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WLTP 16th
Reporting on
Low & Realistic Winter
Temperature Task
Force
Kick-off meeting

M.C. Astorga-Llorens

Ispra-Italy, 12-13 September 2016
Low Temp TF:

@araiindia.com
@adviron.de
@volkswagen.de
@utacceram.com
@ford.com
@tno.nl
@tno.nl
@minienm.nl
NL (Ministry I&M)
@rdw.nl
@clepa.be
@valeo.com
@daimler.com

@toyota-europe.com
@bmw.de
@hyundai-europe.com
@volvocars.com
@renault.com
@transportstyrelsen.se
@aecc.be
@horiba.com
@m PSA.com
@denso.be
@denso-auto.de
@opel.com
@n.t.rd.honda.co.jp
@jrc.ec.europa.eu
**Low Temp Task force Agenda**

<table>
<thead>
<tr>
<th>Date</th>
<th><strong>September 2016</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title</strong></td>
<td>From Monday, 12(^{th}) at 10:30 h to Tuesday 13(^{th}) at 15:30h</td>
</tr>
<tr>
<td><strong>Informal Document</strong></td>
<td><strong>Agenda Low Temp TF 2016-09-01</strong></td>
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**Location:**  
Room Hermes; Visitors centre - Ispra  
12\(^{th}\) September

<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda item</th>
<th>Lead/ contributions</th>
<th>Working Document</th>
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</thead>
<tbody>
<tr>
<td>10:30</td>
<td>Welcome Coffee and networking</td>
<td></td>
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<tr>
<td>11:00</td>
<td>Introduction and presentation of Terms of Reference; Mandate (Background &amp; purpose)</td>
<td>Coordinator JRC</td>
<td>ToR WLTP doc 14-14e</td>
</tr>
</tbody>
</table>
Low & Realistic Winter Temperature Task Force

Terms of Reference:
WLTP 14th meeting (doc no. 14)

1. Background
2. Mandate &
3. Terms of Reference
   3.1 Subgroup LowTemp-Emis &
   3.2 Subgroup LowTemp-Range

Monday

Tuesday
WLTP Phase 2a

Supplemental tests

**Boundary Conditions**

Low and realistic winter temperature
Correction of R/L and fuel specifications
WLTP Phase 2a

WLTP 14th PARIS, April 2016
Document WLTP 14-14e (ToR Low Temp TF)

See document
MINUTES of the 14th WLTP IWG Meeting WLTP-14-24e
1/ BACKGROUND

The purpose of the low temperature test is to check the level of specific pollutant emissions of vehicles in conditions that may easily be encountered during the winter season.
Mandate of the Low-Temp Task Force

be chaired by the European Commission;

be open to all experts, stakeholders and CP representatives that have an interest in WLTP;

act as a platform for the exchange of information and contributions of stakeholders, to be discussed and agreed during the development process;
Mandate of the Low-Temp Task Force (2)

develop a harmonised low temperature test procedure (Type 6 test) for the assessment of the emissions of specific pollutants in conditions that may be easily encountered during the winter season;

propose a harmonised test procedure to assess the impact of low temperatures on the range of electric vehicles for a proper information of the consumers;
Mandate of the Low-Temp Task Force (3)

report to the WLTP-IWG on the progress; deliver technical advice and a GTR text proposal;

focus only on the technical issues regarding the procedure to be developed, while political decisions are made at the WLTP-IWG level.
Test procedure should assess the impact of low temperature on the efficiency of after-treatment devices or other emission control technologies.
In order to properly reflect the conditions that are encountered in real world winter conditions, the road load should be representative of the increased resistance to progress at low temperatures due to the higher air density and other factors.
Should emissions be predominantly measured during the cold start and immediately after or during the whole WLTC cycle?
Low temperatures largely affect the range of electrified vehicles as a consequence of a reduced efficiency of the battery and also due to the additional energy consumption from auxiliaries (i.e. heating system).
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WLTP 16th:
Reporting on the
Low & Realistic Winter Temperature Task Force
Kick-off meeting
DAY 2

M.C. Astorga-Llorens

Ispra-Italy, 12 September 2016
Presentation of 2 subgroups as defined in the ToR
Subgroup LowTemp-Emis
Subgroup LowTemp-Range

one in charge of the procedure for assessing the pollutant emissions in conventional and electrified vehicles (LowTemp-Emis)

the second in charge of the procedure for assessing the impact of the low temperature test on the range of electrified vehicles (LowTemp-Range)

3 October 2016
Proposal not accepted: Only one group?

*(See minutes of the kick off meeting)*

One single group: in close collaboration with the EV group for what it refers to Low Temp and Range?
For both subgroups a general approach is proposed which can be adapted to the specific purpose of each deliverable

- Start with an analysis of the existing normative and literature on the method;

- Prepare a **comparative analysis amongst the different regional** procedures;

- Propose a way forward for the development of a harmonized procedure, including considerations on whether **there is need for experimental activities** and to what extent;

- Develop the **harmonized method**;

- Validate the method
Timing

For subgroup LowTemp-Emis (to be agreed)

For subgroup LowTemp-Range (to be agreed)
# WLTP Phase 2 Working Items and Schedule

**note:** Completion timing of Phase 2a may have a chance to be shifted based on each item progress

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<th>remark</th>
<th>collaboration with EVE</th>
<th>Schedule</th>
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<tr>
<td><strong>gtr amendment</strong></td>
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<td>CYCLE TF</td>
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<tr>
<td>Classification &amp; Gear shift, Annex 1 &amp; 2</td>
<td>Downscale/gear shift per system power of HEV</td>
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<td>Germany/Korea</td>
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<td>Power to mass ratio, \textit{n}_{\text{min, drive}} , Annex 1 &amp; 2</td>
<td>Definition of mass VCC proposal for \textit{n}_{\text{min, drive}}</td>
<td>Carryover from Phase 1b</td>
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<tr>
<td>Normalization, Annex 7</td>
<td>Mainly ICE (remaining item)</td>
<td>ICE vehicles: completed by EU Electrified vehicle: JAPAN will re-visit necessity of trace index when apply normalization</td>
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<td>Drive Index, Annex 6</td>
<td>Collaborate with &quot;Normalization&quot;</td>
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<td><strong>Supplemental Test TF</strong></td>
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<td>Boundary Conditions, Annex 6</td>
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<td>Low &amp; Realistic Winter Temp</td>
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<td>Correction of R/L and fuel specification</td>
<td>Option</td>
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<td>High Altitude</td>
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<td>Auxiliary Devices, Annex 6</td>
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<td>MAC</td>
<td>Vehicle test? Component evaluation? Simplified test?</td>
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<td>others</td>
<td>Vehicle test? Component evaluation? Simplified test?</td>
<td>Electrified vehicle: JAPAN will lead</td>
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<td>Eco-Innovation, new Annex</td>
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<td>i.e., sailing .....</td>
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<td><strong>EVAP TF</strong></td>
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<td>Strong desire to develop gtr by 74th GRPE</td>
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<td>Pollutants only (rapid aging method)</td>
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<td>ICE</td>
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3 October 2016
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