

## **Transposition of the WLTP GTR into a UN Regulation**

### **(under the 1958 agreement)**

There is a common understanding of all parties concerned that a future transposition of the WLTP GTR into a UNECE Regulation ("Regulation WLTP") under the 1958 agreement should replace at some point the existing UNECE Regulations 83 (addressing criteria pollutant emissions) and 101 (addressing CO<sub>2</sub> emissions and electric consumption). The future Regulation WLTP would initially transpose WLTP GTR phase 1a and 1b. It could then be gradually expanded to cover all other elements developed in the WLTP GTR, i.e. it would go well beyond just describing the mere test cycle and would also address elements like OBD, durability, evaporative emissions,... Alternatively these other elements could be dealt with in different, specific GTRs. The decision on which of these two options will be retained can be taken at a later stage and is not important for the following discussion

Traditionally UNECE Regulations on automotive systems (such as emission control) are a precise "copy" of EU legislation, allowing vehicle manufacturers to choose between obtaining an EU or a UNECE certificate to demonstrate compliance with a certain aspect of automotive legislation. Other regions signing up to a particular UNECE Regulation effectively apply EU law for the aspect covered and can issue their own certificates of compliance in this respect.

At least one non-EU contracting party of the WLTP GTR process (Japan) has shown an interest to use the future Regulation WLTP in their national legislation (rather than transposing the WLTP GTR fully into a separate national legal text). Other non-EU contracting parties may follow and show the same intention. Therefore the following two alternative routes for the transposition of the GTR into UNECE Regulation have to be considered:

#### 1) Route 1: Non-EU regions do not sign the WLTP Regulation

In this case Regulation WLTP would fully reflect EU legislation, i.e. the WLTP GTR + EU emission limits + other EU technical requirements (EU cycle composition L/M/H/Ex-H, EU temperature correction, EV utility factors, cycle flexibility corrections,...) + other EU administrative requirements (conformity of production, in-service-conformity,...).

Non-EU contracting parties having national legislation deviating from EU legislation could not apply Regulation WLTP certificates directly, or issue WLTP Regulation certificates. Rather, they would have to draft their own national legislation, which could refer to parts of Regulation WLTP. In addition, some test reports etc. established under Regulation WLTP and national legislation could be mutually acknowledged.

If this alternative is adopted the drafting of Regulation WLTP should be done in such a manner that individual parts of it can be easily referenced from "external" national legislation. This principle has not always been observed for existing UNECE Regulations.

2) Route 2: Some non-EU regions (e.g. Japan), having different emission legislation, sign Regulation WLTP

In this case Regulation WLTP would have to be developed in a hierarchical manner and certificates would be issued at certain "levels". For the "top" level the most stringent combination of regional requirements (e.g. with regard to emission limits, correction functions etc.) has to be fulfilled. Below there would be several "regional" levels, each corresponding to the combination of a specific regional legislation in terms of emission limits and region-specific technical and administrative requirements. Each region signing Regulation WLTP would have to accept the "top" level and its own "regional" level certificates for national regulatory purposes and could issue certificates of all levels.

An example

Region 1 has emission limits A1, B1, C1, D1 for pollutants A, B, C and D, reference fuel R1 and uses a test cycle TC.

Region 2 has emission limits A2, B2, C2, D2, reference fuel R2 and uses a test cycle TC+Ex composed of TC and an extension Ex.

Let's further assume  $A1 > A2$ ,  $B1 < B2$ ,  $C1 = C2$ ,  $D1 < D2$

The Regulation WLTP would then provide three levels of certification:

- Top level (to be accepted by all contracting) parties => with reference fuels R1 and R2 the emission limits A2, B1, C1, D1 have to be met on the test cycle TC alone as well as on the extended test cycle TC+Ex.
- Region 1 level (optional acceptance by contracting parties) => with reference fuel R1 the emission limits A1, B1, C1, D1 have to be met on the test cycle TC
- Region 2 level (optional acceptance by contracting parties) => with reference fuel R2 the emission limits A2, B2, C2, D2 have to be met on the test cycle TC+Ex

**Discussion**

It is obvious that before the start of the work on Regulation WLTP the principle decision on the route to follow has to be taken.

Route 2 would be a relatively new experience at GRPE, albeit similar approaches have already been taken in other areas of automotive UN Regulations. The details of its administrative implementation, in particular how to handle the different certification levels (e.g. via different series of amendments?) would still have to be decided. Effectively many administrative "sub-routes" of route 2 exist and could be investigated. However, route 2 is likely to be very complex to implement and would only be justified over route 1 if it offers significant practical advantages.

At a first glance the advantages of route 2 seem to be three-fold:

- Even if in practice "top" level certificates may be little used for cost reasons, the certificates corresponding to "regional" levels below could be issued by any contracting party. Japan could for instance issue European WLTP Regulation certificates and vice versa.
- The experience gained with the mutual issuing of regional certificates as well as the very fact that emission certification requirements are consolidated in a single technical document could foster global harmonisation with a mid- or long-term view. It should however be noted that certification testing is not an end in itself but should ensure a good emission performance of the vehicles under existing real conditions in the regions. Factual differences of the regions, e.g. with respect to maximum speeds, market fuels (linked to the supply infrastructure) and ambient temperatures set natural limits to a full global harmonisation.
- Route 2 would – at least in principle – allow the inclusion of the WLTP Regulation into the International Whole Vehicle Type Approval (IWVTA), which seems not to be possible if route 1 is followed.

Whether these advantages of route 2 justify its additional complexity over route 1 needs to be discussed.

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