

Japanese Proposal for Narrow Vehicles (Kei Cars, Etc.) (Impact Velocity)

The proposal to the current draft text of the Regulation is marked in bold or strikethrough characters.

A. PROPOSAL

Japan proposes to add the following paragraphs to Part A to the draft GTR:

“XX. In PSI-05-06, Japan indicated that narrow vehicles with a width of 1,500 mm or less, which are categorized as small vehicles (e.g., Japanese Kei cars), tend to have speeds in single vehicle crashes lower than standard-size cars. In addition, a survey on Pole Side Impact accidents in Japan also showed that the danger recognition speed in single vehicle crashes of Kei cars is lower than standard-size cars by about 5 to 7 km/h around the 70%tile range. For these reasons, while the test speed of the Vehicle-to-Pole side impact test has been set at 32 km/h in principle, it is appropriate to set it at 26 km/h for narrow vehicles whose width is 1,500 mm or less, as this speed covers the Kei car accidents at the rate equivalent to that of 32 km/h for the other vehicles.

XX. Moreover, in the case of narrow vehicles with a width of 1,500 mm or less, since the distance between door outer panel and seat center is short, it is difficult to meet the injury criteria for the crash speed of 32 km/h with the current crash safety technologies.

XX. Nevertheless, in the future, consideration should be given to setting the test speed at 32 km/h for narrow vehicles whose width is 1,500 mm or less as well in order to achieve safety at the level equivalent to that of standard-size cars. Accordingly, we will amend the crash speed requirement upon completion of technical verifications of measures for the Vehicle-to-Pole side impact test of such narrow vehicles to be carried out by the Contracting Parties to the 1998 Agreement.”

Part B Annex 1 Paragraph 6.1., amend to read:

" ~~6.1 Except as provided in paragraph 6.2, a~~ A test vehicle prepared in accordance with paragraph 3, paragraph 4 and paragraph 5 of this Annex, shall be impacted at any velocity up to and including 32 km/h, with a stationary pole. **However, if the vehicle width is 1,500 mm or less, the test velocity shall be 26 km/h.** "

Paragraph 6.2., amend to read:

~~" 6.2. [For a period of not more than x years after adoption of this regulation], the maximum test velocity may be reduced to 26 km/h for vehicles with [a length of 3.4 m or less] and [a width of 1.48 m or less]. Contracting parties selecting this option shall notify the Secretary General in writing when submitting the notification required by section 7.2 of the Agreement Concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts Which Can Be Fitted.]"~~

B. Justification

On the addition of paragraphs to Part A to the draft GTR:

The paragraphs regarding future amendment of the test speed for narrow vehicles with a width of 1,500 mm or less should be placed in Part A. We referred to the following paragraphs 64. and 106. in Part A of UN GTR9:

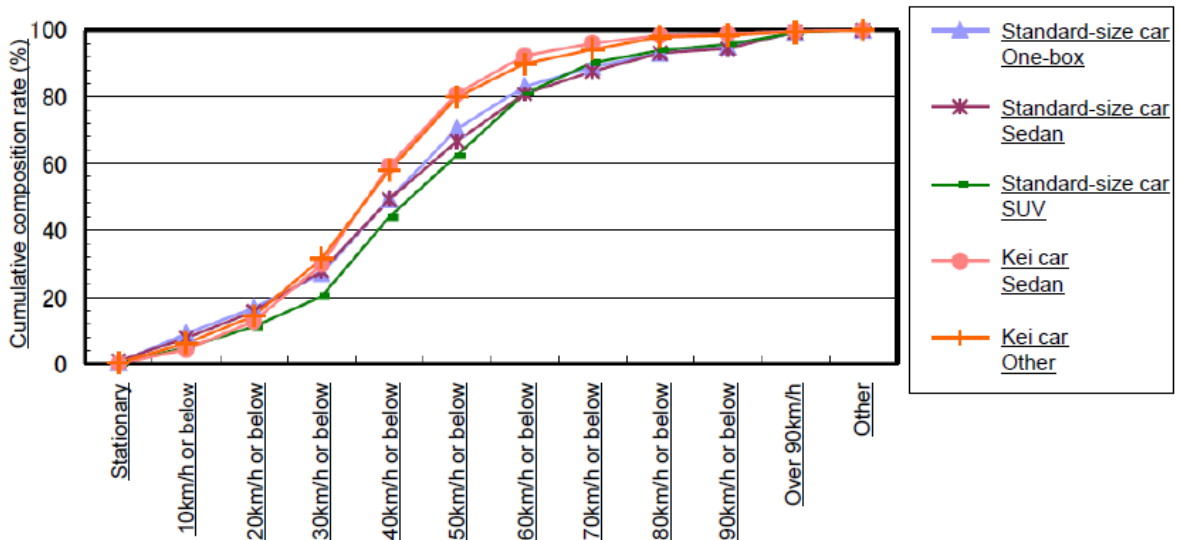
64. The lower legform impactor currently used for testing in Europe was designed by the Transport Research Laboratory (TRL) in the United Kingdom. However, it is known to also have certain limitations regarding the biofidelity and the repeatability of the test results. Therefore, Japan proposed to use a completely new legform, the so-called Flexible Pedestrian Legform Impactor (FlexPLI). As the FlexPLI legform is considered by some to have high biofidelity and an excellent ability to assess potential leg injuries, the FlexPLI should be considered to replace the TRL lower legform impactor in the future. However, because of the lack of experience in using the FlexPLI as a certification tool, a further confirmation process is needed. Therefore, a Technical Evaluation Group (TEG) was established to evaluate the reliability of the FlexPLI as a certification tool (TRANS/WP.29/GRSP/36). The TEG is currently assessing the FlexPLI and will advise GRSP by the end of 2007 as to the suitability of the FlexPLI for testing and compliance verification purposes (TRANS/WP.29/GRSP/37). The TEG is also expected to provide its recommendation as to the effective date of entry into force and the date on which the FlexPLI could replace the rigid lower legform impactor. TEG will also consider a transitional period during which the FlexPLI and the rigid lower legform impactor can be used as alternatives.

106. It was agreed to recommend using the legform impactor developed by TRL, for the time being, to evaluate the performance of vehicles in protecting the lower leg. However, it was also recommended to consider the possible future use of the Flex-PLI, which is considered by some to be more biofidelic and expected to be highly usable and repeatable, following the evaluation to be conducted by the Technical Evaluation Group (INF GR/PS/106) 19/.

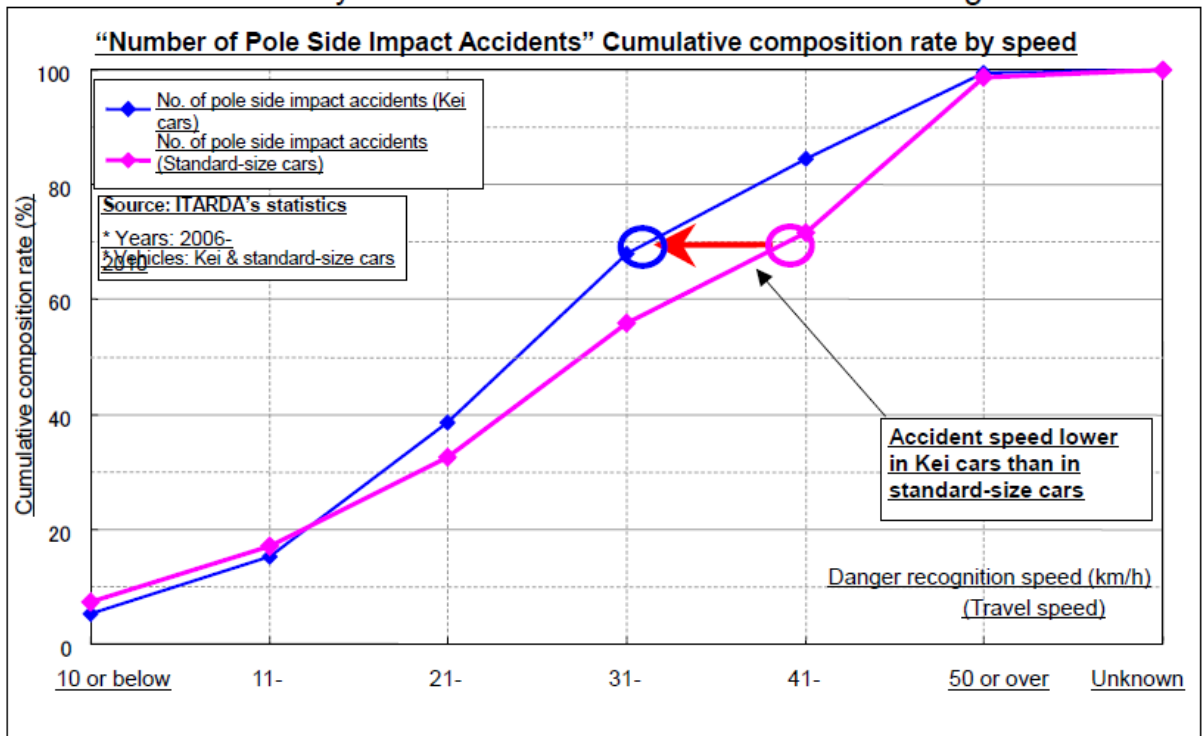
Furthermore, the following information on the accidents of narrow vehicles whose width is 1,500 mm or less (i.e., Kei cars) is an excerpt from PSI-05-06:

Accident data in Japan

- ✓ A survey on accidents in Japan shows that the danger recognition speed in single vehicle crashes of Kei cars is lower than standard-size cars by about 5 km/h in the 50%tile range of all the accidents.



- ✓ Further, a survey on pole side impact accidents in Japan also shows that the danger recognition speed in single vehicle crashes of Kei cars is lower than standard-size cars by about 5 to 7 km/h around the 70%tile range.



On the amendments to paragraphs 6.1. and 6.2. of Annex 1 to Part B:

It is necessary to clearly state the test speed for narrow vehicles whose width is 1,500 mm or less in the text of regulation (Part B).