Modification of R16/R129 Support Leg Volume

Submitted by the experts from CLEPA

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• 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
• 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
• 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
• 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)
• 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
• 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)
• 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)
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