

# Comment to draft framework for the validation of Equivalency drum-circuit tyre abrasion test



JAPAN AUTOMOBILE STANDARDS INTERNATIONALIZATION CENTER

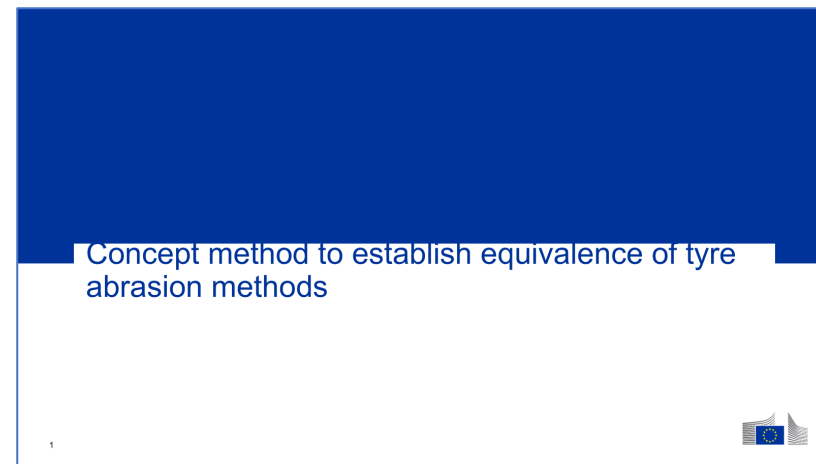


National Traffic Safety and Environment Laboratory

# 1. Background

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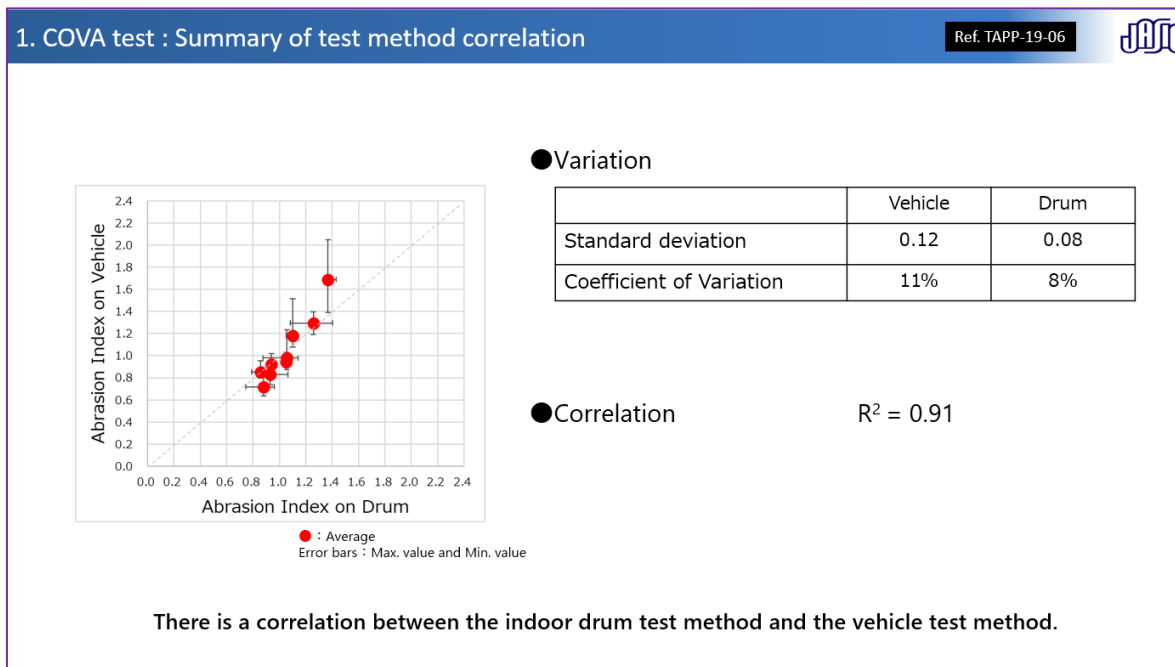
In 38<sup>th</sup> Task Force on Tyre abrasion, European Commission (EC) proposed to establish the verification method of equivalency of tyre abrasion test methods. Japan received the explanation about “Concept method to establish equivalence of tyre abrasion methods” on 18<sup>th</sup> November.



Japan would like to comment to this proposal.

# 2. Comment to EC proposal

As JASIC continuously explained in TF TA, there is a correlation between the indoor drum test method and the vehicle test method.



Ref. TA33-09

Japan believe that indoor drum test method is acceptable to use as certification test together with vehicle test method.

## 2. Comment to EC proposal

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However, if TF TA cannot reach to the agreement to adopt indoor drum test method before 83<sup>rd</sup> GRBP session and if the framework for the verification of equivalency for the proposal text in previous GRBP session (see below) is necessary for the agreement, we propose to modify EC proposal accordingly. (see next page)

- **6.1.1. At the discretion of the Type Approval Authority, the abrasion index of a candidate tyre determined with the indoor drum test method described in paragraph 2. of Annex 3 to this Regulation may be used as alternative.**

## 2. Comment to EC proposal

(1) The accuracy of reference test method for verification of equivalency

We know that there are some UN Regulations which have a framework for the verification of equivalency of certification test method.

| Name of UN regulation |  | Reference test method  | Alternative test method                | Reference                        |
|-----------------------|--|------------------------|--|----------------------------------|
| UN R140               | Electronic Stability Control (ESC) Systems   | Practical Vehicle test | Modelling<br>Simulation tool           | Annex 4<br>Para 2.1. and 2.2.    |
| UN R154               | Criteria emissions, emissions of carbon dioxide and fuel consumption and/or the measurement of electric energy consumption and electric range (WLTP) | The gravimetric method | The pressure method<br>The flow method | Annex B8 - Appendix 7<br>Para 1. |

The comparison between alternative test method and reference test is required for verification of equivalency simply.

## 2. Comment to EC proposal

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The reason why verification of equivalency for alternative test method is defined;

The accuracy of reference test method is quite high and verification of equivalency between reference test method and alternative test method is easy

However, the variety of current vehicle test method is almost same as indoor drum test method therefore test condition of vehicle test method which is defined in new UN Regulation is not enough for reference test.

Therefore, before establish the framework for the verification of equivalency, the improvement of accuracy for vehicle test is necessary and we need to investigate which test condition/parameter of vehicle test is necessary to modify.

- test temperature range
- test vehicle selection
- road surface
- variation of lateral acceleration etc. (SRTT vs candidate tyre)
- number of test repetitions etc.

## 2. Comment to EC proposal

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(2) It is unclear who has the responsibility for verification of equivalency

In EC proposal, responsibility for verification of equivalency is not described. On the other hand, the 1958 Agreement specifies that the Approval Authority is responsible for the skill of Technical Service.

D. Technical Services

The quality of the tests and inspections carried out by Technical Services should correspond with the level of the requirements in the Regulation(s) for which they are designated. Therefore it is necessary to provide guidance on the skills of Technical Services to facilitate the smooth enforcement of the Agreement within the above-mentioned principle. The Approval Authority is responsible for ensuring that the Technical Services which it designates comply with the requirements of this section.

## 2. Comment to EC proposal

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Q : who should take a responsibility for verification of equivalency?

This is Japan's opinion :

- ◆ Since the Approval Authority has the responsibility for the test skill of Technical Service, it is reasonable that either the Approval Authority or Technical Service should have a responsibility for verification of equivalency.

## 2. Comment to EC proposal

### (3) Periodic check is not necessary

The 1958 Agreement clearly defined that the Approval Authority has the responsibility for the test skill of Technical Service therefore validation should be also evaluated by the Approval Authority. Therefore, verification of equivalency is also evaluated by the Approval Authority and we believe that it is not necessary to describe the continuous verification procedure in UN Regulation.

#### D.2. Assessment of the skills of the Technical Services

D.2.1. The skills referred to in paragraph D.1. 4/ shall be demonstrated by an assessment report established by a Competent Authority. This may include a certificate of accreditation issued by an accreditation body.

D.2.2. The assessment on which the report referred to in paragraph D.2.1. shall be conducted in accordance with the provisions of Annex 2.

The assessment report shall be reviewed after a maximum period of three years.

D.2.3. The assessment report shall be communicated to the UNECE secretariat and to the Contracting Parties upon request.

D.2.4. The Approval Authority which acts as a Technical Service shall demonstrate compliance through documentary evidence.

This includes an assessment which shall be conducted by auditors independent of the activity being assessed. Such auditors may be from within the same organization provided that they are independent to the personnel undertaking the assessed activity.

D.2.5. A manufacturer or its representative acting on his behalf, designated as Technical Service, shall comply with the relevant provisions of paragraph D.2.

# 3. Reason why we need indoor drum test method

In addition, we would like to comment why indoor drum test method is necessary.

(1) Test condition and circuit for vehicle test method is European oriented

The test speed and driving style distribution is established based on the European road condition.

Therefore, for Japan or other Asian countries, there is no circuit which can evaluate the vehicle test method or it is very difficult to carry out the vehicle test method because of speed restriction by Road Transport Act etc.

If only vehicle test is allowed in new UN Regulation and the Contracting Party, who introduce new UN Regulation for tyre abrasion, cannot evaluate it in their country, it is big problem regarding the mutual recognition under the 1958 Agreement.

We think the indoor drum test method, which is independent of road conditions etc., is necessary to adopt same timing with vehicle test in order to make feasible to evaluate tyre abrasion test in each country.

# 3. Reason why we need indoor drum test method

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(2) The indoor drum test method is environmentally friendly

It is possible to collect the tyre wear particles in indoor drum test system, therefore the indoor drum test method is much suitable for the controlling and mitigating tyre wear particles which is the purpose of new UN Regulation for tyre abrasion.