



C L E P A
*European Association of
Automotive Suppliers*

CLEPA proposal belt installed CRS

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Belt installation

Integrated belt installed CRS are important to arrange for safe transport of children in:

- All vehicle positions, which don't offer any isofix anchorage (in older cars without any isofix / front seat next to the driver / middle rear seat / using 3 seats on a row)
- Rear facing transport till the age of 6 years (Sweden, but more and more required in other EU areas)
- Forward facing transport (normally till the age of 4-5 years)

To be able to facilitate this we need to offer:

- Criteria with realistic thresholds, which are necessary to assure safe performance
- Possibility to combine specific vehicle ECRS with anti rotation device



R129 criteria belt installed CRS

From crash test, executed with R44-04 belt installed seats under R129 test conditions the following can be concluded:

For large toddler rear facing belt installed seats or infant seats, combined with a belt installed base, there is a need to use an anti rotation device.

Proposal for 2.12

An "Anti-rotation device" for a "specific vehicle ~~ISOFIX~~" Enhanced Child Restraint System may comprise a top tether, a support-leg or any other means capable of limiting the rotation.



R129 criteria belt installed CRS

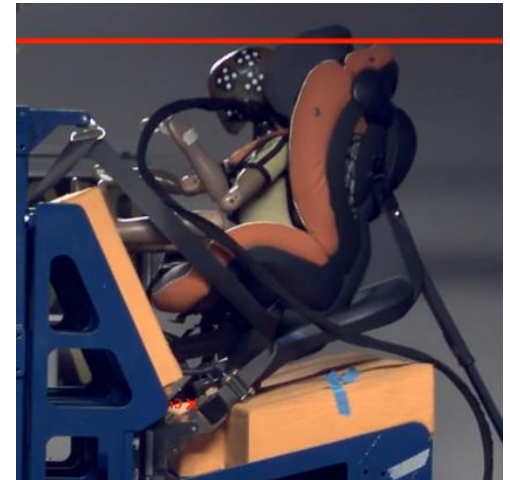
From crash test, executed with R44-04 belt installed seats under R129 test conditions the following can be concluded:

For large toddler rear facing belt installed seats, ***it's impossible*** to comply with a vertical head displacement of 800 mm. in a rear impact and difficult to comply in the rebound of a frontal impact.

Proposal:

Define 840 vertical head displacement for all dummies

Rational: If we accept this for Q10 dummy, why should we not accept it for other dummies?





R129 criteria forward facing CRS

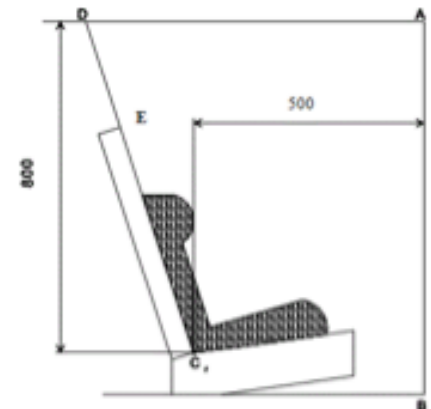
R129 6.6.4.4.1.1.

Head excursion: No part of the head of the dummy shall pass beyond the planes BA, DA and DE as defined in Figure 1 below . This shall be judged up to 300 ms or the moment that the dummy has come to a definitive standstill whatever occurs first. Except for booster seats when testing using Q10 dummy where :

The value in relation to the DA plane is 840 mm.

Proposal: Adjust the vertical displacement to 840 mm. for all dummies.

Figure 1
Arrangement for testing a forward-facing device



Dimensions in mm



R129 criteria rear facing CRS

R129 6.6.4.4.1.2.

Head excursion: No part of the head of the dummy shall pass beyond the planes FD, FG and DE as defined in Figure 2 below . This shall be judged up to 300 ms or the moment that the dummy has come to a definitive standstill whatever occurs first.

Proposal: Adjust the vertical displacement to 840 mm. for all dummies.

Figure 2
Arrangement for testing a rearward-facing device, not supported by the dashboard

