

UNECE GRPE Informal Group on Environmental and Propulsion Performance Requirements of L-cat Vehicles (EPPR L-cat) State of Play

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EPPR meetings in 2019

- 08-09 Jan 2019: EPPR 26th (GRPE Geneva summary; GTR2 & OBD2)
- 19-22 Feb 2019: EPPR 27th (JRC Ispra; GTR2 & OBD2)
- 26-29 Mar 2019: EPPR 28th (Geneva; GTR2 & OBD2)
- 22-23 May 2019: EPPR 29th (Geneva; GTR2 & OBD2)

Web conferences

NEXT F-2-F MEETING: EPPR 30th 15–18 October 2019 (Location: CARB- tbc)

Amendment 4 to UN GTR 2

- **Renewed mandate to the IWG EPPR L-cat (45th session)**
 - AC.3 adopted ECE/TRANS/WP.29/2015/113 (ECE/TRANS/WP.29/AC.3/36/Rev.1)
 - Mandate was extended for the period 2016 - 2020
- **Mandate:**
 - harmonized test procedures^(§) for two-wheeled vehicles equipped with conventional combustion engine technology but the objectives also includes three-wheeled vehicles and other propulsion types in the next stage of work.
 - the scope of discussions does not cover light four-wheeled vehicles on emission related GTRs

(§) to establish amendments to UN Global Technical Regulation (UN GTR) No. 2 (Worldwide harmonized Motorcycle emissions Certification/test procedure (WMTC)) with respect to Environmental and Propulsion unit Performance Requirements (EPPR),

Amendment 4 to UN GTR 2

- **Mandate (cont.):**

- the IWG will continue to first develop requirements for 2-wheeled vehicles with conventional combustion engine technology.
- Progressively other vehicles categories and other propulsion unit types will be considered to be included.

Amendment 4 to UN GTR 2

• Status:

- The IWG has issued Informal Documents (draft text) indicating the progress toward issuing an amended GTR2
- The IWG has issued a working document (formal text) containing the **Amendment 4 to UN GTR No. 2^(*)** for consideration at the following session of GRPE (May 2019) (ECE/TRANS/WP.29/GRPE/2019/12)

<http://www.unece.org/fileadmin/DAM/trans/doc/2019/wp29grpe/ECE-TRANS-WP29-GRPE-2019-12e.pdf>

- **Informal document GRPE-79-21e:** Consolidated version with the editorial corrections and the inclusion of the Statement of technical rationale and justification
- **Informal document GRPE-79-22:** Technical report on the development of Amendment 4 to global technical regulation No. 2

(*) on the measurement procedure for two-wheeled motor cycles equipped with a positive or compression ignition engine with regard to the emissions of gaseous pollutants, CO₂ emissions and fuel consumption.

Amendment 4 to UN GTR 2

- **Purpose:**

- entire revision of GTR No 2 to dedicate separate sections to test types I (tailpipe emission after cold start), II (idle / free acceleration emissions) and VII (energy efficiency)
- update the GTR for technical progress.
- text as closed as possible to EURO 5^(*,+) (based text provided by the European Commission - EPPR-11-15^(§))

(*) Reg.(EU) No.168/2013 of the European Parliament and of the council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles.

(+) COMMISSION DELEGATED REGULATION (EU) No 134/2014 of 16 December 2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to environmental and propulsion unit performance requirements and amending Annex V thereof.

(§) <https://wiki.unece.org/download/attachments/25267103/EPPR-11-15-Rev1e.doc?api=v2>

Amendment 4 to UN GTR 2 - Scope

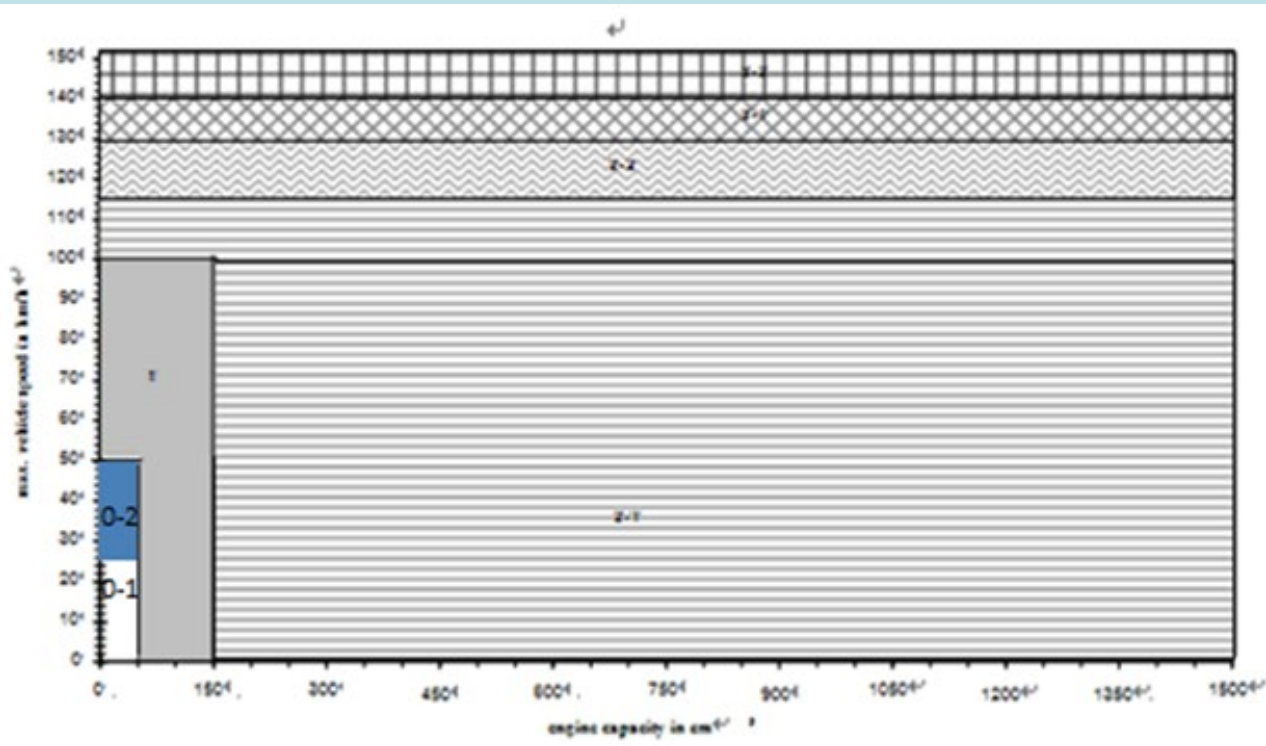
- ✓ Two-wheeled motor vehicles equipped with a propulsion unit in accordance with the following table:

	<i>Vehicle with PI engines (Petrol)</i>	<i>Vehicle with CI engines (Diesel)</i>
Type I Test	Yes	Yes
Type I Test particulate mass	Yes (only for DI)	Yes
Type II Test	Yes	Yes
Type VII Test	Yes	Yes

- ✓ The EPPR IWG may add other vehicle types in a second stage

Amendment 4 to UN GTR 2

Vehicle categories for environmental testing



Some CPs were having concerns for implementing Class 0 vehicle in domestic regulation due to different maximum speed. Hence it was decided to leave the details of **Class 0 vehicles as Contracting Party option**

Vehicle sub-classification for environmental testing, test types I and VII

Amendment 4 to UN GTR 2

Performance Requirements:

- Due to the disparity of level of stringencies present in different regions of the world, it was decided to define performance requirements at two levels:
 - Principal performance requirements (or the most stringent ones for two-wheeled motorcycles) GTR 2 is largely harmonised with Reg. (EU) 168/2013 (EURO 5)
 - Alternative performance requirements (or less stringent) and corresponding to performances already in application in some Contracting Parties.

Amendment 4 to UN GTR 2

Reference fuel.

The principal performance requirements of this UN GTR are based on the use of reference fuels:

- For Type I Principal norms, the reference fuel for PI vehicles shall be either E0 or E5.
- For Alternate norms, regional reference fuels available with contracting parties can be used for Type I test (Alt A = India BS IV, Alt B = Euro 4 Alt C = Euro 3).

Amendment of UN GTR 18 to include OBD 2

- **Purpose:**

- To develop functional aspects of On-Board Diagnostic (OBD) systems.

- **Mode of Operation:**

- Creation of a “Corresponding Group” within the IWG EPPR L-Cat (agreed by all parties) to concentrate in the development of OBD 2
- The speed up of the process necessary because of a CP (i.e. JPN) required the development of OBD 2 for regional legislation (timing)
- The CG is lead by a vice-chair (Mr MATSUKAWA - JPN)
- The base document is again the text referring to OBD 2 in EURO 5
- Final responsibility of the work and the submission of Informal/Working documents remains with the EPPR IWG

Amendment of UN GTR 18 to include OBD 2

• Content:

- The work of the OBD 2 (amendment to GTR 18) is also based on the European EURO5 regulation

I. Statement of technical rationale and justification		Part 1	Part 2
A.	Introduction		Yes
B.	Procedural background and future development of the gtr		Yes
C.	Existing regulations, directives and international voluntary standards		Yes
D.	Discussion of the issues addressed by the gtr		Yes

II. Text of the global technical regulation		Part 1	Part 2
1.	Purpose	Yes	
2.	Scope and application	Yes	
3.	Definitions	Yes	
4.	List of acronyms and symbols		Yes
5.	General requirements	Yes	

Annexes		Part 1	Part 2
1.	Functional aspects of On-Board Diagnostic (OBD) systems	Yes Except for IUPR and access to OBD information	Yes Only for IUPR and access to OBD information
2.	Minimum monitoring requirements for electric circuit diagnostics	Yes	
3.	In-use performance ratio		Yes
4.	Selecting criteria for vehicles with respect to in use performance ratios		Yes
5.	On-board diagnostics family for IUPR		Yes
6.	Test type VIII requirements: OBD environmental tests	Yes	
7.	Propulsion unit family definition with regard to on-board diagnostics	Yes	
8.	Administrative provisions		Yes

Amendment of UN GTR 18 to include OBD 2

- **Progress:**

- **Informal document GRPE-79-23:** This is the consolidated document addressing the phase 1 of the work of the IWG and in particular of the work of the Correspondent Group as defined by the IWG in its formation (EPPR-24 and its term of reference)
- Discussion of phase 2 is divided into 3 sessions and is planned to be completed by Mar 2020
- Working document including phase 1 and 2 is planned to be submitted to GRPE in Jan 2021.
- Amendment of GTR No.18 is planned to be adopted by WP29 in Jun 2021.

IWG EPPR L-cat work outlook

- **Next areas of activities:**

- **Durability – Decided by CPs & stakeholders**
- Propulsion Unit Performance
- GTRs to be transposed into UN Regulations (?)

} Possibly in parallel

<https://wiki.unece.org/pages/viewpage.action?pageId=63308245>



Any questions?

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