Workshop at BAST 3./4.8.

- **Participants**
  - Opel (Fr. Scholz/Hr. Eikemeier)
  - Audi (Dr. Weber)
  - Ford (Hr. Moerke/Fr. Greyff/Hr. Frosch)
  - Kiddy (Hr. Diezel)
  - Takata (Dr. Nett)
  - Cybex (Fr. Krebs)
  - MHH (Dr. Johannsen)
  - BAST (Fr. Schnottale)

- **Vehicles**
  - Opel Corsa
  - Opel Astra SportsTourer
  - Audi Q7
  - Audi A6 Avant
  - Ford S-MAX

- **CRS**
  - Takata Maxi
  - Römer KidFix XP
  - Cybex Solution X-Fix

- **Prüfkörper**
  - „F4“-universal
  - Gabarit
  - ISO F2x
  - ISO R2
  - i-Size support leg
  - ISO R3 (Dr. Weber)
  - ISO L1/2 (Fr. Scholz/Hr. Eikemeier)

- **Others**
  - ISOFIX attachments
Assessment results

• **Ford S-MAX**
  – 3x ISO 440mm → possible, noasses to belt buckle
  – 3 CRS G2/3 (max 500mm) possible also with ISOFIX; buckle use possible (contact between CRS)
• **Audi Q7**
  – 3x ISO 440mm → not possible
  – 3 CRS G2/3 with ISOFIX- not possible;
  – 3 CRS G2/3 (max. 500mm) without ISOFIX possible, contact between CRS
  – Mid rear : Gabarit not ok, F4 ok
• **Audi A6 Avant**
  – 3 CRS G2/3 not possible
• **Opel Corsa**
  – 3 CRS G2/3 not possible
• **Opel Astra SportsTourer**
  – 3 CRS G2/3 not possible
Assessment Results  
(fixtures on iSize ready seating positions)

• **F4 440mm**
  – Single positioning: Fits on all vehicles with ISOFIX and belt; buckle usage difficult on small seat places (no problem with real CRS)
  – Remaining space in the middle between two 2 F4 440mm out board
    • 250mm (Corsa)-480mm (S-MAX)

• **F4 520mm**
  – Single positioning: Fits on all vehicles with ISOFIX and belt; buckle usage difficult on small seat places (no problem with real CRS)
  – Remaining space in the middle between two 2 F4 520mm out board
    • 170mm (Corsa)-400mm (S-MAX)

• **Gabarit**
  – Belt routing Gabarit and F4 different
<table>
<thead>
<tr>
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<th>F4 440mm</th>
<th>F4 520mm</th>
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<tbody>
<tr>
<td>Single seat homologation possible</td>
<td>Single seat homologation possible</td>
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<tr>
<td>3-in-a row only in a small number of vehicles possible (just ISOFIX use)</td>
<td>3-in-a row not possible (even not without ISOFIX)</td>
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<tr>
<td>95% only for 125 cm child height</td>
<td>95% for 135 cm child height</td>
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<tr>
<td>135 cm only 50%</td>
<td>150cm 50%+x% (x% needs to be verified)</td>
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<tr>
<td>Tests with Q6; Q10 not possible</td>
<td>Tests with Q10</td>
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**Current Situation**

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<tr>
<td>CRS in workshop between 470mm and 510 mm</td>
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<tr>
<td>3 CRS in a row possible depending on shape and adjustment and vehicle</td>
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<tr>
<td>Q10 fits in all CRS at the workshop</td>
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<td>Current real situation is better than fixture installation</td>
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</table>
Belt guidance F4 vs. CRS vs. Gabarit
Buckle access and size difference
Fixture vs. CRS
Findings

• during the workshop, no relevant benefit with regard to 3-in-a-row was seen for F4 440 mm (fits only in single vehicles)

• disadvantage F4: 440mm no 10 year old in these boosters (change for the worse compared with existing situation)

• for the F4 changes for belt routing and buckle access in the lower part is necessary
Proposal

• Changing size concept as in the CLEPA Proposal
  – 125 (95%) → 150 (50%)

• No requirement for 3-in-a-row fixtures for all vehicles
  – CRS are different from fixtures regarding flexibility
  – Size inside vehicles are restricted

• Height of fixture no big problem in assessed vehicles
  – no use of ISOFIX connectors

• Width of fixture for bigger children >125cm
  – Q10 should be used for testing frontal and side impact
    • Due to law in many European Countries CRS use up to 150cm
  – Maximum width between 480mm and 500mm
    • Reducing to 440mm would lead to decreasing child passenger safety
  – Belt path should be updated for better compatibility