

MINUTES

of the 16th WLTP IWG Meeting

Location: The Hague, NETHERLANDS
Hotel Carlton Beach
Gevers Deynootweg 201
2586 HZ Scheveningen

Date & Time: October 5th (10:00) – 7th (16:00), 2016

October 5th :

1. Welcome & Organization

Peter Striekwold (RDW) welcomes the group and acknowledges the work of the IWG to find common solutions between government and industry. Andre Rijnders (RDW) addresses the big tasks and new elements that are part of phase 2 of WLTP, which will be the group's work for a couple of years. The Co-Chair thanked RDW for hosting the IWG members and for the perfect organization.

Kawano-san proposes to harmonize the names of the task forces and to clarify the names of the task force leaders. A list task force leaders and individual groups was presented during the meeting and will be uploaded. IWG confirms the current task force leaders as named in WLTP-16-32e.

2. Adoption of Agenda & Minutes

- Minutes of 15th WLTP IWG meeting (WLTP-15-13e) adopted

3. Cycle TF (Gear Shift)

- Status report by **H. Steven** (WLTP-16-10e)

Heinz Steven gives an overview on the current proceedings of the task force (F2f and audio webconference). Some of the amendments were only drafting issues and are already incorporated in the gtr. (e.g. definition of "n/v ratio", ...). The full load power curve does now start at n_min_drive of gear 2, not anymore at n_idle. Gear specific power curves will not be considered.

N_min drive: new approaches to define n_min_drive have been developed, but the group still could not find a proposal that is accepted by all task force members.

The GSTF foresees a possibility to find a compromise solution by the end of the year and to amend the gtr accordingly. Japan still has reservations but encourages the task force to develop better parameters.

All drafting issues (green) as shown in Heinz´s presentation were **adopted**.

All proposals as shown in Heinz´s presentation were **adopted**

OICA made the proposal to avoid additional interpolation families as follows:

In the case you have two vehicles in a potential interpolation family where one would be in class 2 and one would be in class 3, both vehicles may be tested in class 3 and downscaled where necessary.

Interpolation between different levels of downscaling (annex 1 para. 8) and different speed caps (annex 1 para. 9) should be expressly permitted.

Japan will reply in KW 41 and if positive these points may be incorporated in an informal paper for GRPE 74.

OICA asks if the new calculations will be implemented in European law for 9/2017.

EU-COM: From a technical point of view yes, but political views (NGOs) have to be considered.

It was adopted to perform a round robin for the calculation of gear shift points and to use the current and the upcoming calculation method.

Japan propose to modify the definition of "power to mass ratio" which is applied for cycle classification and this proposal was **adopted**.

Current : mass in running order

NEW : mass in running order – 75kg

Originally, "curb mass" which corresponds to new proposal is used for classification threshold.

4. E-Lab. Sub-Group

- Status report by **Chairs (N. Mizushima / P. Ohlund)** (WLTP-16-19e)
Mizushima-san gives a brief summary on the current status of discussions in the EV sub group. FCV issues will be shifted to phase 2b.
He presents a schedule of the open issues that will be solved until end of 2019. (to be changed to 3rd Quarter of 2018).
India asks to implement a calculation example for the postprocessing of results. EV SG technical secretary will consider to include in the technical report, not in the gtr.

5. EVAP TF

- Status report by **T. Fujiwara** (WLTP-16-13e)
[request for adoption]
- Proposed EVAP GTR by **T. Fujiwara** (WLTP-16-14e)
Fujiwara-san gives an overview on the background of the timeline of the development of the EVAP work. He presents a flow chart of the EVAP test procedure and focuses on a harmonised fuel, and the applicable purge cycle for class 2 and 3(L-M-H-M cycle phases). The Limit values are CP options.
The EVAP gtr text has to be submitted until October 10th 2016.
Open issue: Sealed tank systems. A proposal for a procedure for sealed tank systems will be developed by the group for further amendment of the text.
The proposals presented by the EVAP group were **adopted**.
Fujiwara-san will prepare a technical report and present it during the IWG meeting in January.

October 6th :

6. In Service TF

- Status report by **P. Dilara** (WLTP-16-xyz)
Klaus Steininger gives an overview:
 1. durability check (mandatory test, test statistics, choice of the vehicle),
 2. independent testing: NGO, technical services. Also consider that the type approval CO2 values may be checked within certain limits. Rules and margins have to be defined.
 3. CoP: There already is a new test procedure in WLTP 1 in Europe, that should serve as a basis for discussion.
- The criteria for the determination of road load tolerance in Korea (**Charyung Kim**) (WLTP-16-16e).
C. Kim explains the method of energy calculation currently based on FTP-75 and HWY cycles. If the difference in energy exceeds 15 % the manufacturer's road load values will not be accepted. A method for WLTP will be developed shortly.

Work will not start before the beginning of 2017. Klaus will send an email with an invitation for a kick off meeting in November 2016 (timeline, ToR ...).

7. Supplemental Test TF

- Status report by **C. Astorga-Llorens** (WLTP-16-15e)
Kick off 11th and 12th of September, JRC. Cova Astorga focuses on the low and realistic temperature interest group issues. ToR have been discussed and amended (WLTP-14-14e). Boundary conditions: emission measurements at typical winter condition, effectiveness of aftertreatment systems. If GHG and CO2 is a focus of the group is not defined, yet. Cova asks if the low temperature effect on the range of electrified vehicles (customer information) should be part of the focus of the group (including a shortened test procedure). Cova will send out a questionnaire with open issues that will have to be answered before the next meeting.
Time frame: Cova states that the group will not have substantial results until January 2017 (original time frame).
CPs are asked to contribute to the scope and ToR of the group.

OICA asks to involve DG Clima in the task force and to focus on customer information.

EU-COM states that the temperature for Europe will be somewhere in the range of 0°C, additional family definitions will have to be established, to reduce testing burden.

- Japan comments on ToR of Low and realistic winter temperature interest group **T. Fujiwara** (WLTP-16-17e)

Japan is interested in a test at a harmonized temperature for criteria pollutants, CO₂, FC and electrical range at the same time. Currently Japan is performing a statistical study and is planning to present the result at the 18th IWG.

Korea expressed their interest in low temperature testing and will provide data if available.

- ACEA comments on Low temperature testing by M. Naegeli (WLTP-16-26e)
ACEA want to focus on criteria pollutants, low temperature range shall only be used for customer information (e.g. simulation of range). Criteria pollutants shall be checked under CS conditions.
- Next TF meeting was set on 21st and 22nd Nov. in CCFA.

8. Durability TF

- Status report by **A. Marotta** (WLTP-16-24e)

The objective, mandate and ToR of the task force have been presented during the 14th IWG meeting in Paris.

Alessandro asks for comments, amendments and invites more members to join the task force. The kick off meeting will be held between end of October and the beginning of November. It is intended to finalise the draft text until end of 2017 up to mid 2018, depending on the need of validation tests.

Open issues are e.g. the cycle for the durability test, the applicability of bench ageing tests for modern engine / aftertreatment systems, EGR durability.

Battery durability should be aligned with the out results of the EVE IWG and the EV subgroup. EU-COM: The battery durability test should be a vehicle test with

a representative driving and charging profile. Battery experts shall be involved in the development of a cycle/profile.

OICA addresses that an in-service test would be much more effective and gives much more information than a durability test. EU-COM replies that the aim of the gtr is to develop technical tests based on scientific research that might afterwards be implemented in regional legislation but, depending on the availability of ISC tests that have to be developed, as well.

- IWG has made a decision to split into two groups. This durability TF takes care of traditional durability issues and EV SG (collaborate with EVE IWG) takes care of battery durability.

9. Carryover from Phase1b

- Status report on Annex 4 items by **R. Cuelenaere** (WLTP-16-11e)

Rob Cuelenaere gives an update of the progress interest group.

Acceleration for dyno load setting was **adopted** and confirmed by IWG.

WLTP-16-06e (Bill Coleman): Bill presents a gtr amendment on the use of additional cooling fan. The proposal was **adopted**.

Fujiwara-san explains the proposals for the following issues:

1. number of split runs (WLTP-16-23e)

Round the calculated number of split runs up to the next full number, this shall be the number of runs. If more runs will be necessary, the responsible authority shall confirm.

The content of the text was **adopted**, and will be refined during the drafting meeting.

2. Alternative road load determination (WLTP-16-21e)

The delta vehicle friction has to be measured and the delta value has to be used to calculate the corresponding road load.

1. Include the alternative road load with a restriction on 25 N delta
2. Assign new tasks for the phase 2b agenda: gather data on a justification for higher or lower restriction limits, review the impact and develop a method in conjunction with implementing proposals for a manufacturer responsibility clause. Hand over the issue to the ISC task force.

The proposal was **adopted**.

3. Roller radius correction (WLTP-16-22e)

The approach to develop a fixed value is still under discussion. The group presented a temporary solution that was **adopted**.

- Overview on dual-axis roller usage by **I. Riemersma** (WLTP-16-xyz)

Iddo gives an oral update on the dual-axis dyno issues. He was asked to have a task force and address the dual-axis dyno requirements for EU-WLTP. The group tried to take notice of the Japanese concerns and the draft text that serves as a basis for the incorporation of the text in the gtr. The text will be implemented in European law but a compromise solution for the gtr has not been found, yet. EU-COM is very much interested in finding a harmonized solution for the gtr. Japan is still discussing this issue and will present the results of a study on the accuracy of testing on dual-axis dynos when it is completed (next IWG in Geneva).

The secretary asks Korea and India to bring their opinions to the floor during the next meeting.

EU-COM proposes a transition time to implement mandatory 4WD tests. Until the end of the transition time 4WD vehicles could be tested on 2WD dynos.

10. **OBD TF**

- Status report by **T. Fujiwara** (WLTP-16-20e)

Fujiwara-san explains that a questionnaire has been distributed in May. Until now he received four feedbacks. Task force meetings have not been scheduled, yet. All feedbacks stated that the base regulation shall be UN R-83 and that the test cycle shall be based on the WLTC phases. It is intended to develop a separate harmonized OBD gtr until the end of 2018. The task force leader proposed to use the current R-83 as a basis text, the first task force meeting shall be on 16th of December.

OICA reminded the group that for the development of new gtr, a sponsor is needed and WP.29 has to give a mandate.

EU-COM proposes to invite an expert for heavy duty OBD and check if it is feasible to align the new gtr with heavy duty.

11. Transposition of GTR15 into UNR

- Status report by **R. Gardner** (WLTP-16-xyz) -
- Presentation on transposition of GTR15 into UNR by **OICA** (WLTP-16-12e)

Imran Cosadia presented a stepwise approach on how to transpose the gtr 15 into the 58 agreement.

EU has already included the gtr in EU regulation and want to prohibit, as from Sept. 2017, the placing on the market of vehicles that do not comply with R83.08. OICA proposes an interim solution where type approvals for regions outside Europe are still possible, but not for EU itself. EU-COM asked Japan during the meeting whether the stepwise approach proposed by OICA would be suitable for Japan or not. Japan made a comment stating that this stepwise approach may decelerate the motivation to develop new WLTP UNR which is agreed by WP.29 Feedback from Japan is expected until mid of November.

October 7th :

12. Drafting

- Overview of the complete GTR by **S. Dubuc** (WLTP-16-03e)
- Working document for the drafting meeting in the Hague by **S. Dubuc** (WLTP-16-04e)

[request for adoption]

- An updated table regarding the use of Hz (input from Japan, BMW,VW) by **S. Dubuc** (WLTP-16-05e)
- Bill Coleman's proposal for cooling fan text by **S. Dubuc** (WLTP-16-06e)
- Annex 6 renumbered by **S. Dubuc** (WLTP-16-07e)
- A proposed restructuring of Annex 6 by **S. Dubuc** (WLTP-16-08e)
- JASIC's proposal regarding using coefficient h by **S. Dubuc** (WLTP-16-09e)

- GTR for Evaporative test procedure (WLTP-16-14e)

13. Meeting schedule

- 17th WLTP IWG Meeting, January 2017, Geneva
- Schedule of next task force meetings

14. AoB

Adoption of the ToR of all task forces – agenda point for the next IWG.

All task forces/ interest groups shall collect feedback on the ToR and present a revised version for the 17th IWG.

For the minutes

Markus Bergmann

(co-technical secretary of IWG)