

List of relevant GRVA Regulations for software updates

This document was prepared by the expert from France. It proposes a list of the relevant UN Regulations under the purview of GRVA, for the purposes of software updates.

I. List of relevant UN Regulations

UN Regulation	Title	Relevant (Yes/No)
UN Regulation No. 13	Braking	Yes
UN Regulation No. 13-H	Braking (passenger cars)	Yes
UN Regulation No. 78	Braking (Category L)	Yes*
UN Regulation No. 79	Steering equipment	Yes
UN Regulation No. 89	Speed Limitation Devices	Yes
UN Regulation No. 90	Replacement brake lining assemblies, drum brake linings and discs and drums for power-driven vehicles and their trailers	No
UN Regulation No. 130	Lane Departure Warning System	Yes
UN Regulation No. 131	Advanced Emergency Braking System	Yes
UN Regulation No. 139	Brake Assist System	Yes
UN Regulation No. 140	Electronic Stability Control	Yes
UN Regulation No. 152	Advanced Emergency Braking System	Yes
UN Regulation No. 155	Cyber security	Yes
UN Regulation No. 156	Software update and software update management system	Yes
UN Regulation No. 157	Automated Lane Keeping System	Yes

II. Justification

During the 191st session of WP.29, the expert from France proposed that all subsidiary Working Parties of WP.29 consider the list of the Regulations under their respective purview which may be relevant for the purposes of software updates (see ECE/TRANS/WP.29/1175, para. 37). This identification of relevant Regulations is necessary to introduce the necessary provisions on identification and update of software in each affected Regulation, using the guidance provided in Annex 7 of the Consolidated Resolution on the Construction of Vehicles (R.E.3).

This document proposed a list of the UN Regulations under the purview of GRVA which may be relevant for the purposes of software updates. More specifically:

- **UN Rs13, 13-H, 78*, 79, 130, 131, 139, 140, 152, 157** (Regulations on braking, steering, active safety and ADAS/ADS): Most systems directly or indirectly related to braking and steering greatly rely on software as part of their basic operation.
- **UN R89** (speed limitation devices and functions): Most speed limitation devices and functions greatly rely on software as part of their basic operation.
- **UN R90** (replacement brake parts): This Regulation only applies to physical replacement parts. If no software is present on these replacement parts, this Regulation is not relevant for the purposes of software updates at this stage. However, any introduction of connected replacement parts on the market should lead to a reconsideration of this classification.

- **UN R155:** Exact software versions of critical electronic control units (such as ECUs with external interfaces) are fully relevant for the purposes of type approval pursuant to R155.
- **UN R156:** Software versions of relevant electronic control units (such as telematics, infotainment or human-machine interfaces) may have an impact on the definition of a vehicle type with regard to R156.

Additionally, the authors believe that Global Technical Regulations No. 3 and 8 are also relevant for the purposes of software updates. However, they are outside of the scope of the Regulations for which guidance is given by Annex 7 of R.E.3.

* UN R78 is a Regulation that only applies to vehicles of Category L, which are not part of the scope of UN R156. GRVA may wish to consider whether an extension of the scope of UN R156 is necessary before including provisions for software updates within UN R78.