

SafeGuard Technical Bulletin

IMMI Perspective on Ease of Use

As the world's largest manufacturer of safety components and advanced restraint systems for child car seats, IMMI® recognizes the importance of reducing misuse, in part by offering components that make car seats easy to use correctly. Through its SafeGuard® product line, IMMI supports the addition of functionality that improve ease of use by making car seats more practical for parents on the go.

Several of the ease-of-use ratings in the EOU program are related to the implementation of advanced restraint systems, including harness operation, connection to the vehicle and clarity of instructions on component labels. SafeGuard component systems that improve ease of use include SafeGuard MiniConnectors™, non-rethreadable harnesses, independently insertable buckle tongues, instructional chest clips and labels that clearly indicate child size and modes of use.

Securing of Child

The problem: According to NHTSA, more than half of car seat users leave harness straps too loose when securing their children. This mistake is often made because of the difficulty of adjusting some seats. Between 11 and 16% of users improperly position the harness strap.

- *SafeGuard dual-tongue buckles made for use in the US are all independently insertable.* When the two tongues on the shoulder portion of the harness buckle are independently insertable, the car seat rates a 3 in this area. "Puzzle" buckles that require inserting tongues together rate 1 or 2.
- *Several SafeGuard restraint system designs that do not require rethreading of the harness.* When the user needs to adjust shoulder height, a harness that does not require rethreading is rated a 3 or 2, depending on difficulty of adjustment. When rethreading is required, the car seat rates a 1 for this feature.
- *When it takes one hand to tighten the harness and two hands to loosen the harness (such as a system based on the SafeGuard A-Lok), the seat gets a 3. Other systems rate a 1. There is no 2 rating available.*
- *With the SafeGuard 1Adjust (initially launched on the SafeGuard Transport™ pediatric ambulance restraint), one operation tightens the five-point harness and adjusts shoulder height.* The shoulder height adjuster travels on a track, offering an infinite number of positions for securing the child. In terms of the EOU program, the inclusion of the 1Adjust feature would give a child car seat a 3 rating in two categories.

Installation in Vehicle

The problem: According to NHTSA, nearly half of all users install child seats too loosely in the vehicle, due to not tightening LATCH connectors completely or improperly restraining a child car seat with a vehicle seat belt. Approximately

45% of users don't use the top tether.

- A 3 rating for installation in the vehicle requires LATCH straps that fully retract.
- LATCH connectors such as snap hooks that require twisting to remove rate a 1. *SafeGuard MiniConnectors do not require twisting to remove and rate a 2.*
- *Retractable LATCH connectors, such as the SafeGuard KwikLATCH, will rate a 3 in the storage category.*

Labeling

- *The SafeGuard chest clip is available with text or graphic, which prominently displays correct positioning.* In order to rate a 3, a chest clip must be labeled to indicate the correct position of the shoulder harness.

The SafeGuard Child Seat, sold from 2006 to 2009, was designed specifically to combat the most common misuses of child car seats and is the only forward facing car seat to have received a five-star ease-of-use rating from NHTSA in 2008. The SafeGuard Go, now marketed by Dorel Juvenile Group, received four stars, the highest rating of any car seat in the category of combination seats used in forward facing mode.

These ratings demonstrate that IMMI was successful in its effort to advance the state of the art in components by introducing restraints that are easy to use correctly. The safety components and advanced restraint systems utilized in the SafeGuard Child Seat and SafeGuard Go are available to child car seat manufacturers for integration into their current and future product lines.