

Transposition of WLTP into
EU Regulations
and
UN/ECE Regulations

71st GRPE June 2015

Submitted by the expert of the European Commission



Background

- It is the intention of the European Commission that WLTP will replace NEDC in 2017. A new EU regulation is needed to enable implementation
- In addition a new UN Regulation that includes WLTP (GTR 15) is required in order for it to remain possible to grant approvals against the 1958 Agreement
- At a European level the GTR needs to be complemented by additional technical elements, including:
 - Additional Ambient Temperature Correction Test (14 °C)
 - Correction for test cycle flexibilities
 - Utility Factors for OVC-HEVs



- EU WLTP is being prepared as a new implementing and amending regulation of co-decision EC No. 715/2007 that will eventually replace the current EC No. 692/2008 (NEDC)
- Proposed that new regulation will include all equivalent WLTP GTR requirements in a single new Annex XXI with the NEDC elements being deleted from the other annexes
- How to report WLTP results in the Type Approval Process is an issue currently being worked out
 - Which values?
 - Where reported?
 - Where used?



EU Regulation WLTP Annex XXI

- WLTP Annex is now likely to use GTR Phase 1b as the 'baseline' (previously it used Phase 1a)
 - Significant changes have been made / continue to be made to the Phase 1a elements – with additional elements also being added.
- New European specific text developed (e.g. ATCT)
- Text not applicable at a European level removed (e.g. option to not require use of the Extra High cycle phase)
- Some previously European specific issues have now been incorporated into the GTR (e.g. wheel alignment)



- WLTP GTR: covers both criteria pollutant (R.83) and CO₂ emissions (R.101)
- 69th GRPE 2 transposition options discussed:
 - a) Incorporate GTR 15 into the relevant sections of R.83 and R.101; or
 - b) Introduce a new 'Regulation WLTP'
- 70th GRPE Option b preferred i.e. implement WLTP via a new 1958 Agreement Regulation, that will eventually replace both R.83 & R.101



- Original proposal was for Regulation WLTP to be a 1:1 transposition of new EC Regulation (xxx/2015) – with the exception of some non-UN/ECE requirements (e.g. access to Repair and Maintenance Information)
 - With Informal document to be submitted to 71st GRPE
- 70th GRPE Japan registered interest in applying the new Regulation WLTP – other countries may follow
 - Options for enabling Regulation WLTP to be globally harmonised, whilst at the same time enabling regional variations to remain (e.g. limit values for pollution emissions) need to be discussed and agreed



- Areas for discussion and agreement:
 - The scope of the new 'Regulation WLTP'
 - Potential 'multi-level' approach
 - Transitional provisions in Regulations Nos. 83 and 101
 - The future of Regulations 83 and 101
- Introduction of 'Regulation WLTP' into UN Regulation No. 0 (IWVTA) also needs to be considered

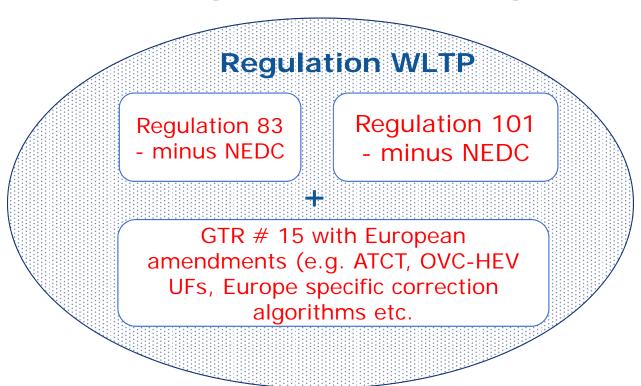


With option b (chosen by GRPE at its 70th session): Regulation WLTP shall not only cover CO₂ testing but also cover all other test types in R.83 and R.101 e.g. emission, OBD etc.

- > A solution is needed to address the following:
- Limit values are not harmonized yet
- The options in GTR No. 15 shall also be transposed.



Original proposal to 70th GRPE: single new regulation incorporation all European elements



Problems:

- Some CPs may wish to continue with R101 and R83 with NEDC
- Not addressing the needs of non EU CPs (e.g. Jpn)



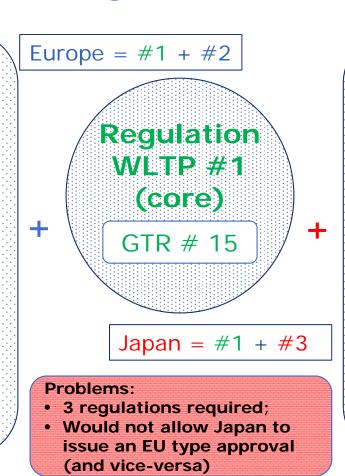
One option to enable Japan to issue approvals against the 1958 Agreement

Regulation WLTP #2 Europe

Regulation 83 - minus NEDC

Regulation 101 - minus NEDC

European amendments to GTR (e.g. ATCT, OVC-HEV UFs, Europe specific correction algorithms etc.



Regulation WLTP #3 Japan

Japanese type approval administrative elements, emissions limits, etc.



Multi-level option to enable harmonisation

New UN/ECE 'Regulation WLTP'

Regulation WLTP – top level (Level 2)

Contains most stringent limits from across all regions

Subject to full mutual recognition: TA shall be accepted by all CPs

Regulation WLTP – Level 1a
Contains current R.83 limits
Optional acceptance by other CPs

Regulation WLTP – Level 1b Contains "other" limits (e.g. Jpn) Optional acceptance by other CPs

Etc.

First step towards full harmonisation

Use different Approval Marks and Numbering to distinguish approval level Regulation 83 and Regulation 101 remain unchanged and 'available' for approvals But pragmatic solution addressing testing options of the GTR 15 for level 2 needed



Option #1 to enable Europe & Japan to issue approvals against the 1958 Agreement

Regulation WLTP

Regulation WLTP Level 2

Regulation WLTP Regional Level 1a

Regulation WLTP Regional Level 1b

Etc.

For other current
Regulation 83
requirements
(e.g. Evap. emissions)
Regulation
WLTP will be 'empty'* and will provide x-refs to relevant part of R.83
(as is currently the case in R.101)

Regulation 83

- Type II test (Carbon monoxide emission test at idling speed)
- Type III test (Verifying emissions of crankcase gases)
- Type IV test (Evaporative emissions)
- Type V test (Durability of pollution control devices)
- Type VI test (Cold start)
- Annex XI OBD

* Where other tests refer to the Type 1 test (NEDC) it will be necessary to say that this should be seen to be the WLTP Type 1 test (over a certain transition period in some cases)

Problem – Japan have different requirements to those in R.83



Option #2 to enable Europe & Japan to issue approvals against the 1958 Agreement

Regulation WLTP Level 2 Regulation WLTP Regional Level 1a Regional Level 1b Etc.

Second New 'Regulation 999'

'Empty' regulation with x-refs to equivalent parts of R.83*

Type II test (Carbon monoxide emission test at idling speed)

Type III test (Verifying emissions of crankcase gases)

Type IV test (Evaporative emissions)

Type V test (Durability of pollution control devices)

Type VI test (Cold start at low ambient temperature)

Annex XI - OBD

* Where other tests refer to the Type 1 test (NEDC) it will be necessary to say that this should be seen to be the WLTP Type 1 test (over a certain transition period in some cases)

Solution:

- Japan only need to sign-up to Reg. WLTP
- EU would sign-up to both regulations



Proposed timetable

- Discussions at 71st GRPE to agree a way forward
- For WP.29 (Nov 15) Develop a proposal on the fundamental approach
 - Due to 'novel' approach information to WP.29 for endorsement before going further
- Firm proposal of way forward to be provided to 72nd GRPE in January 2016



Contact information

Klaus Steininger, European Commission Nikolaus.Steininger@ec.europa.eu

Robert Gardner, TRL rgardner@trl.co.uk