

No.	Subject	Questions, comments
1.	Vehicles to be tested	17.04.2018 Ispra: Closed point: All vehicles covered by GTR 15 except fuel cell vehicles.
2.	Test temperature	-7 °C is supported by all contracting parties but with a proviso from Japan which will be submitted at a later date.
3.	Criteria emissions to be measured	THC, CO, NO _x , PN, PM, CO ₂ , NMHC (?) 17.04.2018 Ispra: Closed point: No NO _x correction factor will be required.
4.	Range to be measured (see also under point number 19 of this table)	17.04.2018 Ispra: Open points: 1. Which range must be measured? 2. Which range is of relevance to the customer?
5.	Auxiliary devices	17.04.2018 Ispra: Open point: A small subgroup under the leadership of Christoph Petitjean (CLEPA) will be formed to propose which auxiliary devices are to be taken into consideration. Only those which are related to low temperatures will be considered. Variables to be discussed are when and how long such auxiliaries shall be activated. For information: An auxiliary device is defined in GTR 15 as: <i>Energy consuming, converting, storing or supplying non-peripheral devices or systems which are installed in the vehicle for purposes other than the propulsion of the vehicle and are therefore not considered to be part of the powertrain.</i> (NOTE: peripheral devices are essential to the operation of the powertrain.)
6.	Cycle Annex 1	17.04.2018 Ispra: Open point: Which cycles are to be driven? Could L- M-H, L-M-H-XH, or L-M-H-L be possibilities?
7.	Shifting Annex 2	17.04.2018 Ispra: Open point: Might any shifting problems be expected due to the low temperature (e.g. low-powered vehicles) and the associated higher road load?
8.	Test fuel Annex 3	17.04.2018 Ispra: Closed point: The EU is OK with -7 °C fuel. Open point: Japan will provide fuel information. Open point: Must a gas-fueled vehicle be tested on two reference fuels? Closed point: A low temperature oil will not be specified nor required.
9.	Road load Annex 4	INFO: EPA and Reg. 83 allow calculating road load based on a 10 per cent reduction in coastdown target time. EPA also states: "Base the adjustment of road load on the road load force profile at -7 °C or on a 10 percent decrease in the target coastdown time used for FTP testing." Closed point: A reduction of the coastdown time translates into a 10 per cent increase in road load.

		<p>Open point: Drafting Co. will contact Ford to clarify how the road load is increased by 10 per cent when using the torque meter method.</p> <p>Open point (?): Is the operation of some movable aerodynamic body parts temperature-dependent?</p>
10.	[Reserve]	
11.	Test equipment Annex 5 Hydrocarbon sampling system	<p>17.04.2018 Ispra: Closed point: Paragraph 4.1.3.1.2. of Annex 5 (test equipment) relates to all heated parts of the hydrocarbon sampling system. Compounds measured at 23 °C can also be measured accurately using the same analytical instruments and procedures at low temperatures as long as water condensation is avoided.</p>
12.	Test equipment Annex 5 Connecting tube	<p>17.04.2018 Ispra: Closed point: As long as water condensation is avoided, no special precautions must be taken regarding the length, heating etc. of exhaust connecting tubes to be used.</p>
13.	Test equipment Annex 5 Dynamometer bearings	<p>17.04.2018 Ispra: Open point: Japan will discuss this point internally. AVL will provide information on the use of heated dynamometer bearings</p> <p>Background information: Heated dyno bearings is allowed in both Reg. 83 and §1066.701. The use of heated dyno bearings determines when the test may start.</p> <p>EPA: For dynamometers that have independently heated bearings, start the emission test within 20 minutes after warming up the dynamometer; for other types of dynamometers, start the emission test within 10 minutes after warming up the dynamometer.</p> <p>Reg 83: The time between dynamometer warming and the start of the emission test shall be no longer than 10 minutes if the dynamometer bearings are not independently heated. If the dynamometer bearings are independently heated, the emission test shall begin no longer than 20 minutes after dynamometer warming.</p>
14.	Test equipment Annex 5 CVSs	<p>17.04.2018 Ispra: Closed point: CVS dilution air heat exchanger for all types of CVSs (CFV, PDP, UFM, SSV) will not cause any problems at low temperature testing.</p>
15.	Test equipment Annex 5 PN, PM measurements	<p>17.04.2018 Ispra: Closed point: Testing at -X °C will have no influence on measuring PN and PM.</p>
16.	Test equipment Annex 5 Measuring non-criteria emissions	<p>17.04.2018 Ispra: Open point: JRC will study whether testing at -7 °C will have any influence on measuring NH₃, N₂O, C₂H₅OH (ethanol), formaldehyde and acetaldehyde. Other partners (Horiba, AVL, etc.) are welcome to contribute.</p>
17.	Test procedure	17.04.2018 Ispra:

	Annex 6	Open point: Both Reg. 83 and §1066.701 follow a similar test procedure, i.e. fuel drain and refill, precondition, ambient or forced cooldown, then the emissions test. A test procedure must be defined and agreed upon.
18.	Test procedure Annex 6 Preconditioning temperature	17.04.2018 Ispra: Open point: The preconditioning temperature must be defined and agreed upon. Open point: Which cycle shall be used for preconditioning? Background information: Reg. 83: Preconditioning may be conducted at a test cell temperature of max. 30 °C (??). §1066.701 requires preconditioning at an average temperature of - 7°C.
19.	EVs Annex 8	17.04.2018 Ispra: Open points: 1. Will simulation be used to determine range? 2. Which range should be reported to the customer? 3. Which CO ₂ value (CD, CS or weighted) shall be used? These points to be discussed at a later stage of development of the GTR.
20.	Equivalency Annex 9	17.04.2018 Ispra: Open point: Can low temperature tests be simulated? If so, it will have to show equivalency.
END		