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Software update post registration

11th session - Workshop on the implementation of UN Regulation No. 155 (&156)

RDW, The Netherlands

Version 1.0

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Current Situation(1)

› UNECE R156 (and WP 29 R.E.3*) provides uniform provisions on ensuring software updates (with/without hardware changes/upgrades) can be performed at any point of time during the lifetime of the vehicles.

› Manufacturers with R156 type approval intend to update, *for e.g., driving assistance systems, battery management systems among others*, continuously using software update capabilities on already registered and new vehicles

› Type Approval Authority(and its technical service) responsible for respective regulations shall assess and grant respective extension(s)/new type(s) based on the magnitude of changes.

› However, Manufacturer(s) cannot perform software updates even after receiving the extension approvals from type approval authority on type level. Normally, a vehicle is registered as is and should stay as is unless physical(and in some cases electrical/electronic) construction is affected. Modifications made after registration *on a type level*, for example adding/updating functionality, is not prescribed and hence is not allowed.

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Current Situation(2)

› In the EU, the current draft commission delegated regulation(no number yet) amending Annexes I, II, IV and V to Regulation (EU) 2018/858 of the European Parliament and of the Council has only requirements with respect to introduction dates of the software update regulation. https://webgate.ec.europa.eu/regdel/#/delegatedActs/1836?lang=en

› R156 (and R155) regulation text/interpretation does not address post-registration updates precisely even though the primary intention of the regulation was to update software for the registered vehicles.

› Hence, Manufacturer is obliged to enquire "in every Member State" if the modification has impact on the registration of the vehicle and if an inspection by National Authority is necessary. Hence, a clear harmonized administrative procedure at the EU is not available to handle such software updates post registration.

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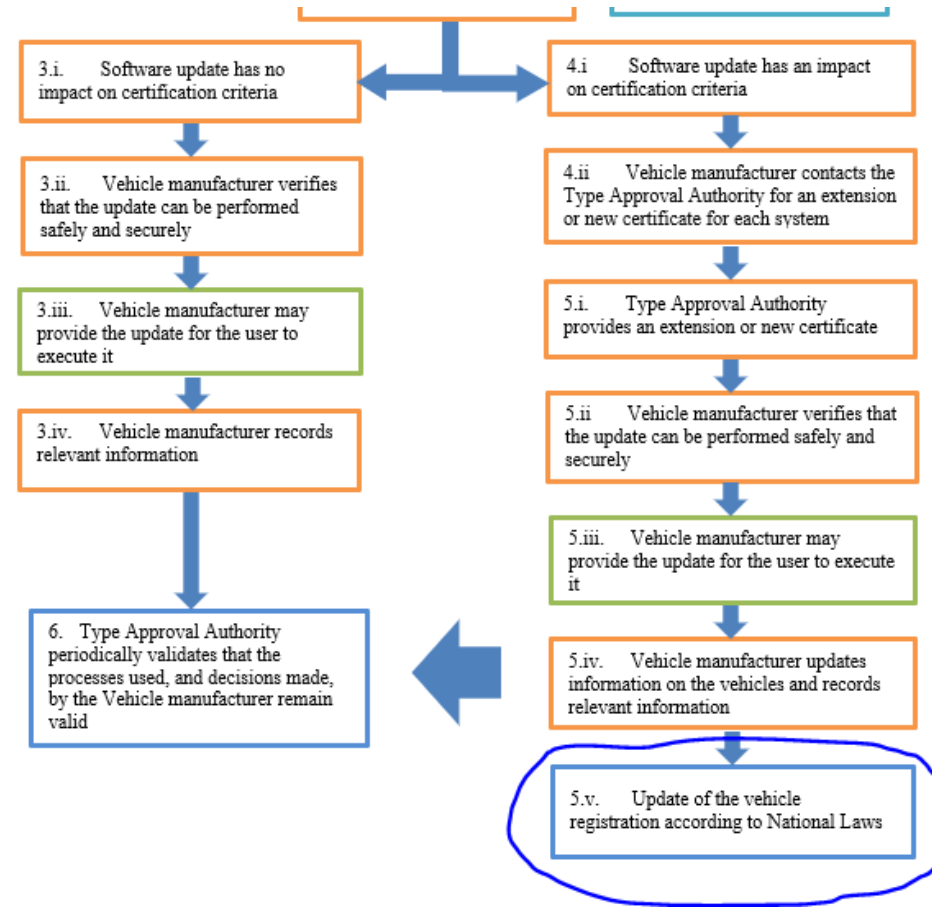
Current Situation(2)

› Each member state national authority may define different level of specifics for allowing software updates (which have been already type approved). This may make some software updates not being available in some member states but available in others*.

› Uncertainty in national provisions/regulations of all member states for performing "software" changes post-registration of vehicles.

  › E.g., 1., Germany provides guidelines on software updates on a national level, however, a reference to national regulations for handling "software updates" was not available on the website. More clear guidance regarding software updates is planned to be released in Germany this year as explained by German representatives.

  › E.g., 2., Netherlands is investigating on how to handle software updates after registration (Individual and Series).

› Handling of export and import of vehicles and corresponding impact on geofenced updates needs to be clarified or clear guidelines made available.

› *All member states must give a go-ahead* to every software update post registration even though *there is a lack of clear policies and/or procedures* for registering software updates for all those member states.

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Discussion(s) in various forums

› VCA (UK) presented in the CS/OTA IWG in the 20th Session on managing updates to system approvals for registered vehicles

  › Outlines four options on numbering of approvals for updates on registered vehicles and corresponding pros and cons.

  › No agreements and outcomes have been achieved on the handling.

  › Issue remains with respect to national differences on registration of software updates for constant upgrading of systems like driver assistance or battery management

› Proposal for an amendment to the consolidated resolution on the construction of vehicles outlines possibility that manufacturers may obtain approvals to differ between software versions of vehicles in the market and of the new vehicles

  › https://unece.org/fileadmin/DAM/trans/doc/2020/wp29/ECE-TRANS-WP29-2020-082e.pdf

  › E.g., 9.3.4 in R157

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Proposal for Future Actions

› Initiate a survey of current requirements/guidelines, responsibilities and corresponding artefacts for all member states regarding performing software updates post registration.

› Harmonized procedures for handling software updates for the already registered vehicles. This may include:

  › Activities and corresponding roles for manufacturers, type approval authorities, technical service(s), national type approval bodies, registration authorities, and/or periodic technical inspection authorities/bodies

  › Clarifications on steps/stages for various criticality of software updates with respect update issuance, approvals and registration updates etc.

› Look for possibilities for adaptations to national legislation for better harmonization & enabling intention of R156

› Raise this issue at the new EReg topic Group which focusses on the dynamic vehicle characteristics including in-vehicle data. This topic group is working on an action plan, the first session will take place end of October

› Outline certain scenarios to have clarity on the issue. Industry may produce some scenarios on this issue. Can industry provide certain scenarios on clarification on this issue? OICA agreed to provide certain scenarios for further clarification.

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