

NHTSA's CRS Ease of Use Program

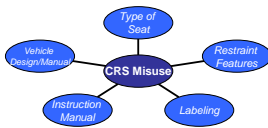
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The Challenge: CRS Misuse



- Misuse is still a problem.
 - Many factors can contribute to improper CRS use.
- 2000 – TREAD Act
 - Section 14(g) required the creation of a CRS consumer information program.
 - In 2002, NHTSA felt that creating a **usability** program would be the most valuable approach.

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The Misuse Solution: An Ease of Use Program

- Offer U.S. consumers more information to make an informed purchase.
 - Consumers are given guidance on what technology exists.
- Raise awareness of the importance of proper installation of child restraints.
 - Consumers are aware of the consequences of improper installation and what constitutes it.
- Motivate CRS manufacturers to continuously improve the usability of child restraints.
 - CRS manufacturers have the opportunity to promote their products; Consumers receive improved CRS.

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EOU Procedure

- Ratings are given for rear-facing, forward-facing, and booster modes.
 - A seat could receive two or three different sets of ratings.
 - Four categories are assessed in each mode.
- Ratings are tabulated using standardized rating forms.
 - Developed by NHTSA
 - Goal: To receive objective and repeatable results.
 - Filled in by certified CPSTs
 - Two groups of two techs each rate the same restraint.
 - Groups compare their responses; differences are resolved.

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Labels are assessed for their content, clarity, and initial durability.

Raters look for information above and beyond what FMVSS No. 213 requires.



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The instruction manual is assessed for clarity, content, and usability.



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Features related to **securing the child** are assessed.



Finally, features related to **installing the seat in the vehicle** are assessed.



EOU Rating Form Example

NHTSA Ease of Use Rating Form - 2009				
Infant Only/Convertible/Combined Use/Booster Seat/High Back Model				
Make & Model:	G			Model #: G
Evaluation of Labels	A	B	C	Notes
Clear indication of child's size range for this mode. Is there additional information on the CRS about how the child should fit in it?	Separate, clear, complete height and weight information directly next to the illustration. Additional size information included as a picture.	Separate, clear, complete height and weight information directly next to the illustration. Additional size information included as short, simple text.	Incomplete text as indicated, text independent of illustration, or no illustration, and/or no mention of additional sizing information.	<input type="checkbox"/> No picture of child in seat. <input type="checkbox"/> Additional sizing info given in text only. <input type="checkbox"/> Additional sizing info missing. <input type="checkbox"/> Not in vehicle seat.
All methods of installing the seat in this mode are clearly indicated, including with lower anchors, lap belt only, and lap/shoulder belt, with and without the base as necessary.	Illustrated clearly with CR in vehicle seat. We need to head text although illustrations should be labeled for each method of installation.		Method missing, partially illustrated, or no illustrations at all. CRS may be shown without any vehicle seat at all. Must read text.	<input type="checkbox"/> No overview of modes of use.
Does the CRS indicate the correct	Yes, there is a	Yes, there is text	No indication of	

EOU Rating Form Example (Continued)

RF MODEL - MAKE AND MODEL	MODEL #	Date of Manufacture	
0	0	12/15/06	
Feature			
Value	Score	Weighted Score	Weights
2	3	6	2
2	3	6	2
2	1	2	2
2	2	4	2
2	3	6	2
1	3	3	1
Total		29	11
Weighted Ave		2.45	
Star Rating		4	

- Features are **weighted** according to risk of injury if misused (3, 2, or 1).
- Seats are given **scores** according to form responses (A=3, B=2, C=1).
- **Weight x Score = Weighted Score.**
- **Sum of Weighted Scores / Sum of Weights = Weighted Average.**
- **Weighted Average** corresponds to a **Star Rating.**

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Why Upgrade?

- In 2007, 81% of child restraints received the top rating of "A".
 - In 2002, only 57% received this rating.
 - This was good news for child passenger safety, but it rendered the program ineffective for comparison shoppers.
- Full inclusion of LATCH occurred after the original program was put into action.
 - Other innovative features have since appeared on the market as well.
- In 2008, the first major upgrade of the program occurred.

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Major Changes for 2008

- Dissolved the "Assembly" category.
 - Some features were retained to keep manufacturers from "backsliding".
- Added assessments for LATCH and other innovative features.
- Increased the ratings bands from 3 (A,B,C) to 5 (star system).
- Adjusted weights of some features.

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Access to Ease of Use Rating Forms

- “NHTSA’s Child Safety Seat Usability Rating Program” – Conference paper
 - Lifesavers Conference website
- Federal Register
 - <http://www.gpoaccess.gov/fr/index.html>
 - Choose “Simple Search”, then “Federal Register, Volume 73 (2008)”.
 - Enter “page 6261” into the search field.

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Questions?

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