

The 1958 Agreement and lifetime/lifecycle considerations

Executive Summary

This document:

- Recalls the discussion at the 179th session of WP.29 on the existence (or not) of a legal basis for lifetime and lifecycle provisions in UN Regulations annexed to the 1958 Agreement.
- Reviews relevant provisions in the 1958 Agreement (Title/scope, preamble, Arts. 2–3 etc.).
- Mentions that lifecycle and lifetime provisions would support the aim of the Agreement.
- Highlights that the Agreement does not provide specific guidance or limitation concerning lifetime/lifecycle considerations.
- Evaluates whether this absence of limitation constitutes a sufficient legal basis by assessing the aim / spirit of the agreement and existing precedents.
- Evaluates that the existing precedents are binding precedents.
- Provides a list of precedents in UN Regulations with lifetime/lifecycle relevant considerations.
- Proposes to conclude that these elements provide the assurance of a sufficient legal basis for drafting and adopting lifetime and lifecycle provisions in UN Regulations.

I. Introduction

Documentation: ECE/TRANS/WP.29/1149, para. 25

1. The World Forum for the harmonization of Vehicle Regulations (WP.29) received, at its 179th session, a presentation on lifetime considerations, debated by the Task Force on Cyber Security and (Over-The-Air) Software Updates, while drafting a regulation on cyber security.

2. During the discussion, the representative of the United Kingdom noted that this issue had already been discussed at GRVA and that the key issue in the discussion was whether or not there was a legal basis to adopt provisions related to the vehicle lifetime or the vehicle type lifecycle. He invited the secretariat, possibly with the support of the Office of Legal Affairs, to provide guidance on this point for the next session of WP.29.

3. The GRVA Secretary is proposing this document, aimed to analyse the content of the 1958 Agreement and provide an answer to the question raised.

4. The question is, whether of not, UN Regulations can contain (performance) requirements for the performance assessment of a (wheeled) vehicle, its equipment and parts, when it left the factory, during its lifecycle and potentially until the end of its lifetime. This question implies the following one: Can provisions be written such that requirements are (met and) verified after the type approval is granted?

5. In this document, *lifecycle* and *lifetime* and other relevant terms are understood as follows:

(a) "*Lifecycle*" means the span of a *vehicle type*'s existence. The lifecycle starts during the development of a vehicle type, it progresses through the production phase (where a vehicle type is legally established and production of vehicles of that type commences and continues until the vehicle type is declared discontinued), and then into the post production phase where vehicles of that vehicle type exist but the vehicle type is no longer produced. This phase may not have a defined end unless it can be established that vehicles of that vehicle type no longer exist.

(b) "*Lifetime*" means the lifetime of a *single vehicle*. A vehicle's life will start during the production phase of a vehicle type and will end [at the latest] when the vehicle is scrapped.

(c) “*In use*” vehicles are vehicles which are used i.e. not necessarily new. The phase during which the vehicle is “in use” belongs to the vehicle *lifetime* and the vehicle type *lifecycle*.

(d) *Lifecycle* and/or *Lifetime* relevant performance requirements could potentially only be tested once the vehicles belonging to an approved vehicle type are in use. For the purpose of this document, the author considers requirements that can only be verified once the vehicles are in use (and not necessarily new) - “worst case”.

II. Relevant provisions in the 1958 Agreement

Documentation: [E/ECE/TRANS/505/Rev.3](#)

A. Review of the provisions of the Revision 3 to the 1958 Agreement

(a) Title/scope

6. The 1958 Agreement provides (among others) a framework for the adoption of harmonized technical United Nations Regulations for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles.

→ The scope of this Agreement is “wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles”. Lifecycle and/or lifetime relevant provisions applied to wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles would fall of this scope.

(b) Preamble

7. According to its preamble, the Agreement is aimed at reducing technical barriers to trade. It is recognizing the importance of safety, environmental protection, energy efficiency, anti-theft performance, and also the importance to develop technical regulations that are technologically and economically feasible, adapted to technical progress.

→ Lifetime and lifecycle relevant provisions that would be aimed at addressing the reduction of technical barriers to trade, aimed at addressing safety, environmental protection, energy efficiency or anti-theft performance, and that would be technologically and economically feasible would be in line with the ambition and the spirit of the Agreement, as provided in the preamble.

→ The preamble does not provide any guidance or restriction having relevance for the drafting and adoption of lifecycle and lifetime relevant provisions.

(c) Relevant articles

8. Art. 2, para. 1 provides a definition for a “Type Approval pursuant to a UN Regulation”, which is an administrative procedure by which the Approval Authorities of one Contracting Party declare, after carrying out the required verifications that a type of vehicle, equipment or part submitted by the Manufacturer conforms to the requirements of the given UN Regulation. Afterwards the Manufacturer certifies that each vehicle, equipment or parts put on the market were produced to be identical with the approved product.

→ This definition highlights two essential aspects of the Type Approval system: obligations before the Type Approval is granted as well as obligations after the Type Approval is granted. Note: further provisions in the Agreement expand the list of obligations for the Manufacturer and the Authority.

9. Art. 2, para. 1 also specifies that, for the application of the UN Regulations, there could be various administrative procedures alternative to type approval, [such as] [...] the self-certification.

→ Art. 2 authorizes alternatives to Type Approvals such as Self Certification and does not specify when controls can be performed or can't anymore.

Note: Guidance is actually provided by the provisions in the UN Regulations that determine the necessary condition of the vehicle subject to testing (e.g. Type 1 test in UN Regulation No. 83 requires the test vehicle to have a mileage bigger than 3000 km).

10. Article 2, para. 2 specifies the aspects that UN Regulations **shall** cover:

- Wheeled vehicles, equipment and parts,
- Technical requirements,
- Test methods,
- Conditions for granting Type Approvals,
- Introductory and transitional provisions, as well as,
- An information document to be provided by the Manufacturer.

→ This paragraph does not explicitly include or exclude the possibility that requirements cover the lifecycle or lifetime. One could interpret that lifetime or lifecycle relevant requirements shall be technical requirements.

11. Article 4 provides for provisions regarding the finding and the handling of non-conformity.

→ It does not provide limitation about the time when non-conformity can be found or handled. There is no consideration stating that a lack of performance of a vehicle in use is not relevant because the vehicle left the production plant or is not new.

(d) Relevant schedules

12. Schedule 1 is defining the procedures for verifying the conformity of production. It requires an initial assessment that take place before the Approval is granted, it defines COP requirements for the Manufacturers and for the Authority including continued verification arrangements, after the approval is granted.

(e) Comments

13. The context of the 1958 Agreement is primarily the type approval context. But it mentions self-certification. It also mentions the possibility for the Authorities to react in case of non-compliance. It does not limit the time when controls can be done and when non-compliance can be found.

14. The type approval is understood as a pre-market evaluation of the performance of the product. It is expected from the Authority that they declare the product compliant on the basis of an assessment before the product is put on the market. The type approval system relies on a declaration from the Authority and also on the Conformity of Production that apply after the type approval is issued, i.e. after the Authority declared the product in compliance. This sets a precedent for other provisions that would apply after the type approval is granted.

B. Semantic considerations

15. Some words of relevance are not defined and only appear sporadically e.g.

- “Use”: found in Article 4 (“prohibition of sale and use”).
- “Production is definitely discontinued”: found in Schedule 5, para. 2 (DETA context)
- (“Series of amendments”: found in Schedule 5, para. 2.6.(c))

16. “New” is only associated with the terms “Contracting Party”, “Technology”, “Schedule”, “(draft) UN Regulation”, “Validation”, “Interpretation” and “Agenda item”. The terms “new vehicle”, “new equipment”, “new parts” do not appear throughout the text of the Agreement.

17. “Lifetime”, “lifecycle”, and words having similar meaning are not mentioned in the Agreement.

C. Legal basis

18. When reviewing the title, the author concluded that lifecycle and/or lifetime provisions would not fall out of this scope.

19. When reviewing the preamble, the author concluded that lifetime and lifecycle provisions that would be aimed at addressing the reduction of technical barriers to trade, aimed at addressing safety, environmental protection, energy efficiency, anti-theft performance and that would be technologically and economically feasible would be in line with the ambition and the spirit of the Agreement as provided in the preamble.

20. The author did not find any limitations in the Agreement that would prevent the Contracting Parties to adopt provisions having relevance for the lifecycle or the lifetime.

21. Are these elements establishing a sufficient legal basis? In particular, is the absence of limitation a sufficient legal basis? In order to answer to this question, the author reflected on the aim/spirit of the Agreement. The author proposes to look for precedents in the sense of Art. 31 (General Rule of Interpretation) in Section 3 (Interpretation of Treaties) of the Vienna Convention on the Law of Treaties¹, that advises to “take into account any subsequent practice in the application of the treaty”. In application of to this Article, interpretation of the 1958 Agreement can be done by looking into precedents within the UN Regulations (“subsequent practice”) adopted under its framework (“in the application of the Treaty”).

(a) The spirit and the aim of the Agreement is provided in the preamble, which recognize the importance to reduce technical barriers to international trade, and the importance of safety, environmental protection, energy efficiency and anti-theft performance of wheeled vehicles, equipment and parts. It seems to the author that the aim of the UN Regulations is to generate benefits, e.g. in terms of safety, when vehicles are in use and not only when they are new. From this point of view, the absence of limitation regarding lifetime or lifecycle may be seen as desirable and on purpose. Therefore, one may consider that this provides a sufficient legal basis.

(b) Let’s analyse whether precedents exist, i.e. whether UN Regulations developed under this framework set precedents and whether these precedents can be considered as binding. Chapter three below is listing some precedents. Are these precedents binding for the Contracting Parties? An answer to this question can be found in Art. 1, para. 4, that stipulates that UN Regulations are “Entering Into Force” hence binding for the Contracting Parties applying them and that did not notify their disagreement, and in Art. 3, para. 1² that specifies that wheeled vehicles, equipment or parts for which type approvals have been issued by a Contracting Party shall be held to be in conformity with the relevant part of the national legislation of all the Contracting Parties applying the said UN Regulation. It should also be noted that the UN Regulations setting precedents were adopted by consensus by the Contracting Parties.

III. Relevant provisions in UN Regulations - precedents

22. The paragraphs below provide a non-exhaustive overview of UN Regulations having provisions, not only relevant for the vehicle performance when it is new, at the stage of type approval or in production, but also when it is in use.

¹ <https://treaties.un.org/doc/Publication/UNTS/Volume%201155/volume-1155-I-18232-English.pdf>

² Note: This clause has a relevance in the case WP.29 is regulating new matters such as innovations that impact other regulatory aspects (e.g. virtual keys, privacy etc.).

23. UN Regulation No. 79, para. 5.1.4. stipulates that the steering equipment shall be designed, constructed and fitted in such a way that it is capable of withstanding the stresses arising during normal operation of the vehicle, or combination of vehicles.

➔ This provision is lifetime / lifecycle relevant. It is also interesting to note that the regulator requires the Manufacturer to anticipate the case of use “in combination” with a product from another manufacturer (e.g. a trailer).

24. Similar provisions are found in UN Regulations Nos. 13 and 13-H regarding the design of the braking system.

25. UN Regulations dealing with the environmental performance of vehicles provides relevant precedents on ways to assess the performance of vehicle during their lifetime and vehicles types during their lifecycles.

- (a) Performance requirements with run-in vehicles e.g. Test vehicle >3,000 km in UN R83,
- (b) Durability requirements, useful life e.g. up to 700.000 km / 7 years in UN R49,
- (c) In use / In service requirements in UN R49 and 83,
- (d) Provisions supporting Periodic Technical Inspection e.g. UN R13
- (e) Provisions supporting road side inspection and market surveillance (UN R41 and 51),
- (f) Road side inspection provisions (UN R41),
- (g) Retrofit (UN R43, 49, 59 and 103).

26. It is proposed to focus on two aspects (b) and (c) above:

UN Regulation No. 49 (Emissions of C.I. and P.I. (LPG and CNG) engines) defines:

2.58. "Useful life" means the relevant period of distance and/or time over which compliance with the relevant gaseous and particulate emission limits has to be assured;

UN Regulation No. 49 (Emissions of C.I. and P.I. (LPG and CNG) engines), para 5.4. specifies:

(...) The mileage and period of time by reference to which the tests for durability of pollution control devices undertaken for type approval and testing of conformity of in-service vehicles or engines are to be carried out shall be the following:

- (a) 160,000 km or five years, ...
- (c) 700,000 km or seven years, whichever is the sooner, in the case of engines fitted to vehicles of Categories N₃ with a maximum technically permissible mass exceeding 16 tonnes and M₃, Class III and Class B with a maximum technically permissible mass exceeding 7.5 tonnes.

UN Regulation No. 49, Annex 8 about the conformity of in-service engines or vehicles provides the following requirements:

- (a) The conformity of in-service vehicles or engines of an engine family shall be demonstrated by testing vehicles on the road operated over their normal driving patterns, conditions and payloads.
- (b) After the granting of type approval for an engine family the manufacturer shall perform in-service testing on this engine family within 18 months from first registration of a vehicle fitted with an engine from that family.
- (c) The annex provides for a pass / fail decision criterion, based on the number of the sampling, allowing for a number of failed tests, before the procedure leads to the conclusion of non-compliance. (The sample size is from 3 to 10 tests with a maximum number of 3 failed tests.)

(d) The tests are conducted on road with a portable emission measurement system in reasonable testing conditions. Annex 8 provides for in-service conformity factor which is 1.5.

(e) Annex 8 provides instructions on the reporting to the type approval Authority.

(f) Annex 8 contains provisions regarding the “remedial measures” in case the Type Approval Authority decides that the in-service conformity of an engine system family is unsatisfactory and proceed to the measures referred to in paragraph 9.3. of the Regulation and in paragraph 9. of Annex 8.

27. This procedure is clearly lifecycle / lifetime relevant and takes effect when vehicles are in use.

III. Proposed conclusion

28. Based on the provisions of the 1958 Agreement and existing requirements in UN Regulations setting binding precedents, both adopted by consensus by the Contracting Parties of the 1958 Agreement, the author of this document concludes that a sufficient legal basis exists i.e. it is possible and allowed to draft and adopt provisions to be inserted in UN Regulations that address the performance of vehicles over their lifetime and/or lifecycle.

29. The author understands that such provisions are simpler to apply for the Type Approval Authorities and the Manufacturers, when they can be verified at the time of type approval. Such provisions, that can **only** be verified **after** the type approval is granted, might be more challenging to apply and may induce more costs. Some may argue that such provisions make the validity of approval conditional. This case is foreseen by the Agreement as it specifies the condition for the withdrawal of an Approval. Therefore, the matter of concern is less of a legal nature than a practical nature. It is about practicality and economic feasibility.

30. The preamble of the Agreement recognises the importance to develop technical regulations that are economically feasible and adapted to technical progress. But the first priority mentioned in the preamble is “safety”.

31. The author proposes that the Contracting Parties supports the following interpretation:

“Provisions related to the lifecycle of a vehicle type and the lifetime of vehicles find a sufficient legal basis in the 1958 Agreement and the precedents in existing UN Regulations.”

Note: Even though a sufficient legal basis is given, any Contracting Party to the Agreement may agree or disagree to adopt Lifetime and/or Lifecycle related provisions, on a case by case basis.