

**Economic and Social Council**Distr.: General  
9 January 2019

Original: English

---

**Economic Commission for Europe****Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on General Safety Provisions****116th session**

Geneva, 1–5 April 2019

Item 12 of the provisional agenda

**UN Regulation No. 116 (Anti-theft and alarm systems)****Proposal for Supplement 7 to UN Regulation No. 116 (Anti-theft and alarm systems)****Submitted by the expert from the International Organization of Motor Vehicle Manufacturers\***

The text reproduced below was prepared by the expert from the International Organization of Motor Vehicle Manufacturers (OICA) to amend the definition of keys taking into account innovative vehicle alarms systems. It is based on informal document GRSG-115-20, presented at the 115th session of the Working Party on General Safety Provisions (GRSG) (see report ECE/TRANS/WP.29/GRSG/94, para. 49). The modifications to the current text of UN Regulation No. 116 are marked in bold characters.

---

\* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, Cluster 3.1), the World Forum will develop, harmonize and update UN regulations to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

GE.19-00237(E)



\* 1 9 0 0 2 3 7 \*

Please recycle The recycling symbol, consisting of three chasing arrows forming a triangle.



## I. Proposal

*Paragraph 5.1.5.*, amend to read:

"5.1.5. "Key" means any **physical device or electronic solution** designed and constructed to provide a method of operating a locking system which is designed and constructed to be operated only by that **physical device or electronic solution**. **The hardware (e.g. smartphone) provided by other than car manufacturer is not included in electronic solution.**"

*Paragraph 6.1.8.*, amend to read:

"6.1.8. "Key" means any **physical device or electronic solution** designed and constructed to provide a method of operating a locking system which is designed and constructed to be operated only by that **physical device or electronic solution**. **The hardware (e.g. smartphone) provided by other than car manufacturer is not included in electronic solution.**"

*Paragraph 8.1.6.*, amend to read:

"8.1.6. "Key" means any **physical device or electronic solution** designed and constructed to provide a method of operating a locking system which is designed and constructed to be operated only by that **physical device or electronic solution**. **The hardware (e.g. smartphone) provided by other than car manufacturer is not included in electronic solution.**"

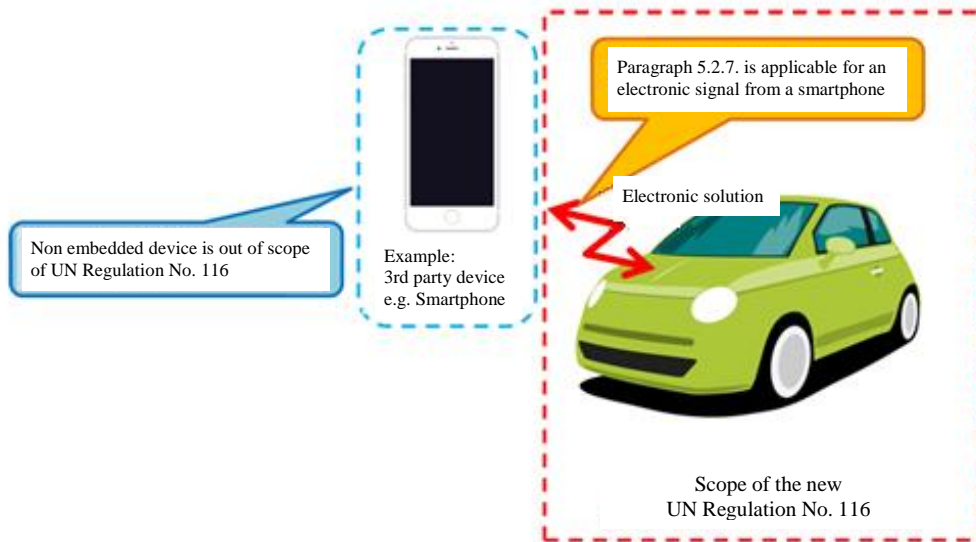
## II. Justification

1. At the 106th session of GRSG (May 2014), the expert from the European Commission (EC) informed GRSG about new innovative vehicle alarm systems, such as silent alarm or door-unlocking, using smart phone (GRSG-106-38) and questioned the need to develop an appropriate amendment to UN Regulation No. 116. The topic was further discussed at the 107th session of GRSG (September 2014). The expert from Germany provided the information (GRSG-107-08) that type approval of some of these solutions had been refused because the smart phone signal was considered an additional key, not provided by the vehicle manufacturer, which could potentially interfere with the original alarm system from the manufacturer.

2. However, the key itself is merely an activation device, not a protection device (anti-theft device). Each device of the UN Regulation (device for unauthorized use, alarm system or immobilizer) may have its own key for locking/unlocking. For example, locking and unlocking of the door lock system is not in the scope of UN Regulation No. 116.

3. To access the vehicle, not only physical keys can be used but also purely electronic ones.

4. According to the current definition of "key", a smartphone cannot be covered as "only by that device". This is the reason why "electronic solution" is added to definition. The hardware (e.g. smartphone) and software transmitting the electronic solution to the vehicle are not in the scope of UN Regulation No. 116. If the electronic solution is defined as a key, it is reasonable that the electronic solution transmitted from the hardware fulfils the requirements of paragraph 5.2.7. (Electrical/electronic locking systems - See figure below).



5. The proposal introduces a distinction between a key as an electronic solution and as hardware and software used to transfer this electronic solution, and amends UN Regulation No. 116 such that new innovative systems are appropriately addressed in the regulation. New innovative systems use components that are not embedded in the vehicle: this means e.g. devices, hardware, operating systems, communication channels, backend servers which are used for setting or unsetting locking systems, by transferring the electronic solution.

6. The proposal clarifies that the electronic solution must fulfil the requirements of UN Regulation No. 116 as being a key, while all hardware and software only used for transferring the electronic solution are not covered by the scope of UN Regulation No. 116. Still according to paragraph 5.4., the manufacturer must ensure the safety of the vehicle.

7. Examples for existing keys could be:

(a) Physical key with transmitter (from the Original Equipment Manufacturer (OEM)) = steering lock is set/unset by physical key, alarm and immobilizer is set/unset by electronic solution, physical device provided by OEM to customer;

(b) Smartphone as a key = Smartphone (Non-OEM) + Access App (OEM) + Electronic solution (OEM);

(c) Smartphone as a key = Smartphone (Non-OEM) + Access App (car pool, non-OEM) + Electronic solution (OEM);

(d) Internet access = computer hardware (Non-OEM) + browser (non-OEM) + web page (in car delivery, non-OEM) + Electronic solution (OEM).