

Distr.  
GENERAL

TRANS/WP.29/GRSP/2002/8  
1 March 2002

ENGLISH ONLY

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Passive Safety (GRSP)  
(Thirty-first session, 13-17 May 2002  
agenda item 2.)

ISOFIX CHILD SEAT ATTACHMENT IN REGULATION No. 44  
(Child restraints)

Transmitted jointly by the Chairman of the ISO SC12/WG1 and  
the Chairman of SAE Children's Restraint Systems Committee

Note: The text reproduced below is an extract of a letter sent by the Chairman of the ISO SC12/WG1 and by the Chairman of SAE Children's Restraint Systems Committee to the secretariat. It requested GRSP to allow both rigid and non-rigid child seat attachments as acceptable alternatives for Regulation No. 44. It is based on the text of a document distributed without a symbol (informal document No. 12) during the thirtieth session (TRANS/WP.29/GRSP/30, para. 45).

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Note: This document is distributed to the Experts on Passive Safety only.

GE.02-20783

Thank you for sending us the GRSP information and appreciate your willingness to circulate this letter at the GRSP December meeting.

Please accept the comments in this letter on behalf of the USA, and Australian, members of ISO SC12/WG-1, SAE Children's Restraint Systems Committee, and the millions of potential worldwide users of ISOFIX/LATCH child restraint systems.

The aim of ISO WG-1, as defined in the Status Report from the Chairman dated November, 2001 document N572, is international harmonization and standardization in the field of child restraint systems in passenger cars and light trucks in order to improve safety for children.

It has come to our attention that GRSP is currently addressing inclusion of ISOFIX child seat attachments in ECE R 44. **This is a very important issue.**

As you know the USA and Canada have implemented rulemaking that makes ISOFIX/LATCH universal anchorages and child seat attachments mandatory by September 2002. After considerable evaluation and to be consistent with the goal for international harmonization, the US and Canada specified ISOFIX anchors and child seat attachments included in ISO 13216 part 1. The USA and Canadian rulemaking includes rigidly mounted 6mm round bars for vehicles as specified in ISO 13216-1 and allows for use of either rigid or non-rigid attachments on child restraints by incorporating requirements for anchorages described in ISO 13216-1 Section 5 for rigid attachment systems and Annex B for the optional non-rigid attachment system.

Although there may be some preference for rigid ISOFIX child seat attachments in Europe, there are certainly many benefits to a non-rigid attachment system which consists of an ISOFIX compatible connector and adjustable straps and is the primary direction being pursued in the US, Canada, and Australia.  
Some of these are:

1) The strap based systems use connectors compatible with the ISO anchorages and can be tightly secured using one or two adjusters in the system. These systems are user friendly in that they are simple to use and easy to adjust.

2) Non rigid systems are already available in the marketplace in the US and are a more near-term solution than rigid systems. A critical issue for the rigid systems is the manufacturing tolerances for the interface that is still an outstanding issue and resolution of this within ISO WG1 does not appear to be coming soon.

3) The hardware used in the non-rigid systems is intuitive, can provide an audible sound when fully assembled on the anchorage, and adds little weight to the seat.

4) Non-rigid systems can be used with existing child seats utilizing the current belt paths facilitating the transition to and increased utilization of the new anchorage system in vehicles in the near term.

5) Consumers would **soon** have many universal ISOFIX compatible seats available.

6) Development costs are low providing equal opportunity for child seat manufacturers worldwide to serve their markets. The non-rigid attachment option provides an alternative to the major development costs involved in making a new rigid attachment ISOFIX child seat.

7) The non-rigid ISOFIX/LATCH restraint system has been tested and meets all the performance requirements of FMVSS and CMVSS 213, and has been successfully tested in NHTSA's recent NCAP crash tests.

8) The non-rigid system has also been successfully tested by a number of EU child seat manufacturers to the **universal** performance requirements of ECE R44 (Tested without tethers).

9) A non-rigid ISOFIX system would be much less costly than a rigid system and the savings would benefit millions of consumers.

In addition to the US and Canada, Australia is committed to allowing both the non-rigid and rigid ISOFIX/LATCH child seat attachments.

We would hope that GRSP and the ECE community recognizes the benefits of the proposed anchorage system for child restraints and considers it imperative to achieve the goal of international harmonization through allowing both non-rigid and rigid ISOFIX attachments. The result, international harmonization of ISOFIX/LATCH child restraint systems to meet the charter of GRSP and ISO WG-1.

GRSP can add the final link to international harmonization of ISOFIX/LATCH by allowing both non-rigid and rigid child seat attachments as acceptable alternatives for universal ECE R44 homologation. Since both systems can meet the performance requirements of ECE R44, let the market determine the preferred alternative.

Sincerely,

Paul Butler  
Chairman  
SC12/WG1/US T.A.G.

Dave Campbell  
Chairman  
SAE Children's Restraint Systems Committee

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