INFORMATION REGARDING TYPE APPROVAL FOR CYBER SECURITY AND SOFTWARE UPDATES

UNECE Regulation No. 155 and 156

The new UNECE regulations for cyber security and software updates are mandatory for new vehicle types from July 2022 and for existing types from July 2024.

Cyber Security Management System (CSMS): Remains valid for a maximum of 3 years from the date of deliverance and serves as the manufacturer's declaration of compliance that all processes regarding cyber security demanded by UNECE Regulation No. 155 are in place.

Cyber security vehicle type approval: Requires a valid CSMS certificate during the application for approval. The manufacturer needs to demonstrate that the vehicle type subject for type approval complies with the requirements stated in UNECE Regulation No 155. Requires approval mark.

Software Updates Management System: (SUMS): Remains valid for a maximum of 3 years from the date of deliverance and serves as the manufacturer's declaration of compliance that all processes regarding software updates demanded by UNECE Regulation No. 156 are in place.

Software updates vehicle type approval: Requires a valid SUMS certificate during the application for approval. The manufacturer needs to demonstrate that the vehicle type subject for type approval complies with the requirements stated in UNECE Regulation No. 156. Requires approval mark.

RXSWIN: UNECE Regulation No. 156 mandates management of software identification. It recommends the industry to adopt RXSWIN (Regulation "X" Software Identification Number) for which all type approval relevant software of the vehicle contributing to the Regulation No. X type approval relevant characteristics of the vehicle can be clustered.

UNECE regulation No. 155 and 156 multi stage type approval

A Multi Stage Cooperation Agreement (MSCA) between Scania and the bodybuilder needs to be in place in accordance with Regulation (EU) 2018/858.

Scania issues a certificate of conformity (CoC) for the base vehicle including the approvals that meet the requirements when the vehicle or chassis leaves Scania's assembly plants.

Scania's CoC is not enough for registration. The bodybuilder is responsible for issuing a CoC for the completed vehicle.

Scania's Cyber Security Management System (CSMS) and Software Updates Management System (SUMS) cover:

- The Scania base vehicle and additional equipment fitted at factory or provided by Scania as part of the vehicle type with installation instructions.
- Software and software updates supplied by Scania.
- RXSWIN(s) and software versions supplied by Scania (Figure 1).

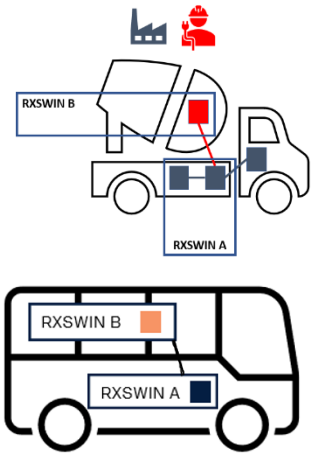

Figure 1. Scania supplied RXSWIN(s) A and bodybuilder supplied RXSWIN(s) B.

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Management systems

A CSMS is not needed for the bodybuilder, if the changes made by the bodybuilder are not cyber security relevant, and the Scania E/E architecture is not modified (e.g., when mechanical components or hardware not related to the Scania E/E architecture is installed).

If the changes are cyber security relevant or related to the Scania E/E Architecture but without any modification, the bodybuilder must explain to the technical service or the type approval authority why the changes are not cyber security relevant (e.g., connecting a third-party fleet management that can report fuel consumption and / or position). In this case, the bodybuilder may not need to have a their own certified CSMS but needs to confirm this with the technical service or the type approval authority.

If changes made by the bodybuilder are cyber security relevant, (e.g., modifying the Scania E/E architecture by adding a crane that can increase the engine speed) the bodybuilder needs to have their own certified CSMS.

No SUMS is needed for the bodybuilder if systems with software update capabilities are not installed. If systems added by the bodybuilder have software update capability, the bodybuilder needs to have their own certified SUMS*. The bodybuilder needs to discuss with their technical service or type approval authority to get a common interpretation. Bodybuilders are responsible for their software versions and RXSWIN(s), if the bodywork has type approved systems.

Vehicle type approval

Modifications made to the base E/E architecture certified from Scania, affecting the compliance with UNECE Regulation No. 155 and 156, are not covered by the respective Scania approvals.

If no additional cyber security risks are introduced, and/or software updates are not possible, type approval for the bodybuilder's vehicle type for UNECE Regulation No. 155 and 156 is not needed.

If additional cyber security risks are created and/or software updates are possible, UNECE Regulation No. 155 and 156 type approval for the bodybuilder's vehicle type is needed.

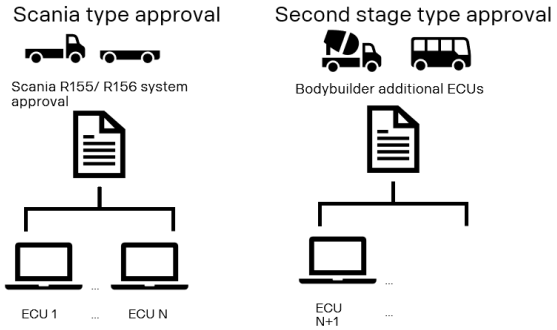

Figure 2. ECUs installed from the bodybuilder must be handled during second stage type approval.

Scania bodybuilder interface access

The prerequisite for bodybuilders to be able to use Scania's installation certificates for UNECE Regulation No. 155 and 156 is that the interfaces are used in the way specified in the Scania bodybuilder manual.

Contact

Contact the local Scania distributor for any general questions related to type approval and for questions regarding type approval of UNECE Regulation No. 155 and 156.

Information for bodybuilders can be found on Scania bodybuilder homepage:

https://bodybuilder.scania.com/bodybuilder/en/home.html/

Report all suspected Cyber Security Incidents to the PSIRT (Product Security Incident Response Team)

psirt@scania.com

More information:

https://www.scania.com/group/en/home/admin/misc/psirt.html

References:

[1] UNECE Regulation No. 155
https://unece.org/sites/default/files/2023-02/R155e%20%282%29.pdf

[2] UNECE Regulation No. 156
https://unece.org/sites/default/files/2021-03/R156e.pdf

* In accordance with (EU) 2022/2236, amending Annexes I, II, IV and V to Regulation (EU) 2018/858, for completed vehicles, where the manufacturer do not execute software updates which affect certified performance, the date of mandatory fulfilment of UNECE Regulation No. 156 is 7 July 2029. If the manufacturer executes software updates which affect certified performance, the mandatory dates are 2022 for new vehicle types, and 2024 for all vehicle types.