

## Appendix 2

Establishment of the JIS for Measurement Method for Gaseous Exhaust Emissions and Fuel Consumption of Motorcycles

— To facilitate the dissemination of environmentally-friendly motorcycles —

Accompanying the tightening of motorcycle emissions controls, METI established 3 standards stipulating measurement methods for gaseous exhaust emissions and fuel consumption that meet the domestic binding emission standards (\* binding standards) based on relevant international standards. It is expected that the establishment of new standards will facilitate the dissemination of environmentally-friendly motorcycles and contribute to solving global environmental problems.

\* Public Notice Providing Detailed Rules for Safety Regulations for Road Transport Vehicles based on the Road Transport Vehicle Act (Attachment 44)

### 1. Objective and background of establishing the standard

Regarding NO<sub>x</sub>, HC and CO contained in gaseous exhaust emissions from motorcycles, the control was tightened to achieve an approximate 60% reduction maximum from the previous level. Accompanying this, METI established 3 standards for measurement methods for gaseous exhaust emissions and fuel consumption that meet the binding standards based on the relevant international standards (ISO6460:Motorcycles - Measurement method for gaseous exhaust emissions and fuel consumption).

Japan had no regulations concerning fuel consumption for motorcycles, nor were there any official testing methods to measure motorcycle fuel consumption. The establishment of these new JIS has significance in that it enables a third-party organization (the National Agency for Automobile and Land Transport Technology, the Japan Automobile Research Institute, etc.) to carry out measurement of gaseous exhaust emissions and fuel consumption of motorcycles in an internationally harmonized manner.

### 2. Key points of the established standards

The newly established JIS D1047 (Motorcycles - Measurement method for gaseous exhaust emissions and fuel consumption) is composed of three parts. In Part 1, "General test requirements" are defined. In Part 2, "Test cycles and specific test conditions" are defined. Specifically, among the international standard (ISO6460-2) corresponding with "General test requirements", standards that will cease to be used in Japan in the near future are deleted and the remaining international standards are combined with Part 1. Thereby, measurement of gaseous exhaust emissions and fuel

consumption using a chassis dynamometer become possible. Additionally, Part 3 stipulates "Fuel consumption measurement at a constant speed," which specifies road-test measurement of fuel consumption at a constant speed and also enables such measurement using a chassis dynamometer by combining this part with Part 1.

(Major items specified)

- Methods of exhaust gas sampling and analysis of samples (Fig. 1)
- Motorcycle classification method (into 5 categories according to engine capacity and top speed)
- Driving conditions (Fig. 2)

Fig. 1 Measurement of gaseous exhaust emissions of motorcycles

Fig. 2 Driving conditions (example) (horizontal: time (seconds); vertical: speed (km/h))

\* For the main text of the standards, search for "D1047 (Motorcycles - Measurement method for gaseous exhaust emissions and fuel consumption)" on the Japanese Industrial Standards Committee (JISC) website .

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