.) |  |
|  | Next meeting(s) |  |
| * ***Official sessions of next TF TPMSTI-CI:***
* **2nd Meeting on UN Regulation No. 141 regarding the “Interface Communication”:**

**29th September 9:15 to 11:30 CET** |
|  | Adjourn |  |
|  | *The Chair thanked all attendees for fruitful and constructive discussions and closed the 1st meeting of TF on TPMSTI-CI on “Communication Interface” regarding UN Regulation No. 141.**“Keep safe and stay healthy”* |  |

All documents will be available via the UNECE website for the Task Force on Tyre Pressure Monitoring System and Tyre Installation ([TPMSTI](https://wiki.unece.org/pages/viewpage.action?pageId=94047545)).

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