The European Commission's science and knowledge service

Joint Research Centre

Progress Report

Low and Realistic Winter Temperature TF WLTP 21th - January 2018

C. Astorga





CALEDAR OF TELCO & MEETING (after 20th WLTP)

October 27th
TelCo

November
17th TelCo

Tand CP

Technical
presentations

(Zurich)

Tand CP

Technical
presentations



Content:

A/

Work of the Low T TF expected in 2018: Progress and development of GTR and, if needed, validation phase.

B/

Information from Japan in relation to the scope of how to use the test results

&

Information provided by other Cps: Sweden, Switzerland and EC.

C/

Test procedure and proposals

Dialogue for harmonized temperature

Information to consumers



CP - Japan information

Japan explained the position for low temperature test procedure and the purpose:

"to introduce the Low Temp Testing to regulate the emission, fuel consumption and range."

Japan will also consider PN even if, at the moment, it isn't regulated in Japan.

Discussion to reach a harmonized temperature is still open

(Presentation available in CIRCA data base)
https://circabc.europa.eu/faces/jsp/extension/wai/dialog/content/add-content.jsp



DG GROW - information

" input regarding a series of elements that should help shape the new procedure for testing vehicles at low temperatures, which in Europe shall replace the existing one still based on NEDC"

DG GROW has already communicated the need to include the diesel vehicles in the scope of the Low-T test, the addition of other pollutants (ex. NOx and PN)"

..."to distinguish the issue of regulated pollutants from the one covering CO2, fuel consumption and electrical range"

Concerning regulated pollutants (THC, NOx, CO, PM-PN), DG GROW ratifies that that they do not have any element to modify the test temperature (-7 ° C)

<u>CPs Switzerland as well as Sweden supported the</u> <u>position of the EC</u>



DG CLIMA – information:

"From a consumer information perspective, DG CLIMA supports work at UNECE level to develop technical procedures for a low temperature test that covers electric range for electrified powertrains (PHEVs) and pure electric vehicles as well as CO2 emissions.

Information that would be necessary will be provided asap and only after more scientific based information on how cold temperature influences these values will be available.



Progress in the discussions for a low T procedure:

1st part - Discussion for a proposal for ICE test procedure (introduction of the GTR drafting coordinator and process: star-up)

2nd part - Discussion for a proposal for a test procedure for hybrid vehicles & emissions

3rd part - Discussion for a proposal for a procedure for hybrids and Electric vehicles

4th part – Discussions on new Test procedure: Information to the customers?



1st part - discussions on new Test procedure: Proposal for LD "pure ICE" vehicles test at low Temperature (sub-zero)

Test for LD vehicles under cold weather conditions (sub-zero) should be done for:

- All "pure ICE" (Technology independent and fuel independent)
- Type 1 test of WLTP (see GTR 15) at sub-zero T
- all pollutants need to be referred (same as for Type 1)
- Preconditioning & soaking (force cooling?)
- Cold start
- Auxiliary devices "on" (heating on, others?)
- R/L determination at -X °C or 10% (?) reduction of coast-down time
- Gear shift calculations (adaptation)
- Fuels
- Cycle
- Hardware and instrumentation of the test
 LowT TF agreed on this proposal as a starting
 point for discussion of the procedure on 12th
 December 2017 (16th f2f meeting)



Drafting of new LowT GTR

- S. Dubuc: drafting coordinator.

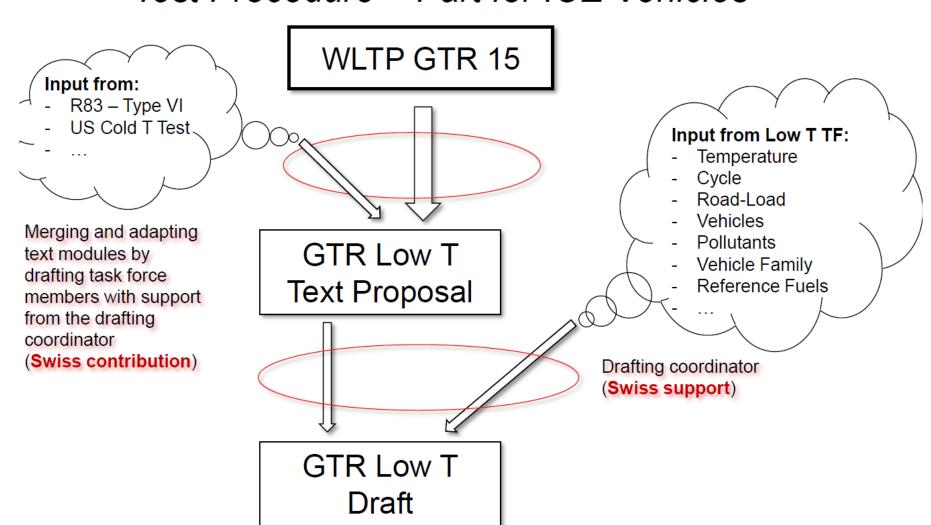
 Coordinator will be supported by a few members of the TF
- G. D'Urbano (Swiss Federal Office for environment) introduced the scope of this drafting process and announced that the Swiss Federal Office for environment will support the work of the drafting coordination in 2018



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Structural Approach

Test Procedure – Part for ICE Vehicles





2nd part / Discussions on new Test procedure: Presentation of a proposal for a valid test for hybrid vehicles (OVC-HEVs) and emissions of ALL OVC-HEVs

- Test could follow Type 1 test of WLTP (see GTR 15)
- CS & CD tests should be necessary to fully address OVC-HEV emissions
- COLD START
- Preconditioning (same time and method as pure ICE?) of the vehicle, soaking T and time?? Heating, lights?, defrosting?(Others?)system or any other auxiliary device necessary under cold T conditions: "ON"
- US 1066 set control max... etc.
- List of devices that may have an influence on the range of the vehicle and/ safety)



3rd part: Discussions on new Test procedure: proposal for a test (or procedure?) for Electric vehicles

This discussion should be focused on a Test at low sub-zero T:

A Type 1 -short procedure- test should be necessary (See GTR 15), unless an alternative method could be demonstrated in time and validated before the dead line of delivery of the work of this TF.

Japan proposal: Shorten cycle but always test needed. Open for discussion.

EV Group does not have any alternative proposal for an empiric alternative method at the moment.

GTR 15 and corresponding annexes 8 will be the reference for drafting coordinator.



4th part – Discussions on new Test procedure: Information to the customers?

Considering that there is variable effect of low temperature in the electric range, and consequently also in the autonomy of the vehicle running with the electrical engine when temperature is sub-zero:

For practical purposes and safe use of the car during extreme winter conditions, customer should have information about the performance and autonomy of the vehicle under those conditions

What kind of information should be useful (and necessary) for the consumers? Still need further discussions inside the TF

Further CPs input still necessary



Low T TF - progress report Summary on 9th of Jan 2018

During 2018 TF should make progress on developing the GTR and, if needed, validation phases.

S. Dubuc together with the Chair of TF and a short list of TF members will support the drafting process.

Information from Japan in relation to the "scope of how to use the test results" as well as the information from any other CP

Contracting parties' presentations Japan, Sweden, Switzerland and EC.

TF has done considerable progress in the discussion for the test procedure proposals as well as to discussions for harmonized temperature.



1st part - Discussion for a proposal for ICE test procedure (introduction of the GTR drafting coordinator and process: star-up)

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GTR drafting process

Small group to deal with the drafting process in the TF (6-7 persons)

Drafting group will use GTR 15th as reference



All documents and presentations corresponding to this 16th LowT meeting can be found in CIRCA-BC under:

<u>Library</u> > <u>WLTP</u> > <u>UNECE-WLTP</u> > <u>Low and realistic winter</u> <u>temperature TF</u>



CALEDAR OF TELCO and MEETING Early 2018

29th? Jan TelCo

19th Feb TelCo

29th March TelCo

TelCo

Tand CP

Technical presentations

GTR



Low and realistic Temperature Task Force:

Ispra, Jan 9th 2018

COVA ASTORGA

DG Joint Research Centre
Directorate for Energy, Transport & Climate
Sustainable Transport Unit

