Isofix Loads Measurements

Task 5.1

CLEPA Contribution

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Test description

• R44 bench equipped with:
  – Lower isofix anchorages loads sensors
    • Load given in this document are calculated in the centre of the 6 mm diameter anchorage
  – Top Tether load sensor

• Tests performed
  – Gr1 with Top Tether / P3
  – Gr1 without Top Tether / P3
  – Gr1 with support leg / P3
  – Gr 0+ with support leg P1,5
Installation

- Seat A: weight 11 kg
  Gr 1 Top Tether
Installation

- **Seat B** weight 9 kg – Gr 1 Top Tether
Installation

- **Seat C** weight 14.6 kg. Gr 1 Support Leg
Installation

- **Seat D** weight 12.2 kg – Gr 0+ Support Leg
Installation

• Isofix Anchorages Position

Forward

Rear
# Results - Synthesis

<table>
<thead>
<tr>
<th>Seat</th>
<th>Anti-rotation</th>
<th>Dummy</th>
<th>Lower Isofix Anchorages</th>
<th>Isofix L X</th>
<th>Isofix L Y</th>
<th>Isofix L Z</th>
<th>Isofix L Res</th>
<th>Isofix R X</th>
<th>Isofix R Y</th>
<th>Isofix R Z</th>
<th>Isofix R Res</th>
<th>TT</th>
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</thead>
<tbody>
<tr>
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<td>Rear</td>
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<td>2418</td>
<td>3370</td>
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<td>825</td>
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<td>3870</td>
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<td>Rear</td>
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<td>829</td>
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<td>1487</td>
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<tr>
<td>Seat B</td>
<td>TT</td>
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<td>Forward</td>
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<td>233</td>
<td>825</td>
<td>3468</td>
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<td>3654</td>
<td>121</td>
<td>2241</td>
<td></td>
<td>4243</td>
</tr>
</tbody>
</table>

Maximum TT

Maximum

Maximum

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Force measured in N
Result Synthesis

- Higher forces in anchorages with 2 points only and with support leg
- Higher forces in rear position of anchorages (to be confirmed)
- Imbalance between left and right anchorages
  - Alignment tolerance ?
  - Effect of rigid Isofix ?
  - Sensor ?
  - To be investigated
Next Steps

- Tests with other labs to check results
- Input from car manufacturers to evaluate anchorages deformation.