Raising Standards for Consumers

Belt Guides in UN Regulation 44 and in Realistic Test Environment

67th GRSP, 20-23 July 2020

Ronald Vroman,
ANEC

- Regulation 44 is intended to forbid CRS in the form of belt guides, irrespective of the results of the crash test
- This requirement has not stopped manufacturers from seeking type-approval for a belt guide
- At least one has succeeded in placing a R44 approved product on the market
- Type approval was granted on the basis crash test results only, ignoring several additional requirements
**Belt Guides in UN Regulation 44**

Two concerns:

- Children are put at risk of serious injury (or worse) when using belt guides / straps as standalone CRS
- Test Approval Authorities selecting what they consider relevant for granting approvals is wrong and detrimental for the type approval system.

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**Belt Guides in Realistic Test Environment**

Test specs as per ETC (a.k.a. ADAC / StiWa):

- VW Polo car body
- Q6 Dummy w/wo Smart Kid Belt
- Euro NCAP pulse
Belt Guides in Realistic Test Environment

Guide Strap

Seat Belt Only

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**Belt Guides in Realistic Test Environment**

<table>
<thead>
<tr>
<th></th>
<th>Q6 with seatbelt only</th>
<th>Q6 with smart kid belt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head $a_{max}$ [g]</td>
<td>91.5</td>
<td>92.7</td>
</tr>
<tr>
<td>HIC&lt;sub&gt;45&lt;/sub&gt;</td>
<td>1197</td>
<td>1395</td>
</tr>
<tr>
<td>Neck $F_{max}$ [N]</td>
<td>3508</td>
<td>3558</td>
</tr>
<tr>
<td>$M_{max}$ [Nm]</td>
<td>74.3</td>
<td>79.1</td>
</tr>
<tr>
<td>Chest $a_{max}$ [g]</td>
<td>62.7</td>
<td>72.8</td>
</tr>
<tr>
<td>Abdomen visual penetration</td>
<td>penetrated by the seatbelt</td>
<td>penetrated by the seatbelt</td>
</tr>
<tr>
<td>Pelvis $a_{max}$ [g]</td>
<td>51.1</td>
<td>56.9</td>
</tr>
</tbody>
</table>

Summing up:
- High risk of abdominal injuries in both cases due to severe submarining
- “Smart Kid Belt” offers no added value compared to “seatbelt only”
- Both results demonstrate the need of using a well-designed booster seat for this age category
- Use of Smart Kid Belt as standalone CRS must be stopped in order to ensure the safety of some of the youngest and most vulnerable of consumers

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**Belt Guides in UN Regulation 44**

ANEC:
- Support the position of the Russian Federation and The Netherlands that the ”Smart Kid Belt” is not in compliance with R44 requirements and that type approval should be withdrawn
- Urge GRSP to modify Regulation 44 to make even more clear that belt-guides and straps cannot not be approved as standalone CRS
- [Request recall of and refund for sold non-complying R44 approved guide straps]
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