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World Forum for Harmonization of Vehicle Regulations**Working Party on Automated/Autonomous and Connected Vehicles****Fifth session**

Geneva, 10-14 February 2020

Item 5 (a) of the provisional agenda

Connected vehicles:**Cyber security and data protection as well as software updates****Draft proposal to amend existing UN Regulations to
introduce software identification numbers (RXSWIN)****Submitted by the experts of the Task Force on Cyber Security and
Over-the-air issues**

This proposal was prepared by the experts of the Task Force on Cyber Security and Over-The-Air Software update issues in response to the mandate agreed by the World Forum for Harmonization of Vehicle Regulations (WP.29) as reflected in ECE/TRANS/WP.29/1126, para. 28 and ECE/TRANS/WP.29/1131, para. 27. It is based on ECE/TRANS/WP.29/GRVA/2018/3, previously presented at the first session of the Working Party on Automated/Autonomous and Connected Vehicles (GRVA) in September 2018. It contains a proposal to be appended to other regulations enabling software pertinent to that regulation to be identified.



Draft proposal to amend existing UN Regulations to introduce software identification numbers (RXSWIN)

1. Add new definitions to the definition sections as follow:

Insert a new paragraph 2.x., 2.y. and 2.z., as appropriate:

- "2.x. "Rx Software Identification Number (RXSWIN)" means a dedicated identifier, defined by the vehicle manufacturer, representing information about the type approval relevant software of the Electronic Control System contributing to the UN Regulation No. x type approval relevant characteristics of the vehicle.
- 2.y. "Electronic Control System" means a combination of units, designed to cooperate in the production of the stated vehicle control function by electronic data processing. Such systems, often controlled by software, are built from discrete functional components such as sensors, electronic control units and actuators and connected by transmission links. They may include mechanical, electro-pneumatic or electro-hydraulic elements. "The System", referred to herein, is the one for which type approval is being sought.
- 2.z. "Software" means the part of an Electronic Control System that consists of digital data and instructions."

2. Add a new section on the introduction of the RXSWIN in the requirement section:

Add a new paragraph x.y. and its corresponding subparagraphs:

- "x.y. Requirements for software identification
- x.y.1. For the purpose of ensuring the software of the System can be identified, an RXSWIN may be implemented by the vehicle manufacturer.
- x.y.2. If the manufacturer implements an RXSWIN the following shall apply:
- x.y.2.1. The vehicle manufacturer shall have a valid approval according to UN Regulation No. xxx [Software Update Process Regulation].
- x.y.2.2. The vehicle manufacturer shall provide the following information in the communication form of this Regulation:
- the RXSWIN
 - how to read the RXSWIN or software version(s) in case the RXSWIN is not held on the vehicle
- x.y.2.3. The vehicle manufacturer may provide in the communication form of this Regulation a list of the relevant parameters that will allow the identification of those vehicles that can be updated with the software represented by the RXSWIN. The information provided shall be declared by the vehicle manufacturer and may not be verified by an Approval Authority.
- [x.y.3. The vehicle manufacturer may obtain a new vehicle approval for the purpose of differentiating software versions intended to be used on vehicles already registered in the market from the software versions that are used on new vehicles. This may cover the situations where type approval regulations are updated or hardware changes are made to vehicles in series production. In agreement with the testing agency duplication of tests shall be avoided where possible.]"

3. Add a new paragraph (or amend exiting paragraph on Production definitely discontinued:

New paragraph X and subparagraph, insert to read:

- "X. Production definitely discontinued
[...]
- X.Y. If the holder of the approval completely ceases to manufacture a type of vehicle approved in accordance with this Regulation, he shall so inform the authority which granted the approval. Upon receiving the relevant communication that authority shall inform thereof the other Contracting Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in Annex [Communication form] to this Regulation.
- X.Z. The production is not considered definitely discontinued if the vehicle manufacturer intends to obtain further approvals for software updates for vehicles already registered in the market."

4. Add items x.y. and its subparagraphs in the Annex «Communication form», to read:

Annex [Communication form]

Communication form

COMMUNICATION

(Maximum format: A4 (210 x 297 mm))

issued by: Name of administration:
.....
.....
.....



Concerning:2 Approval granted
Approval extended
Approval withdrawn with effect from dd/mm/yyyy
Approval refused
Production definitively discontinued

of a vehicle type, pursuant to UN Regulation No. [this Regulation]

Approval No.:

Extension No.:

Reason for extension:

(...)

x.y. RXSWIN:

x.y.1. Information on how to read the RXSWIN or software version(s) in case the RXSWIN is not held on the vehicle:

x.y.2. If applicable, list the relevant parameters that will allow the identification of those vehicles that can be updated with the software represented by the RXSWIN under point x.y.1.:

1 Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).

2 Strike out what does not apply.