



The need for an RDE GTR

June 2018

From the sponsors:
European Union
Japan
Korea

The necessity of RDE

Real Driving Emissions (RDE) methodology has been proven to be an excellent way to ensure low emissions in real world conditions

Emissions should be kept below the emission levels not only in the laboratory but in normal conditions of use as well

It makes the use of state of the art technology to abate emissions indispensable

RDE developments in Europe



2011-2015:

- Kick-off: Working group on RDE
 - Complementary procedure for type approval and in-service conformity testing of LDVs
 - Covering a wide range of normal operating conditions; limiting defeat strategies
- Evaluation of candidate procedures by EU stakeholders (JRC report)
- Development of a PEMS testing protocol;
- Pilot program to assess the feasibility of PN-PEMS

2016:

- Development of RDE Regulations 2016/427 and 2016/646 as first on-road test procedure worldwide
 - NOx Conformity factor 2.1 – applicable from Sept. 2017/2019 (new types/all new vehicles)
 - NOx Conformity factor 1.5 – applicable from Jan. 2020/2021 (new types/all new vehicles)
 - Compliance during urban driving and the entire RDE trip

RDE developments in Europe



2017:

- RDE 3rd Package in Regulation 2017/1151
 - Testing of hybrid vehicles, coverage of cold-start and regeneration events, particle number emissions
 - PN Conformity factor 1.5 – applicable from Sept. 2017/2018 (new types/all new vehicles)

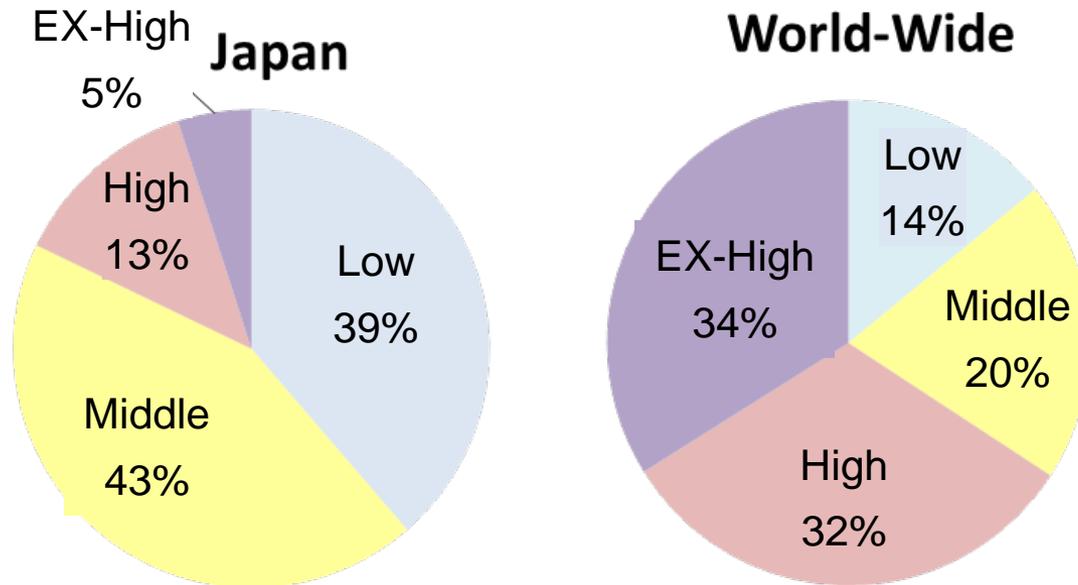
2018:

- **RDE 4th Package:**
 - Provisions for in-service conformity /
 - **Reviewing RDE procedure**
 - **Adapting provisions to ensure practicality and effective emissions testing**
 - **New Validation criteria that work with hybrids**
 - **New simple and transparent evaluation method**
- RDE 4 was voted positively in the Technical Committee and will become EU law by the end of the year

Concept of Japan's RDE method

- RDE method shall be able to check whether result of chassis-dynamometer test is effect on real driving correctly as well or not.
- The Japan's RDE method is based on EC's RDE method, but it is slightly modified by taking into consideration difference of real world driving conditions and adopted different phase of WLTC between Japan and Europe .
- Especially driving condition and speed threshold of Moving Average Window(MAW) and CF value under EC's RDE method are developed based on chassis-dynamometer test (WLTC) and real world driving conditions.
- Therefore, we modified these factors in align with driving conditions in Japan.

Traffic rate of Japan and World-Wide



Other Regions

Korea has adopted RDE as in Europe

China has adapted the methodology and boundaries?

India plans to adopt RDE?

Other CP interest?



Clearly a need for a harmonised GTR

What has happened till now:

- *Request to insert EU RDE regulation in Compendium of candidate GTRs (Doc. 79)*
- *Request to insert Japan RDE regulation in Compendium of candidate GTRs (Doc. 81)*
- *Request for authorisation to develop an RDE GTR (Doc. 80)*

- *For 19-22 June Session of AC.3*

A new RDE GTR

- *Should contain an agreed methodology*
- *Should contain a set of conditions/boundaries etc. that would make it applicable to all participants*
 - = **the widest set of conditions/boundaries**
 - = **the most difficult level to achieve but the only one that is really harmonised**
- *May contain a series of regional provisions where needed*

Plans

- *Approval of RDE IWG and request to create an RDE GTR in AC.3 in two weeks time*
- *First meeting in Sept. 2018 with a first consolidated draft*
- *Second meeting in November*
- *Third meeting and Informal doc for January GRPE*
- *Fourth meeting in February 2019*
- *Working document in time for May 2019 GRPE meeting*
- *Adoption of RDE GTR for November 2019*



Roles:

Chair: European Union

Vice-chairs: Japan and Korea

Secretary: ???

And all of you....

Interested parties should contact:

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Thank you for your attention!

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Japan
Korea

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