

Submitted by the IWG on EPPR

Informal document **GRPE-71-22**  
71<sup>st</sup> GRPE, 8- 12 June 2015  
Agenda item 9(a)

Report from IWG on  
Environmental and Propulsion  
Performance Requirements for  
Light vehicles (EPPR)  
71<sup>st</sup> GRPE 11-12<sup>th</sup> June 2015

Geneva

Chair: Petter ÅSMAN

Secretary: Thomas VERCAMMEN

## Outline

- Background
- State of play
- Informal document- proposal for new GTR on Evaporative emissions and crankcase gases
- State of play for New GTR on OBD
- State of play for amendments to GTR 2
- Informal document- proposal for extension of the mandate
- Roadmap
- Next meetings

## Background- ToR and mandate

- Priority to work under 1998 Agreement but will also work under 1958 Agreement
- Amend GTR No2 and develop new GTRs with respect to Environmental and Propulsion unit Performance Requirements
- Create synergies with 58<sup>th</sup> Agreement and where possible develop common requirements in form of UN Reg(s)
- Exchange information on current and future regulatory requirements for 'light vehicles'
- Adopted at WP29 Nov 2013

## Timing within EPPR mandate (June 2013)

- November 2012: 158th session of WP.29 – agreement on establishment of informal working group by adoption of the mandate regarding environmental and propulsion performance requirements for L-category vehicles.
- January 2013: 1<sup>st</sup> meeting of the EPPR informal working group. Review and adoption of the Rules of Procedure and Terms of Reference.
- June 2013: .GRPE (66th session) meeting of the EPPR informal working group. Presentation of draft final roadmap and related programme management items to GRPE submitted for adoption.
- November 2013: 158th session of WP.29, adoption of GRPE decision regarding the final roadmap and related programme management items.
- 2013-2016: meetings of the working group, regularly reporting to GRPE and the Administrative Committees (AC 1 and AC 3)
- **January 2016: Present a final report as an informal document to GRPE**
- **2016: possible adoption of UN Regulation(s) and Global Technical Regulation(s)**

Past meetings EPPR  
January 2015 – June 2015

- 10<sup>th</sup> meeting in Brussels, 18<sup>th</sup>-20<sup>th</sup> March 2015
- 11<sup>th</sup> meeting in Geneva, 9<sup>th</sup> June 2015
  
- Monthly phone/web meetings

## Topics to be covered by EPPR

- Environmental performance:

- **Type I: Tailpipe emissions test after cold start (revision);** PRIORITY
- Type II: Tailpipe emissions test at (increased) idle / free acceleration;
- **Type III: Emission test of crankcase gases;**
- **Type IV: Evaporative emissions test;** PRIORITY
- Type V: Durability testing of pollution control devices;
- Type VII: Measurement of CO2 emissions, fuel consumption, electric energy consumption and electric range determination;
- **Type VIII: On-board diagnostics environmental verification tests.** PRIORITY

- Propulsion unit performance:

- Unified rules and test procedures to measure power and torque for propulsion technologies fitted on L-category vehicles
- unified measurement of maximum design vehicle speed and/or power for restricted L-category vehicles should be developed and agreed upon.

## Structure of coming proposals

- New GTR (informal document June 2015)
  - Evaporative emissions
  - Crankcase emissions
- New GTR (informal document scheduled for January 2016)
  - OBD
- GTR 2 amended including (tentative informal document for January 2016)
  - Test type I (work have started)
  - Test type II (Idling)
  - Test type VII on Energy efficiency (CO<sub>2</sub>, FC& Range)

→ GTRs to be transposed into UN Regulations

## Evaporative and crankcase emissions

- ***Informal document 71-xx (submitted to GRPE)***
- Several open points in [...]
- Work to finalise formal doc until 19 October



## Evap and crankcase emissions- open issues

- Inclusion of 3-wheeled vehicles: priority?
  - JPN suggestion to give priority to 2-wheeled vehicles, add 3-w later
  - EC and IND prefer inclusion in the current draft.
  - IND made specific proposals for few specific provisions for 3-wheelers in the draft GTR, e.g. regarding test cycle for preconditioning

## Evap and crankcase emissions- open issues

- Reference to vehicle class
  - EC preference to use generic wording '*two- and three wheeled vehicles*'
    - not in favour to refer to SR1 directly in its current stage as classification is in conflict with EU classification. Alternative solution should be developed by group and agreed upon.
  - Others prefer the specific vehicle classification wording as in SR1 e.g. '*category 3-3 vehicles*'

## Evap and crankcase emissions- open issues

- Family definition
- Annex B 3.6. section 2 point 2.2.5.  
Fuel storage capacity declared by the manufacturer

Original proposal :

"...within a range of +/- 50% of the nominal volume"

Compromise proposals:

"...within a range of +10%/- 50% of the nominal volume"

"...within a range of +0%/- 50% of the nominal volume"

## Evap and crankcase emissions- open issues

- Reference fuels
  - E0, E5, E10 are recently introduced in the current draft, to address the reference fuel situation in CPs
  - Different fuel blends (ethanol content) may influence the evaporative emissions
    - IND and EC propose a hierarchy of acceptance
    - JPN prefer no hierarchy, like e.g. in WLTP-gr. Apart from ethanol blending content, other fuel properties varies by each country

## Evap and crankcase emissions- open issues

- Part A
  - To be reviewed and updated after conclusion of the technical details.
  
- List of acronyms and symbols
  - To be added.
  
- Ageing test procedure for evaporative emission control devices - control valves, cables and linkages
  - Lack of specific test procedure
  - No agreement on number of test cycles
  - IND proposal to delete point for the moment and develop test procedure in a next stage

## OBD-I

- Revised proposal for draft GTR by European Commission (Oct 2014)
    - Performance criteria for activation of Malfunction Indicator not defined. Left open for regional decision.
  - Amendment proposals by Japan. (Jan 2015)
  - Proposal by India for a stage approach. (Oct 2014)
  - Scope: Priority to 2-wheel motorcycle. Later 3w-mc
- Target to propose GTR as informal document to next GRPE

## Amendments to GTR 2

- Proposal from EC for GTR 2 revision 1 (clean document).
- IMMA started comparing clean document with current GTR2, so that the differences are clear

## Preliminary status of EPPR proposals

- New GTR on Evap and Crankcase (L1/L3)
  - Evaporative emissions
  - Crankcase requirements (placeholder for crankcase test)
  - Informal doc June -15 (L1/L3)
  - Formal doc + technical report Jan 2016
- New GTR on OBD (L3)
  - OBD UN Stage I
  - Possible timeline for informal doc and tech report Jan -16 (L3)
- GTR 2 (L1/L3) amended including
  - Test type I
  - Test type II
  - Test type VII on Energy efficiency (CO<sub>2</sub>, FC )
    - proposal to focus on conventional propulsion in phase I
    - Cover electric range and consumption in phase II after 2016
  - Possible timeline for informal doc and tech report Jan -16 (L1/L3)

Not feasible to finish all topics within current mandate

→ Proposal for Extension of the mandate for a 2nd phase (informal doc 71-XX)

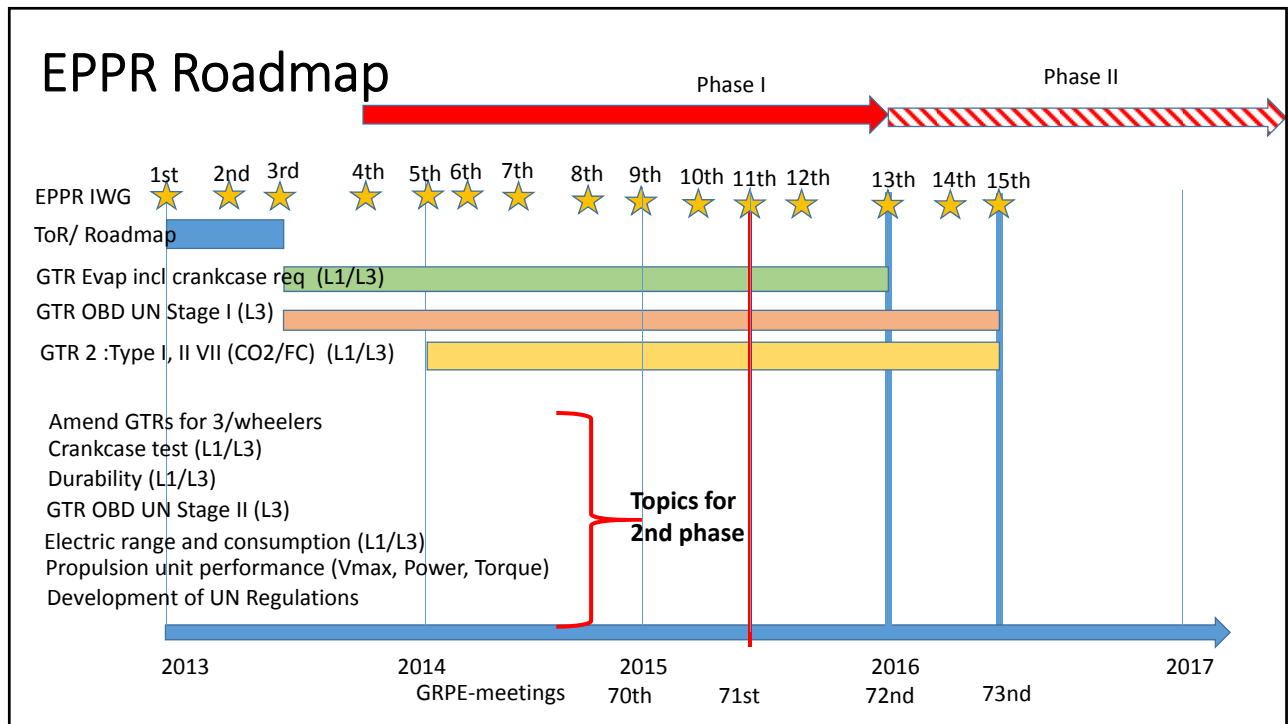


## Informal doc on extension of time line

- Request to extend the time line for the work in a 2nd phase until 2020
- Clarifying the work to not include 4-wheeled vehicles under 98th agreement
- For 3-wheeled vehicles it is recognised that the present regional regulation needs to be considered. Nevertheless 3-wheeled vehicles are considered within the scope of the group.
- It should be assessed whether 'light vehicle' classification can be further optimised and refined. After an initial assessment by the EPPR IG, to clarify whether there are needs of these issues or not for the purpose of environmental requirements, the result should be reported to WP.29.
- Priority given to GTR on Evap and crankcase, GTR on OBD and amendment to GTR 2.
- Remaining work for 2nd phase including UN regs

## "Light vehicle" vs "light duty vehicles"

- In EPPR mandate we refer to "light vehicles" to distinguish from "light duty vehicles"
- We see a need for clarification of terminology to be considered by GRPE



## Tentative proposal for Phase II (from 2016 and beyond)

- GTR on Evap and Crankcase
  - Develop Crankcase test (L1/L3)
  - Amend GTR on Evap and Crankcase for 3-wheelers
- GTR on OBD
  - Amend GTR on OBD UN Stage I for 3-wheelers
  - Amend GTR on OBD UN Stage II for (L3)
- GTR 2
  - Amend GTR 2 for 3-wheelers (conventional propulsion)
  - Amend GTR 2 for electric range and consumption
- New GTR on durability (L1/L3)
- New GTR on PuPPR(Vmax,Power, Torque) (L1/L3)
- Transposition of GTRs into UN regs

## Possible deliverables acc. to mandate for Phase I (final report GRPE Jan 2016)

- GTR Informal document incl tech report on Evap and Crankcase emissions for L1/L3 (Crankcase test for Phase II) (June 2015)
- GTR Informal document incl tech report on OBD UN Stage I for L3 (June 2015)
- Amended GTR 2 incl tech report (Type I, II and VII) for conventional propulsion L1/L3 (Jan 2016)

## Future meetings EPPR

- 12th meeting in Brussels, 8-9<sup>th</sup> September 2015
- Option for OBD expert meeting (September or November)
- 13<sup>th</sup> meeting in Geneva, January 2015, **full day requested**, date tbc
- Monthly audio-web conferences in 2015, see *EPPR-09-10e*