Progress Report of the
VIAQ (Vehicle Interior Air Quality)
Informal Working Group

10th November 2017

Chair: Andrey Kozlov, Russia
Vice-chair : Jongsoon LIM, Korea
Technical secretary: Andreas Wehrmeier, OICA
VIAQ Background, ToR and Mandate

- **WP.29 Mandate** *(ECE/TRANS/WP.29/1112, para 133)*
  - AC.3 endorsed the proposed action plan to, in a first stage, collect information, review existing standards and develop recommendations.
  - End of mandate: November 2017

- **GRPE Adoption** *(ECE/TRANS/WP.29/GRPE/70)*
  - GRPE adopted the proposals for terms of reference to the IWG on VIAQ as reproduced in Annex VI of this report.

- **Review of VIAQ Terms of Reference**
  - The scope of the work is to develop a recommendation (R.E.3, S.R.1, or a new Mutual Resolution) to harmonize test procedures of interior air emissions emitted/generated from interior materials.
VIAQ IWG Meetings since the last GRPE sessions

- **9th VIAQ IWG Meeting**
  - Tele-conference Meeting, June 1st

- **10th VIAQ IWG Meeting**
  - Geneva, Switzerland, November 10th
● Working document in GRPE

- **ECE/TRANS/WP.29/GRPE/10**
  - Proposal for a new Mutual Resolution (M.R.3) of the 1958 and the 1998 Agreements concerning Vehicle Interior Air Quality (VIAQ)

- **GPRE-75-02(Amendments), GRPE-75-03 (consolidated version)**
  - Proposal for amendments to ECE/TRANS/WP.29/GRPE/2017/10 on a new Mutual Resolution on VIAQ

● Justification

- Most paragraphs are editorial corrections to improve the wording clarification
- Adds “carbonyl compounds” and “VOCs” to further define and classify test substances
- Considers the current level of background concentration
- Gives flexibilities with no affects to the tests for opening the door time to “30-60 minutes”
- Gives specific set temperature for HVAC setting in driving mode and changes to “23 °C”
Working document in WP.29

- ECE/TRANS/WP.29/2017/136
  - Proposal for a new Mutual Resolution (M.R.3) of the 1958 and the 1998 Agreements concerning Vehicle Interior Air Quality (VIAQ)
  - Agenda 8.4 Consideration of proposals for a new mutual resolution at the 173rd session of the World Forum.
  - ECE/TRANS/WP.29/GPRE/75, para49, based on ECE/TRANS/WP.29/GRPE/2017/10 amended by GRPE-75-02-rev.1 as reproduced in Addendum2
Roadmap, Timeline

● Roadmap

<table>
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- Half of working items almost closed
- Make a drafting group
- VIAQ recommendation (a new mutual Resolution)
- Develop provisions and harmonized test procedures.

➢ January 2017 : Submit the VIAQ document as an informal document
➢ June 2017    : Submit the amendment of VIAQ document, if necessary
VIAQ Background, ToR and Mandate for Second stage

- **GRPE** (ECE/TRANS/WP.29/GRPE/75, para 47)
  - At the 75th GRPE session, the Chair of the IWG on Vehicles Interior Air Quality requested an extension of the mandate of the IWG on VIAQ until November 2020 to expand the work to consider not only emissions generated by interior materials but also gases from other sources that enter into the vehicle cabin. He introduced a first draft of the updated terms of reference and rules of procedure (GRPE-75-14) for this second stage of the work and expressed the group’s intention to submit a final version at the next GRPE session in January 2018. For this second stage of the work, he noted that the Russian Federation would chair the IWG, together with Korea as Vice-Chair and OICA for the Secretary. He explained that the endorsement by GRPE at this session of the extension of the mandate of the IWG on VIAQ would allow the group to continue working without any interruption between the end of the current mandate and the next GRPE session in January 2018. He invited all Contracting Parties to be involved in the new stage of work.
• VIAQ Background, ToR and Mandate for Second stage

- **WP.29** (ECE/TRANS/WP.29/WP.29/1131, para 44)
  - At the 172nd WP.29 session, WP.29 endorsed the extension of the mandate of the IWG on VIAQ until November 2020 to extend the work to consider not only emissions generated by interior materials, but also gases from other sources that enter into the vehicle cabin. WP.29 noted that a first draft of the updated terms of reference and rules of procedure was submitted by the IWG on VIAQ at the June 2017 GRPE session (GRPE-75-14) and that a final version is expected to be considered by GRPE at its January 2018 session.
Second stage of VIAQ IWG Mandate

- Discussion on the second stage (VIAQ-07-11)
The Second Stage Mandate

- Roadmap of VIAQ IWG Activities

- **Stage 1** - Measurement for interior material emissions

  - **Car Preparation**
  - **Transportation Storage**
  - **28 days ± 5 days**

  - **Test Mode**
    - Ambient mode
    - Parking mode
    - Driving mode

  - **Temp. Stabilizing**
    - 16 ± 1 hours

  - **Sampling (Driver’s nose position)**

  - **Sample Analysis**
    - **GC/MS**
    - **HPLC**
    - **Content Analysis**

**GC/MS**: Gas Chromatography Mass Spectrometry

**HPLC**: High Performance Liquid Chromatography
The Second Stage Mandate

Roadmap of VIAQ IWG Activities

- **Stage 2** - Develop the test procedure for vehicle exhaust gases entering the vehicle cabin (VIAQ-07-11)
The Second Stage Mandate

Roadmap of VIAQ IWG Activities

- **Stage 3** - Assessment of cabin filter quality (VIAQ-07-11)
  - Particle filter, Active carbon filter, Combined filter, HEPA filter
The Second Stage Mandate

Roadmap of VIAQ IWG Activities

Stage 4 - Monitoring of interior air quality (VIAQ-07-11)
- AQS (Air Quality Sensors), PM sensor, Ionizer, CO2 management in cabin,
Informal documents (VIAQ-10-04-rev1)

- Terms of Reference for the second stage (Draft)
  - Objective
    - This proposal expands on the issues of the vehicle interior air quality, addressing exhaust gases entering into vehicle cabin air, to **develop a test procedure in a recommendation**.
  - **End of mandate**: November 2020
  - **New leadership team**: Chair (Russia), Vice-chair (Korea), Secretary (OICA)
  - **Submit Final Terms of Reference**: 76th GRPE January Session
Next VIAQ IWG Meeting

- 11th VIAQ IWG Meeting (TBD)
  - Geneva, Switzerland, January, during 76th GRPE session
  - Half a day requested

- 12th VIAQ IWG Meeting (TBD)
  - March or April 2017