Informal document GRSP-70-18
70th GRSP, 6-10 Dec. 2021,
agenda item 11

CLEPA
European Association of Automotive Suppliers

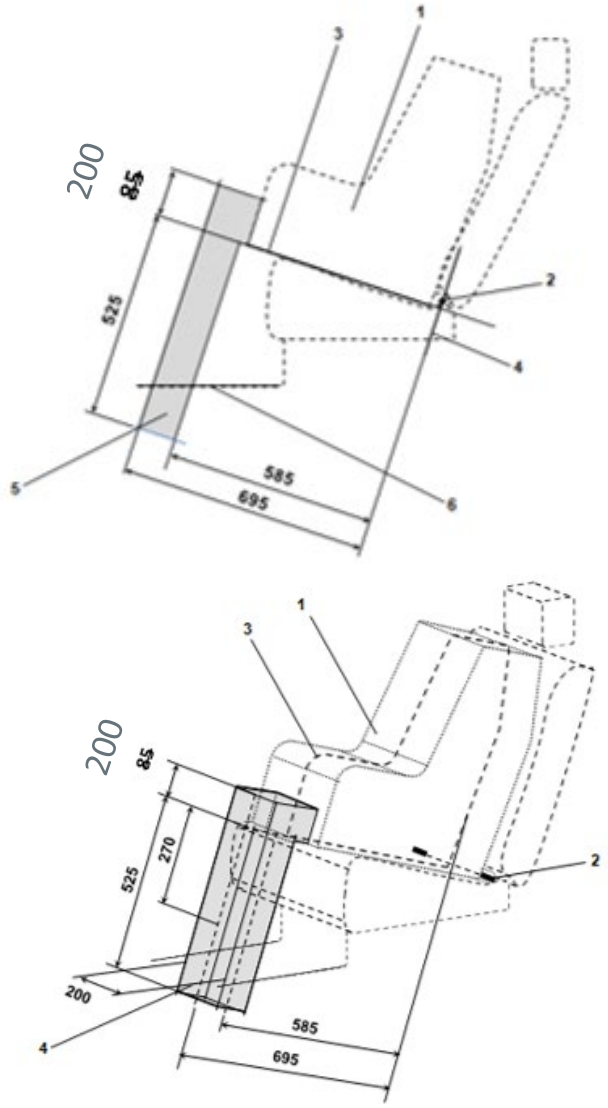
Modification of R16/R129 Support Leg Volume

Submitted by the experts from CLEPA

70th session of GRSP, 06 – 10th December 2021

PROPOSAL

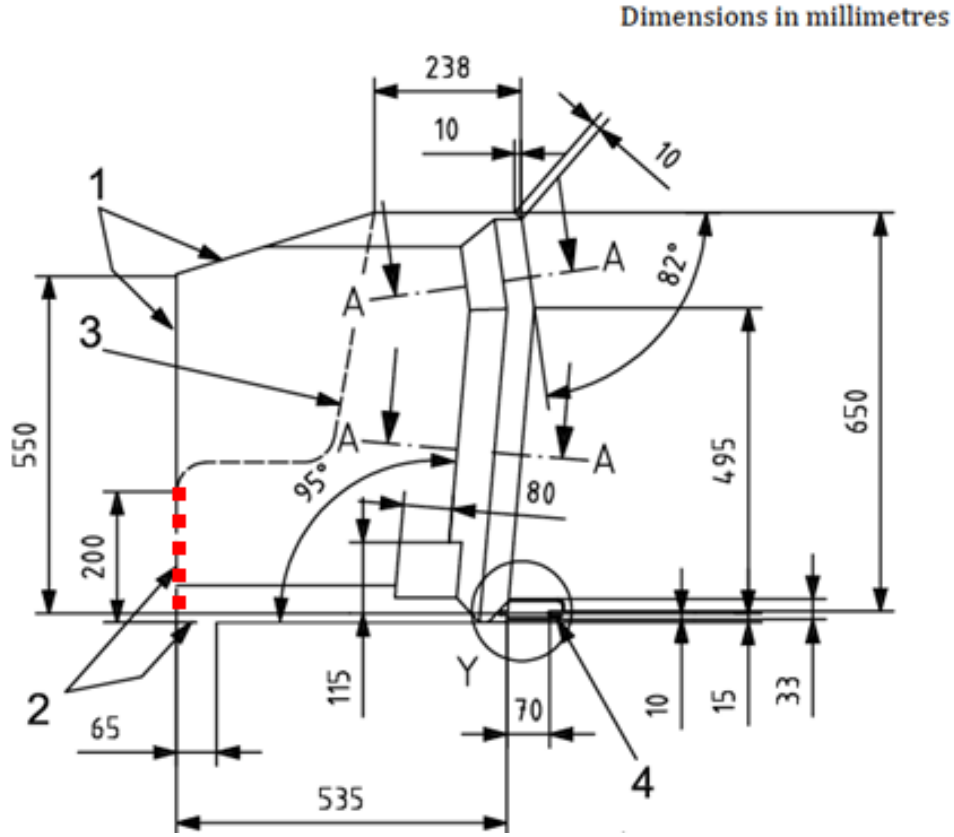
- CLEPA propose to increase the height of the support leg volume to improve compatibility between support leg volume and ISO/R2 & ISO/F2X volumes
- This change would require R129 & R16 to be updated with this modification (GRSP/2021/25 & GRSP/2021/26)
- This change is important for large rearward facing ECRS designs
- This change will not reduce the support leg compatibility with vehicles



JUSTIFICATION (1/6)

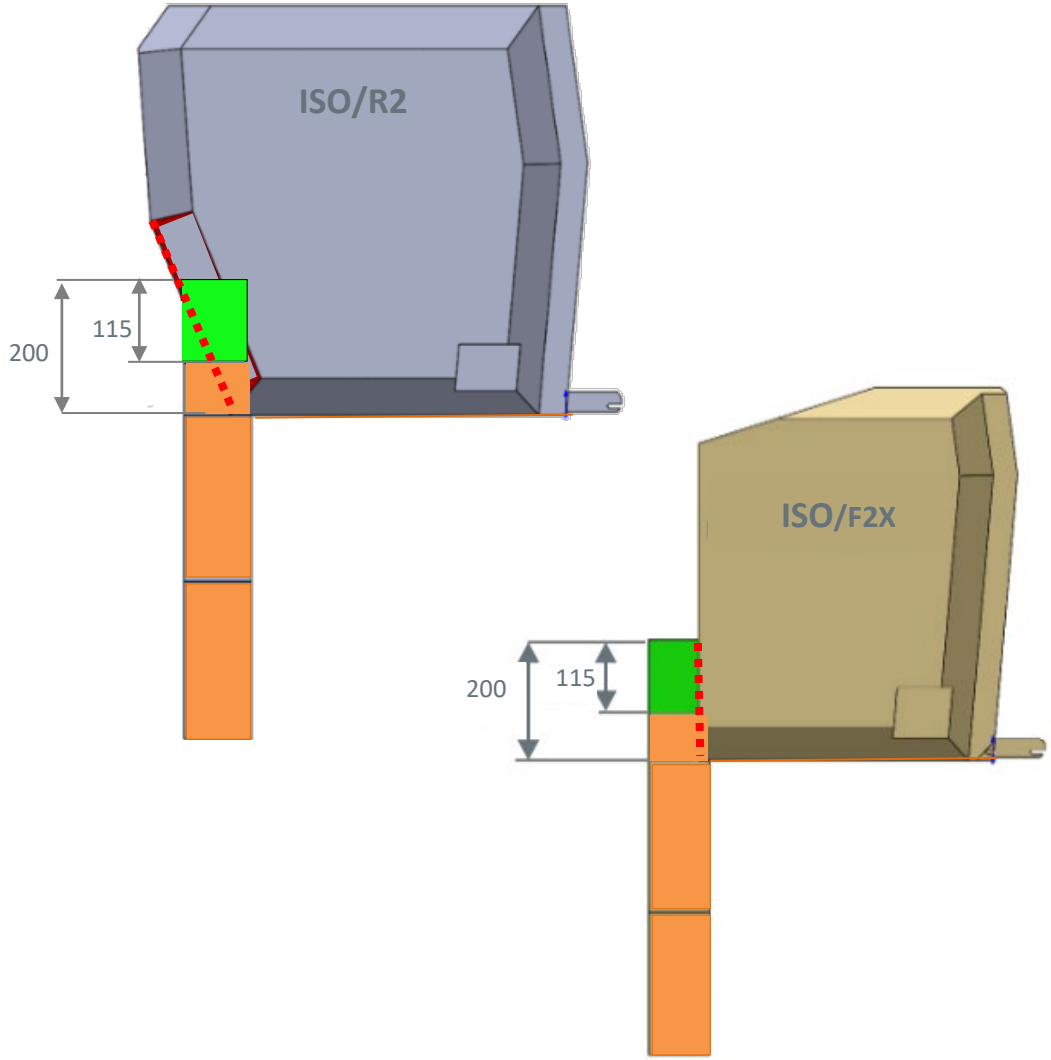
- UN Regulation No. 16 defines the envelope dimensions of ISO/R2 & ISO/F2X CRF envelopes
  - Dashed line 2) represents the area where a support leg or similar may protrude. For the ISO/F2X envelope, this is indicated with a height of 200 mm (red dotted line)

- The proposal is to increase the support leg volume height to match this 200 mm dimension



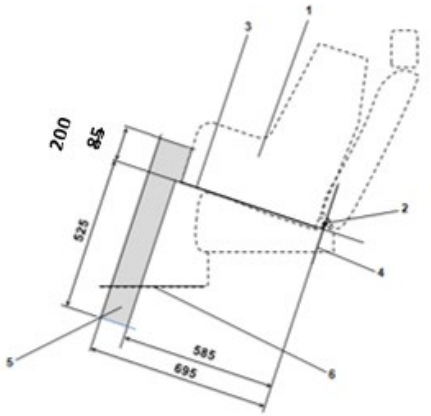
JUSTIFICATION (2/6)

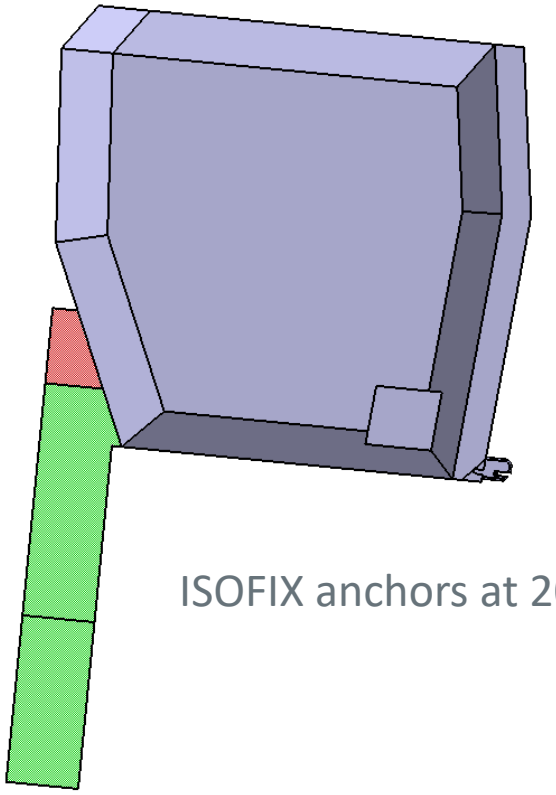
- Increasing the height of the support leg volume would create a better match with both i-size ISO volumes
  - Particularly useful for large rearward facing CRS designs with support legs
  - Will increase design space for support leg & misuse mechanisms & electronics for user misuse warnings
  - Environmental benefits - improved load paths leads to a reduction in materials
  - Potential to reduce CRS weight, improving handling for consumers



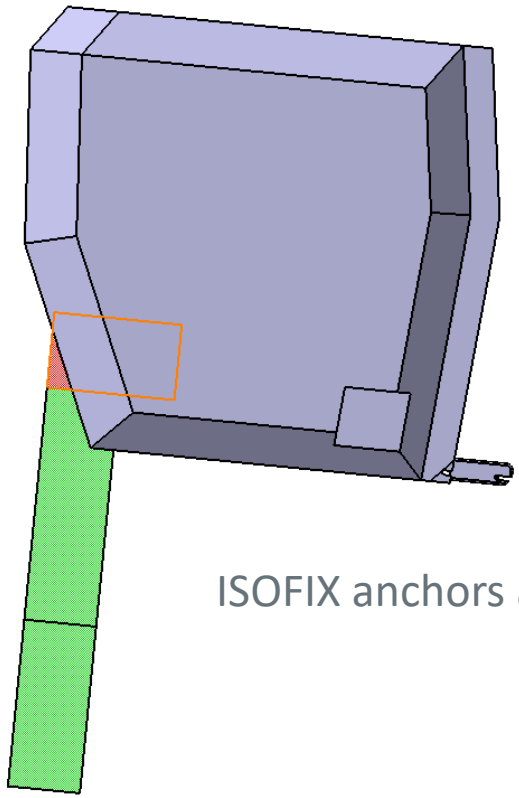
JUSTIFICATION (3/6)

- The additional support leg volume already overlaps with the ISO/R2 volume and therefore little or no extra space is required (depending on ISOFIX position)





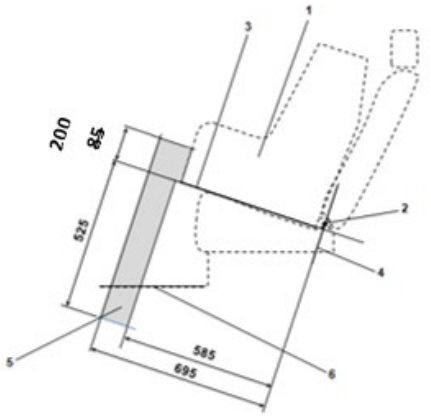
ISOFIX anchors at 20mm

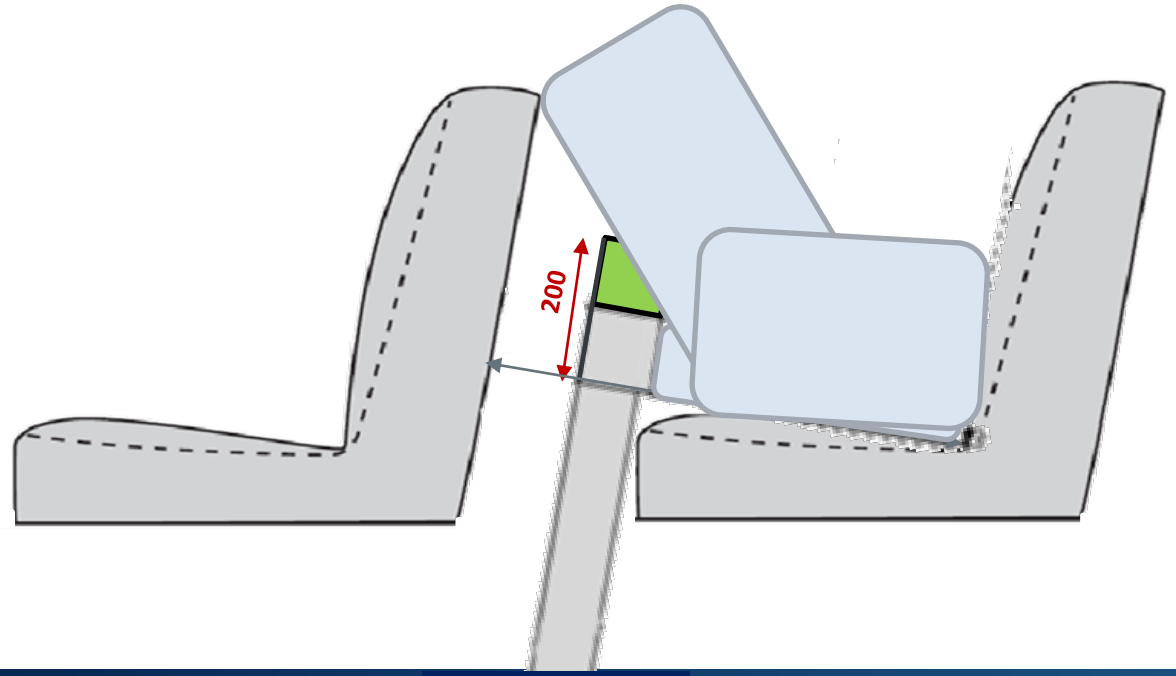


ISOFIX anchors at 70mm

JUSTIFICATION (4/6)

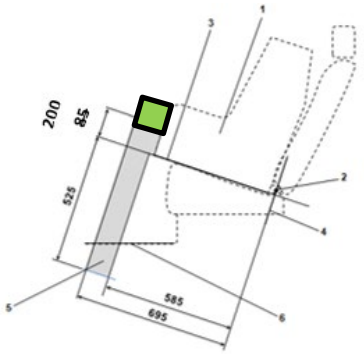
- The additional space required by extending the support leg volume is available in vehicles that can already fit the support leg volume
- This additional support leg volume unused in the vehicle (100 vehicles)
- If contact between the child seats and vehicle seat occurs, it is at the top of the seat, not where the additional support leg volume would be





JUSTIFICATION (5/6)

- Additional support leg volume unused in the vehicle
- Vehicle contact between child seats and vehicle seat occur at the top of the seat
- Examples (Small Off-Road)

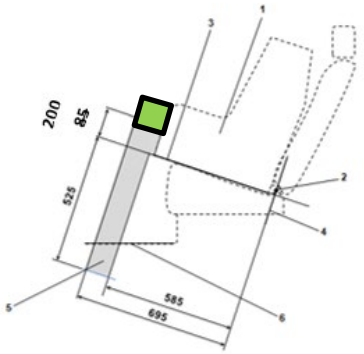


Infant Carrier

Large RF

JUSTIFICATION (6/6)

- Additional support leg volume unused in the vehicle
- Vehicle contact between child seats and vehicle seat occur at the top of the seat
- Examples (Supermini)



Infant Carrier

Large RF

CONCLUSION

- Increasing the height of the support leg volume would improve compatibility between support leg volume and ISO/R2 & ISO/F2X volumes
  - Will increase design space for support leg & misuse mechanisms & electronics for user misuse warnings
  - Environmental benefits - improved load paths leads to a reduction in materials

- This change is important for large rearward facing ECRS designs

- This change will not reduce the support leg compatibility with vehicles