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Full-scale Tests with and without ISOFIX

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Tests

• Renault Megane
  • Prior to side impacts used in frontal full overlap test
  • Side bags deactivated
  • Right side impact with ISOFIX
  • Left side impact with belted CRS
  • Inspection before running second test (e.g., static measurement of side structure)

• FF Bébé Confort
  • without TopTether
  • Q3

• RF MaxiCosi Cabrio
  • with the same base for belted and ISOFIX
  • Q1.5
Results FF

![Bar chart showing deviation from belted in % for various body parts with ISOFIX compared to belted.

- Head a3ms
- Neck FR
- Neck MR
- Chest a3ms
- Chest deflection
- Pelvis a3ms

ILS Kraftfahrzeuge

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Results FF
Results RF

![Bar chart showing deviation from belted (%) for various body parts with ISOFIX and belted comparisons.]
Results RF
Comparison to Sled Tests

- ISO procedure according latest CD version
- ADAC procedure with fixed door
- Currently FF tests only
Results Sled Tests FF

- **belted**
- **ISOFIX sled TUB hinged door**
- **ISOFIX sled ADAC fixed door**
- **ISOFIX car**

Metrics: deviation from belted [%]

- **head a3ms**
- **neck FR**
- **neck MR**
- **chest a3ms**
- **chest deflection**
- **pelvis a3ms**
Comparison to ADAC Tests

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Conclusion

• Looking at the time history and the peak values ISO WG1 TF1 decided that only minor differences between ISOFIX and belt CRS fixation in side impact exist

• FST data indicate that ISOFIX lead to higher dummy readings in lateral impact

• TUB data indicates that ISOFIX and belt fixation are more or less equal in lateral impact

• ADAC test results tend to be considerably lower for ISOFIX installation