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### Economic Commission for Europe

#### Inland Transport Committee

#### World Forum for Harmonization of Vehicle Regulations

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Item 15 of the provisional agenda

**Consideration of technical regulations  
to be listed in the Compendium of  
Candidates for UN GTRs, if any**

### **Request to list in the compendium of candidate Global Technical Regulations (compendium of candidates) the Japan's Real Driving Emissions (RDE) methodology**

#### **Submitted by the representative of the Japan\***

The document reproduced below is submitted by Japan to the Executive Committee (AC.3) for consideration. It is a request to include in the Compendium of Candidates the Real Driving Emissions methodology. Background information can be found in informal document GRPE-76-18. In order to be considered by AC.3, this request is accompanied by a copy of the regulations mentioned (see Article 5, paras. 5.2.1., 5.2.1.1. and 5.2.2. of the 1998 Agreement).

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\* In accordance with the programme of work of the Inland Transport Committee for 2018-2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, Cluster 3.1), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

## **Request to list in the compendium of candidate Global Technical Regulations (compendium of candidates) the Japan's Real Driving Emissions (RDE) methodology**

1. Japan requests to include in the Compendium of Candidates the Japan's RDE Methodology, as this is currently developed in Japan's act based on 3 phases of WLTP.

### **I. Background**

2. In September 2015 in the United States, it was revealed that the manufacturer used defeat devices, which activates the emission control system during the certification test and deactivates the system during real driving.

3. In response to this issue, Ministry of Land, Infrastructure, Transport and Tourism, Japan set "Working Group of Reviewing Diesel Passenger Vehicle Test Procedures for Addressing Defeat Device Issue" composed by experts of diesel emission. The working group published a final report in April 2017 to introduce the real driving emissions (RDE) test based on 3 phases WLTP.

4. The methodology was implemented in March 2018 and the Japan's methodology will contribute to the discussion of the RDE IWG.

### **II. Description of Regulations**

5. Outline

(a) Scope

(i) Diesel vehicles having a gross weight of 3.5 t or less

(ii) Diesel powered passenger cars having a capacity of 9 or less people

(b) MAW (Moving Average Window) method

(i) Developing MAW method in align with driving condition in Japan and 3 phases WLTP.

(ii) Threshold of speed; 35, 50 km/h

(iii) Requirements of trip completeness; 10 %

(iv) All CO<sub>2</sub> compensation factors; 1.1

(c) CF (Conformity Factor) value

(i) Developing CF Value in align with driving condition in Japan

(ii) CF value; 2.0

(d) Other basic factors

<i>Measurement items</i>	<i>NOx, CO2</i>
Order	1. Urban 2. Motorway
Stop periods (<1km/h), Low speed	No continuous 20 minutes driving with less than 20 km/h Test shall contain several stop periods of 10 s or longer, and total stop periods is 7~36 per cent of the time duration of urban. Every stop period doesn't exceed 300 s
Motorway	Test shall contain more than 20 per cent of the distance of motorway with more than 80 km/h.
Time	90~120 min
Altitude	Less than 1000 m (the emissions are divided by 1.6 during higher than 700 m)
Slope	Altitude between start and end point shall not exceed 100 m Cumulative positive altitude shall not exceed 1200 m/100km
Mass	Paymass 90 per cent
Temperature	-2~38°C (the emissions are divided by 1.6 during -2~0°C, 35~38°C)

### III. Related documents

6. Attachments 119 "TECHNICAL STANDARD FOR THE EMISSION FROM DIESEL LIGHT DUTY VEHICLES DURING REAL DRIVING" to the Announcement that Prescribes Details of Safety Regulations for Road Vehicles (Ministry of Land, Infrastructure, Transport and Tourism Announcement No. 619 of July 15, 2002)