

Noise by Vehicle Type

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1. Purpose

Various supplementary noise abatement measures have been taken in the past, according to the following documents and trends, (1) to (4), the spread of automobiles with little or no engine noise can be counted on to reduce noise. (1) The number of hybrid vehicles is soaring (Fig. 1), and (2) the noise inside highway busses is about 5dB lower than that of normal public busses²⁾. (3) The noise reduction which would result from the conversion of all automobiles to low noise vehicles is estimated at about 6dB³⁾. (4) The operation of fuel-cell powered busses (Photo 1) is another example. This report presents the results of measurements of quantity of sound generated by low-pollution cars etc. during test runs (dense asphalt concrete pavement) at the test track in NILIM

2. Measurement results

Coasting passenger cars and electric vehicles produced noise approximately 5dB below that of an ordinary passenger car measured on a public road⁴⁾ (Fig. 2). And a medium size low-pollution heavy vehicle produced about 5dB less than ordinary medium heavy vehicles measured on a public road⁴⁾ (Fig. 3).

3. The future

We presume that clarifying the reasons for these 5dB differences would contribute to further lowering of noise. On the other hand, over 10 years have passed since the measurements which obtained data representing quantities of noise produced by vehicle type used to predict noise (heavy vehicles, medium heavy vehicles, small trucks, passenger car). The results of confirmation of their appropriateness will be reported in the future.

[References]

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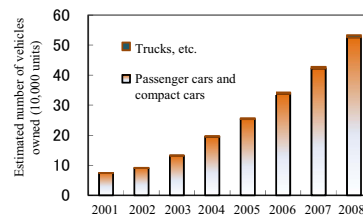


Figure 1. Number of Hybrid Automobiles Owned (in Japan)¹⁾



Photo 1. Fuel Cell Powered Bus (Haneda Airport Limousine Bus)

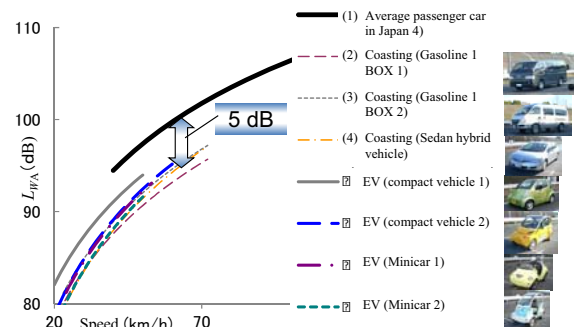


Figure 2. Results of Measurements During Steady Running of Passenger Cars

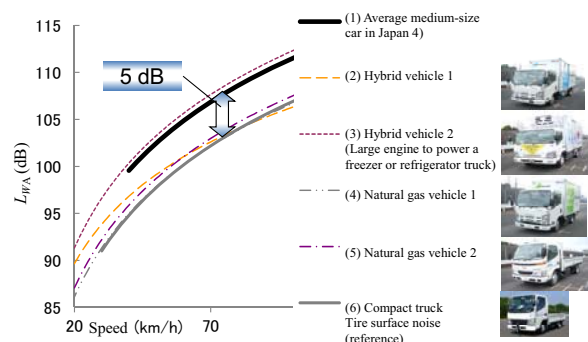


Figure 3. Results of Measurements During Steady Running of Medium heavy vehicles