CLEPA
European Association of Automotive Suppliers

Informal document GRSP-72-36
72nd GRSP, 05-09 Dec. 2022
Agenda items 5 & 10

Further justification of UN R16 and UN R129 proposals on ECRS support legs

Submitted by the experts from CLEPA

72nd session of GRSP, 05 – 09th December 2022

BACKGROUND

Proposals presented to GRSP-70

UN R16	• **ECE/TRANS/WP.29/GRSP/2021/20 (Spain)** – Support legs can protrude from ISO/B2 and /B3 booster seat volumes • **ECE/TRANS/WP.29/GRSP/2021/25 (CLEPA)** – Increases the support leg volume height
UN R129	• **ECE/TRANS/WP.29/GRSP/2021/26 (CLEPA)** – Increases support leg volume height

- **GRSP asked for more evidence from impact tests / simulations**
- **Discussions continued in GRSP Ad-Hoc Group on CRS**

DATA SOURCES

Literature and new tests

- **CLEPA tests presented to UN Informal Group on CRS**
  - CRS-07-02, November 2008
  - CRS-07-03, November 2008
  - CRS-13-05, October 2009

To support development of R129 and amendment of vehicle regulations

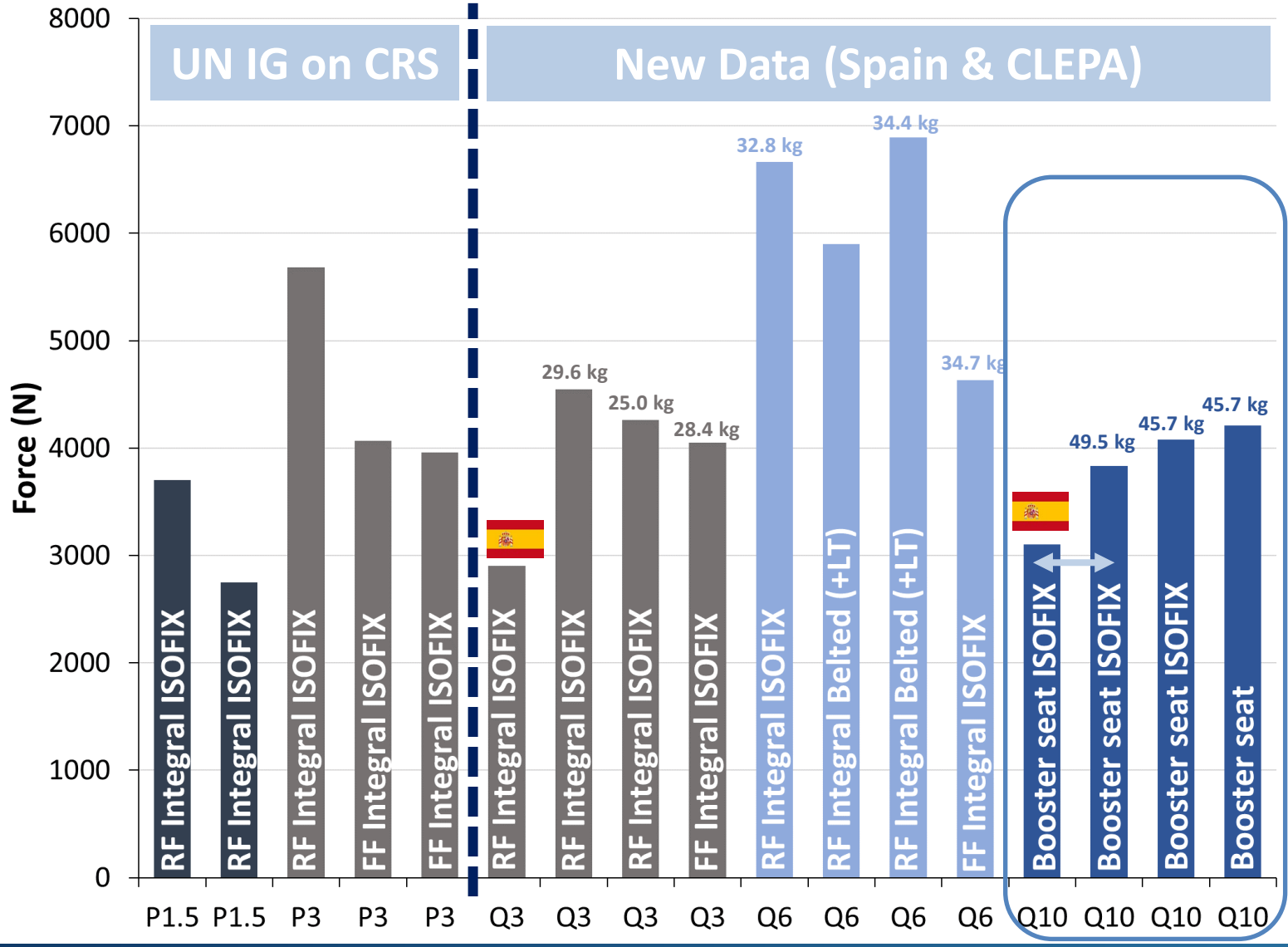
- **Spain tests presented to UN GRSP**
  - GRSP-70-03, December 2021
- **CLEPA tests / simulations (new)**
  - GRSP-72, December 2022

To support proposals to amend CRS and support leg volume requirements

RESULTS – SUPPORT LEGS ON BOOSTER SEATS

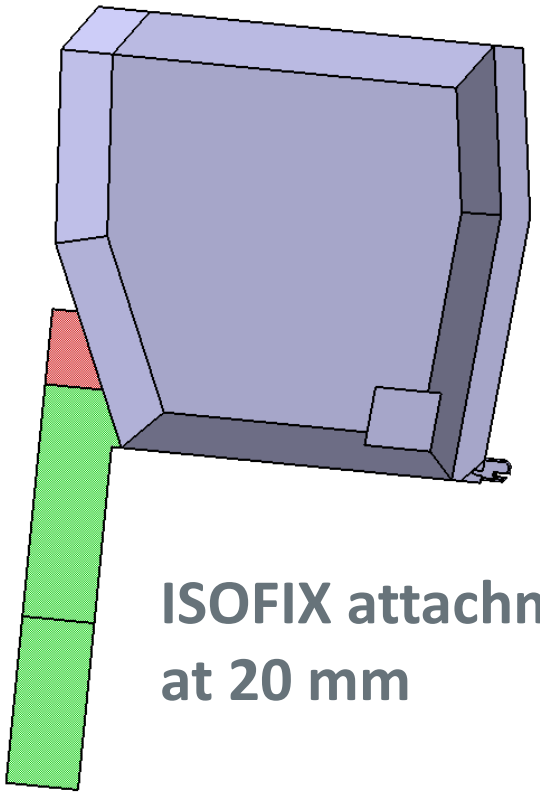
Floor reaction force

- **Legacy data ranged from 2900 to 5680 N**
  - Input to current R145 floor strength requirements
- **R129/i-Size CRS consistent with legacy data**
- **Booster seats with Q10 consistent with other R129 CRS**

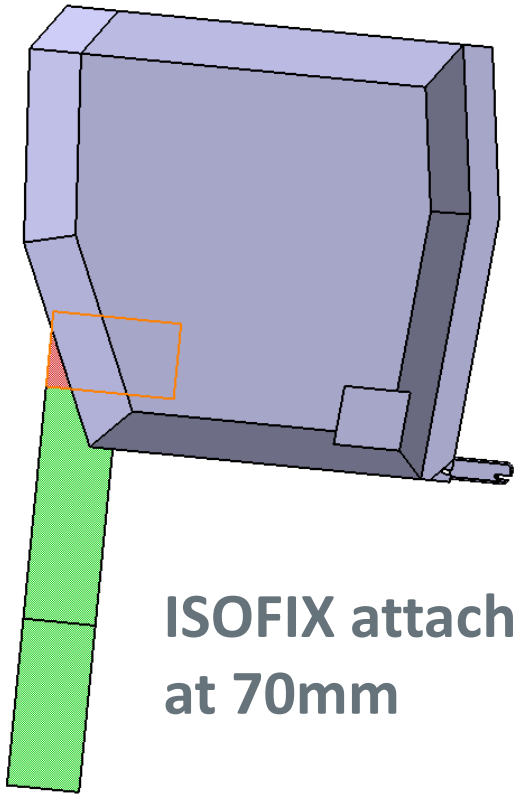


RESULTS – SUPPORT LEG VOLUME HEIGHT

Overview



ISOFIX attachments at 20 mm

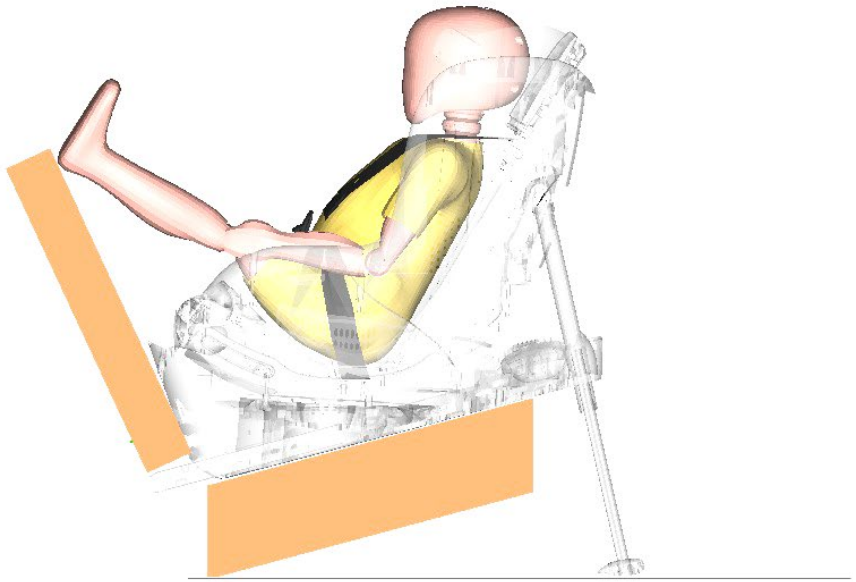


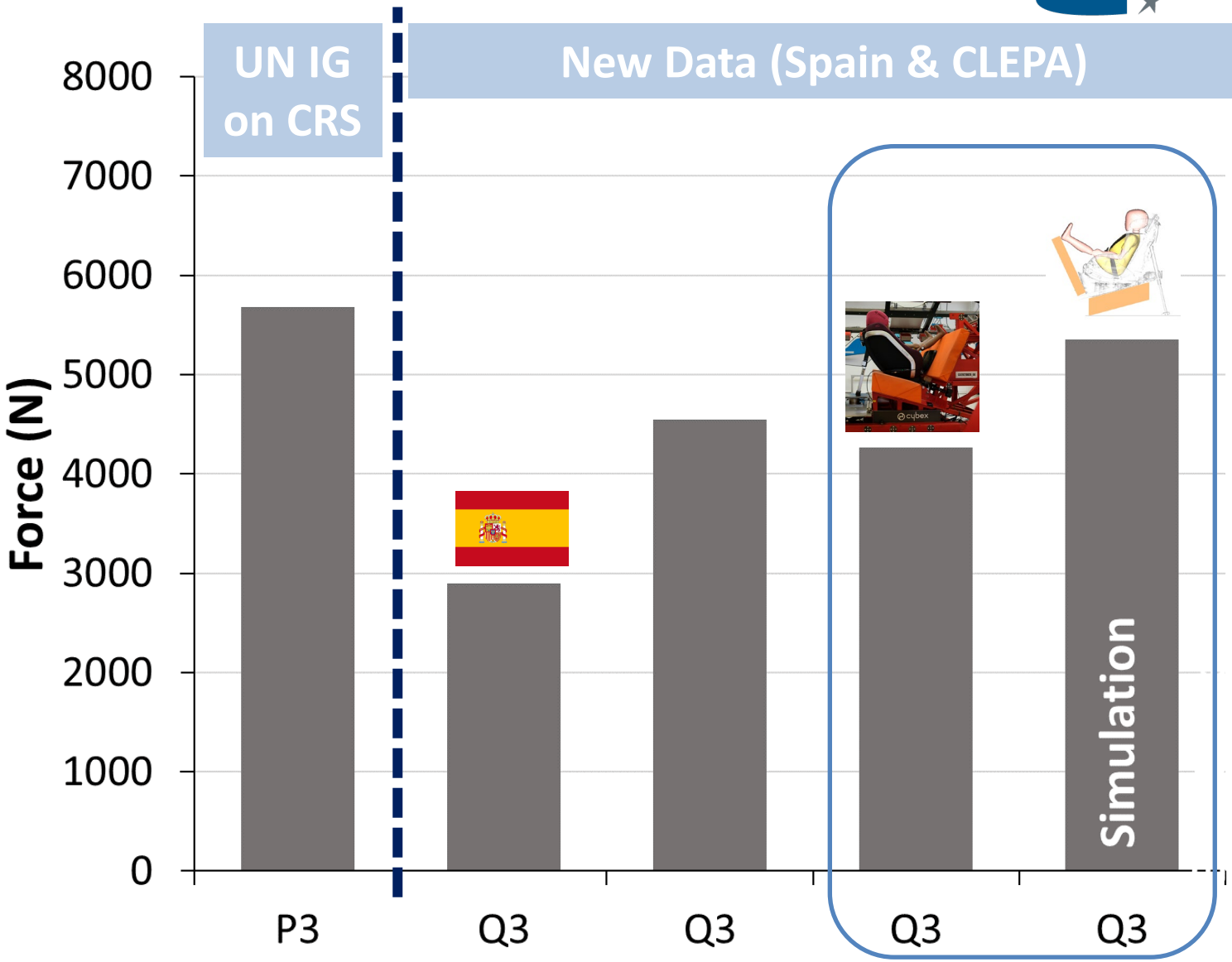
ISOFIX attachments at 70mm

RESULTS – SUPPORT LEG VOLUME HEIGHT

Floor reaction force

- **Taller SL generates similar forces to conventional ISOFIX & SL bases**





RESULTS – SUPPORT LEG VOLUME HEIGHT

ISOFIX anchorage force

- **Legacy data ranged from 3500 to 6300 N**
- **Taller SL generates similar forces to conventional ISOFIX CRS**