PROPOSAL for ADOPTION

Handling of Ki (OIL#34 ~ 38)

<u>1. Open Issues</u>

Oľ	descriptions (WLTP-DTP-LabPRocICE-268_1)	discussion points	possible solution	TF Proposal
#3	1: Technical Secretary request to define bench cycle and type 1 cycle equivalence criteria or to delete bench cycle. This text is carry over from ECE-R83.06. PSA and Iddo Riemersma also commented on the lack of an equivalence definition. Essential that opportunity to load the DPF on engine bench remains. Propose to delete engine test bench equivalent for all parts of regeneration testing except after treatment device loading. The equivalence discussion must be included in phase 1B.		approval of the responsible authority, manufacture develop the alternative procedure to demonstrate its equivalency (including loading quantity and loading distance). It can be done both on engine bench and chassis dynamometer.	Accept alternative procedure with evidence of equivalency (same as R83) draft: Upon request of the manufacturer and with approval of the responsible authority, manufacture develop the alternative procedure to demonstrate its equivalency (including filter temperature, loading quantity and distance). It can be done both on the procedure to the second s
#3	 2. Technical Secretary request to calculate Ki for CO2 and fuel consumption over each phase. It should be discussed whether this would give a correct or misleading impact on the different phases and might need to be included at contracting party request. For phase 1B discussion also because calculations need to be revised to show the phase Ki approach is allowed for CO2 / FC as an option 	Several CPs have needs to provide phase specific CO2 and fuel consumption value for customers. This automatically requires phase specific Ki and this description has already introduced into current gtr in section 3.2. (unfortunately, this is missing in section 3.1)	Add the following paragraph in section3.1. "The following calculation shall be done over one Type 1 operation cycle for exhaust emissions and over each individual phase for CO2 emission and fuel consumption"	TF Decision : 1 (apply whole cycle Ki to each phase Ki) Justification : equipment practicability, within acceptable error (less than 1%) Agreed to require phase specific Ki for CO2/FC only. Discussion points are which should be primary 1. apply whole cycle Ki to each phase Ki or 2. measure each phase Ki (need to consider equipment practicability)
#3 #3	Complete the regeneration event. On the other hand it is not right to turn off the engine	pollutants : all pollutants Ki(s) are available for whole cycle. CO2 and fuel consumption : phase specific Ki is required.	Only possible solution is to allow "engine off" during equipment preparation as other test procedure (charge depleting test for OVC-HEV)	Agreed that engine should not be switched off between two cycles (to avoid an unrepresentative cool down or loading of the filter between the two tests) In the case that more than one WLTC is required for regeneration, phases and bags can be combined (L+M+H, exH).
#3	4: Technical Secretary requests to include FC and CO2 in the decision whether or not the regeneration process is applicable – however, this has not been done owing to no acceptance criteria being specified. Emissions are compared to the emission limit values. CO2 and FC acceptance criteria are defined in ECE-R-101 – this must be discussed in phase 1B.	Ki(s) for pollutants is exempted if the conditions were met, however, exemption of CO2/fuel consumption Ki(s) is not allowed. This means that exemption for pollutants has no meaning.	defined in this appendix, a fixed Ki value of 1.05 may	Accept fixed Ki for CO2/FC (same as R101) draft: Instead of carrying out the test procedures defined in this appendix, a fixed Ki value of 1.05 may be used for CO2 and fuel consumption. APPROVED@#8_IWG

2. Confirmation Items

OIT	Confirmation items	discussion points	possible solution	TF Proposal
new	 1.4. At the option of the Contracting Party, the Extra High2 phase may be excluded for determining the regenerative factor for Class 2 vehicles. 1.5. At the option of the Contracting Party, the Extra High3 phase may be excluded for determining the regenerative factor for Class 3 vehicles. 	Pollutants : L~H phase Ki(s) and Ex-H phase Ki(s) are derivate under L~Ex-H cycle, then are used for Ki(s) under L~Ex-H cycle or not CO2/FC : Each phase Ki(s) derivated under L~Ex-H cycle can be used for each phase Ki(s) under L~Ex-H cycle or not	Option1 : OK Option2 : NG Option3 : any proposal is welcome.	TF Decision : Require independent test for 3 and 4 phases separately Justification : accuracy is first priority testing burden is acceptable (5 -> 7days) EU prefer harmonized procedure, on the other hands, Japan require that it should not create any unfairness.
	2. Test Procedure The test vehicle shall be capable of inhibiting or permitting the regeneration process provided that this operation has no effect on original engine calibrations. Prevention of regeneration shall only be permitted during loading of the regeneration system and during the pre-conditioning cycles. It shall not be permitted during the measurement of emissions during the regeneration phase. The emission test shall be carried out with the unchanged original equipment manufacturer's (OEM) control unit	Suggestion: Make this more specific, e.g. emission control unit. Confirmation : how to control the regeneration process with "the unchanged original equipment manufacturer's control unit" ?	has no affect on original engine calibrations.	Allow usage the engineering control unit to manage regeneration operation <i>draft:</i> At the request of the manufacturer and with approval of the authority an "engineering control unit" which has no effect on original engine calibrations can be used during ki determination VED@#8 IWG
editorial	2.2.5.1. If more than one WLTC is required, subsequent Type 1 cycle(s)	editorial error	2.2.5.1. If more than one WLTC is required, subsequent WLTC cycle(s)	DONE
ē	Annex 4a/6.6.9.1. The provisions of Annex 13(Ki determination) shall apply for the purposes of particulate mass measurements only and not particle number measurements.	missing	add same requirement into gtr	TF Decision : Accepted Insert the statement between Annex 6 -Appendix 1 1.2. and 1.3.
	Annex 4a/6.6.9.3. For particulate mass sampling during a test when the regenerating device is in a stabilized loading condition (i.e. the vehicle is not undergoing a regeneration), it is recommended that the vehicle has completed > 1/3 of the mileage between scheduled regenerations or that the periodically regenerating device has undergone equivalent loading off the vehicle.	missing	add same requirement into gtr	TF Decision : Accepted Add the statement after Annex 6 1.2.4.7.2. (Test Vehicle Preparation)

3. GTR Amendment

22nd FEB 2015 : Proposed gtr amendment based on the decision above was circulated to TF member (FEB 2015) for theit review 11th to 13th MAR 2015 : gtr drafting meeting next gtr drafting meeting : FINALIZATION