

Proposal Regarding Amendment of
the CRS Regulation at
ECE/GRSP's CRS Informal Group

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JASIC

**Japan Automobile Standards
Internationalization Center**

Proposal Regarding Discussions on the Regulation at CRS Informal Group

- CRS Informal Group has been discussing
 - ISOFIX CRS size classes,
 - Frontal impact/side impact test procedures,
 - Dummies.

However, it appears that “the purpose of amending the CRS regulation and the predicted effectiveness” have not been clarified.



We need to clarify “the purpose of amending the CRS regulation and the predicted effectiveness.”

Why We Need to Clarify the Purpose of Amending the Regulation and the Predicted Effectiveness

- Without clarifying the **purpose** of amending the regulation and the **predicted effectiveness** to be achieved as a result of such amendment, it would be **impossible** to produce a regulation that
 - **is truly effective in enhancing the safety of child occupants,**
 - **will not yield any opposite effects.**
- “Change of dummies,” “addition/change of impact test procedures” , “ change of CRS size classes,” etc, are **merely means** and **not the end.**

Examples of Clarification of the Amendment Purpose and Predicted Effectiveness

Purpose

To reduce deaths/serious injuries of young children in automobile accidents

Extraction of problems that need to be addressed

- What is problematic in the real world?
- Where can we improve?

Accident survey and analysis

Ex.: Accident survey in Japan
(CRS-4-08)

Many head injuries in frontal/side impacts

Examples of Clarification of the Amendment Purpose and Predicted Effectiveness (cont.)



Discussion on specific, effective measures to improve the problem

What kind of regulatory requirements can effectively reduce head injuries?

Ex.: Frontal impacts

-Are test conditions in the current regulation appropriate? If they need to be amended for reducing deaths/injuries of child occupants, what are the scientific grounds specifically?

-Is it necessary to measure the head injury index? If so, what are the scientific grounds specifically?

-If the head injury index measurement is effective, how should it be measured?

-If we are to specify head injury index requirements, how much reduction of deaths/injuries can we expect from what requirements and what index values?

-If we are to change dummies for the head injury index measurement, we need to determine the change upon predicting the effectiveness by comparing the current requirement and the strengthened requirement

etc.

Even in this discussion stage, we must discuss while assessing the effectiveness.

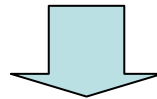
Why We Need to Clarify the Purpose of Amending the Regulation and the Predicted Effectiveness

- Without clarifying the specific **purpose** of amending each regulatory item, the answer to the question
 - **Which item (dummies, impact test procedures, CRS size classes, etc.) should we address first?**would remain ambiguous, causing confusions in the amendment work.

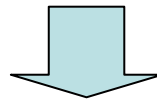
An Example of Clarification of Amendment Work Flow

Ex.: Reduction of head injuries in frontal impacts

The accident data indicate there are many head injuries.



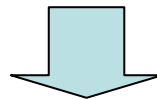
Head injuries should be reduced (= should be assessed).



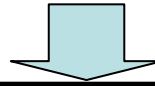
The effectiveness of head injury index assessment needs to be predicted.

The current R44 (P dummy) cannot assess the head injury index.

Q dummy can measure the head injury index.



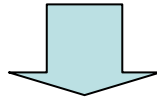
An Example of Clarification of Amendment Work Flow (cont.)



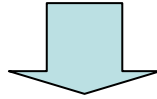
Examination/evaluation of dummies used

		P Dummy	Q Dummy	HBIII
Biofidelity		Fair	Very good	Good
Past usage		EC	No past usage	US
Measurable items	Head acceleration	Difficult	Measurable	Measurable
	Chest acceleration	Measurable	Measurable	Measurable
IARV		Yes	(Under development)	Yes
Durability		No problem	?	No problem
Usability		Easy	(Difficulty in calibration)	Fair

An Example of Clarification of Amendment Work Flow (cont.)



Selection of an appropriate dummy



Frontal impact test conditions (pulse, etc.) and injury index requirements to be determined by considering properties of the selected dummy

Unless the dummy that matches the purpose of amending the regulation is selected, impact test procedures cannot be determined.

We should discuss in sequence not only the frontal impact testing but also the side impact testing and CRS size classes. Otherwise, the flow of discussion will be hindered and the discussion will not progress.

Summary

- At CRS Informal Group, before amending the regulation, we need to revisit and clarify “the overall purpose of amending the regulation,” “the purpose of amending each regulatory item,” and “the predicted effectiveness of amendment.”
- After the purpose and effectiveness have been clarified, we should discuss the amendment in sequence.