GRSP informal on CRS
« DEFINE A SIMPLE SEATBELT PATH »
for Integral systems

Preliminary results

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WHY PRELIMINARY?

- The data used today belongs to BSRI Belgium Road Safety Institute and is still under analysis in collaboration with LAB.
- This only a working document, updated version will be provided/published when analysis is finalized.
- Due to schedule of the GRSP informal group, data are presented in a draft version.
SUMMARY

• Why is necessary?
• Helping end-users, questions
• Definition of a «simple seatbelt route »
• Available material and methodology
• Integral systems - seatbelt attached
• Results
• Other points (strong link with phase II)
• Perspectives works
Why is necessary?

• Misuse of CRS installation is an issue
• Phase III of ECE R129 is under construction
• If no input / reflection, situation of CRS attachment with seatbelt not will be improved
• End-user ease of use and misuse reduction are part of initial philosophy of R129.
• Awareness of parents
  – on the danger of incorrect CRS fixation
  – on the fact that they are actors in this issue
Why is necessary?

- If CRS installation is not understood, end-users are doing it simple, and quickly, rarely looking for a safe solution.
How to help end-users

• Lot of information available but what is really useful to help consumer
  – Controlled
    • User manual / CDs / DVDs provided with CRS
    • User instructions (pictograms)
    • Colour codes
  – Not controlled
    • Demonstrations on youtube
    • Discussions / advices on forums
How to help end-users

• Example

User manual - available on line

Slide show - available on line
How to help end-users
Definition of « simple seabelt route »

• Different approaches are possible:
  – Definition by specialists of the exact terminology to be included in the final regulation text
    • Not today’s exercise
  – Simple, for what, for who?
    • CRS and car makers (engineers),
    • rating organisations (provision of points to be achieved),
    • end-users (understandable and ease of use)
    • Today’s purpose is to see how parents are performing
Available material

• Misuse field data:
  – sufficient degree of technical information
    • CRS model, misuse description, fiability of coded data
  – sufficient sample size
  – recently collected

• BRSI data collection
  – Detailed; with trained inspectors; approx. 2000 children studied, lot of pictures available – for post collection coding/quality check, data collected in September 2014.
Methodology

• Selection of integral G1 CRS
• Split into 4 categories corresponding to different seatbelt routes
• Look at misuse of installation
Integral systems seatbelt attached

**G1 and convertible CRS G0+/1**
Common, many models, since years

**convertible CRS G0+/1**
Less and less used for CRS attachment

**Mainly G1 only (convertible?)**
Common, few models, relatively recent

**Multigroup 123**
Common, many models, appeared relatively recent (44/03?)
Results

• 498 harness CRS fixed by seabelt
• Average rate of misuse installation: 25%
• Detailed of seatbelt attachment category is unknown for 27%

• Sample with known attachment category = 365 with an average rate of misuse of 27%
Results

1. Effective: 16
   No misuse: 124
   Misuse: 40
   Rate misuse = 24%

2. Effective: 101
   No misuse: 81
   Misuse: 20
   Rate misuse = 20%

3. Effective: 23
   No misuse: 11
   Misuse: 12
   Rate misuse = 52%

4. Effective: 76
   No misuse: 48
   Misuse: 28
   Rate misuse = 37%
Other points (link with Phase II)

• Booster systems (highback and low back)
  – Most commonly seen misuse
  – Existing systems avoiding the risk with a good seatbelt positioning: need to consider this point
Other points (link with Phase II)

- Two installations possibility forward facing:
  - Confusion leading to unsafe situation
Perspectives

- Finalise the analysis of pictures
- Rate the misuse severity in the different « seatbelt attachement » categories
- Update document and circulate/publication on the item, including ISOFIX systems, shields(?), booster systems issues
- Collaborate with CLEPA to translate results (integral systems and boosters) into technical requirements, and make proposal to GRSP informal group
Acknowledgements / Welcome / Questions

• BRSI for data disposal
• GRSP informal group to consider this analysis
• CLEPA for collaboration if any