



Daimler Buses

STCBC-XX
24.01.2022

Safer Transport of Children in Buses and Coaches STCBC

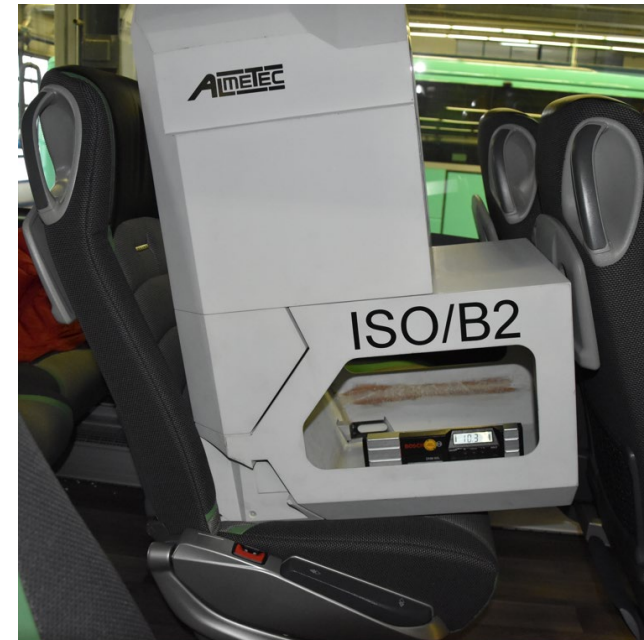
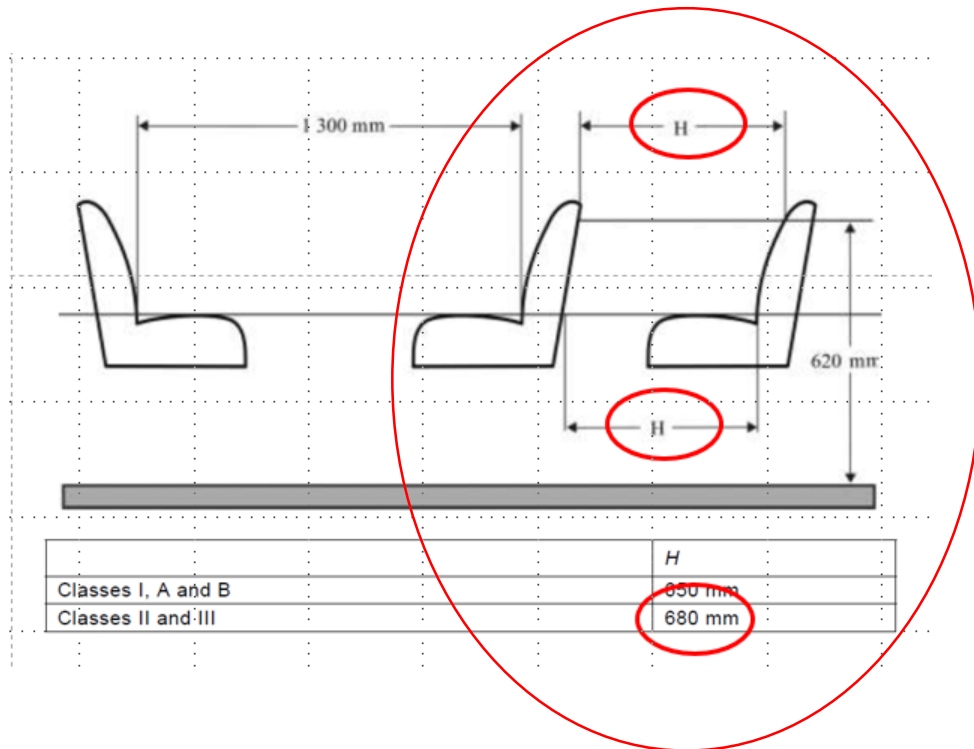
M3, class II/III vehicle check with CRS-envelopes B2 and R2
Consequences for seat spacing and interior layout of vehicles

Test vehicles: Setra S 517 HDH (single deck); Setra S 531 DT (double deck)

Michael Becker, Daimler Buses, 24.01.2022

Test vehicle: SETRA 517 HDH, VIN: WKK 41021013127263

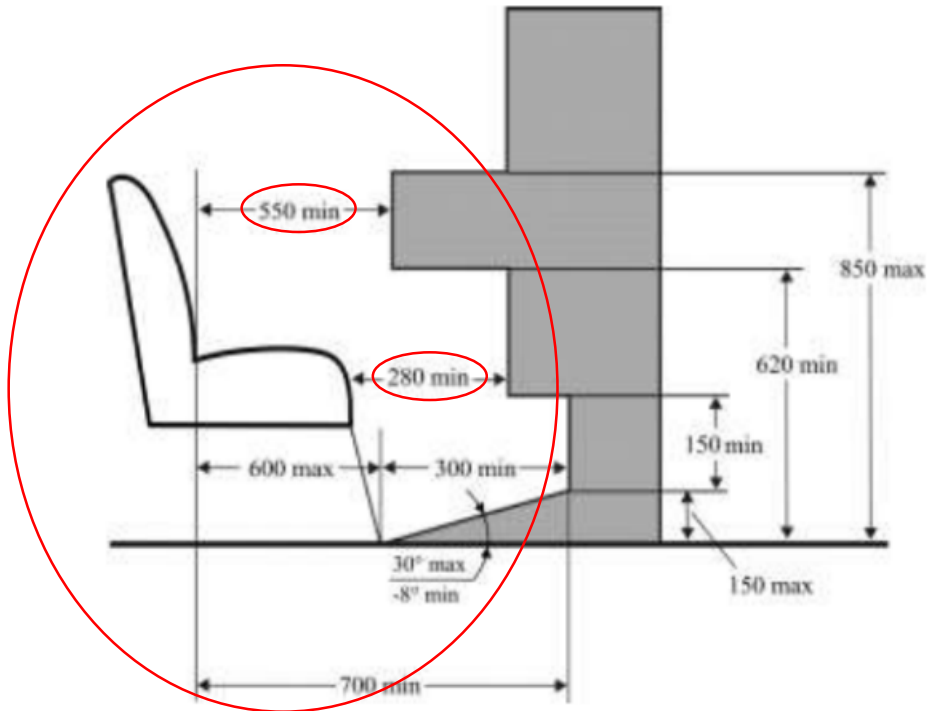
1. Check of seat spacing H with ISO/B2
(see UN R 107, annex 3, para. 7.7.8.4 and annex 4, figure 12A)



Fitting of ISO/B2 with 680 mm seat spacing possible

Test vehicle: SETRA 517 HDH, VIN: WKK 41021013127263

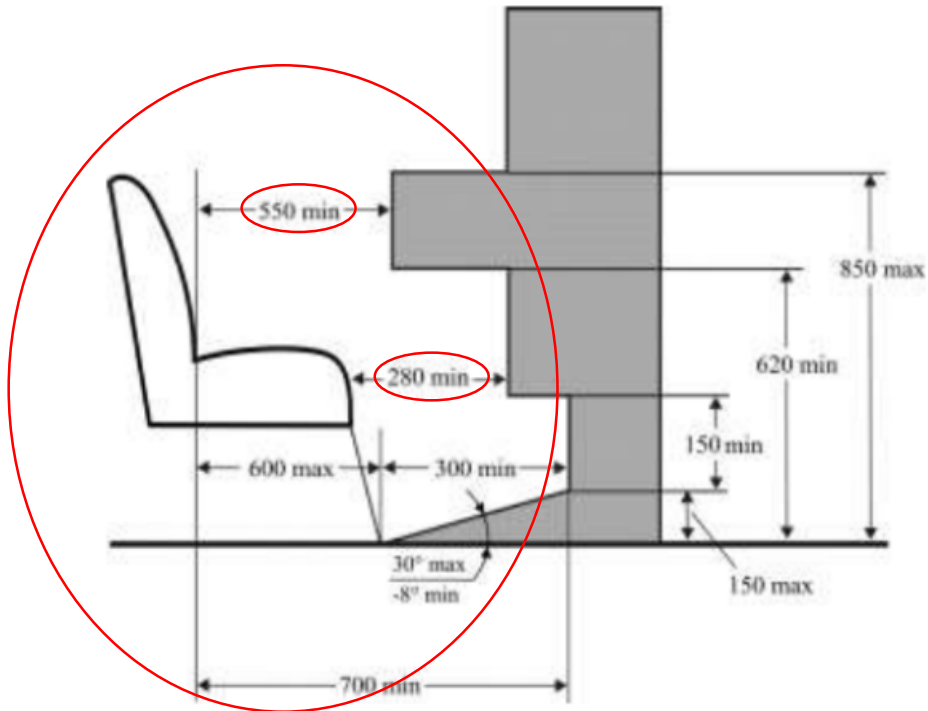
2. Check of required seat distance of 550 mm and 280 mm with ISO/B2
(see UN R 107, annex 3, para. 7.7.8.5.1 and annex 4, figure 13)



Fitting of ISO/B2 needs further 70-80 mm in addition to the required min. distance between seat and partition

Test vehicle: SETRA 517 HDH, VIN: WKK 41021013127263

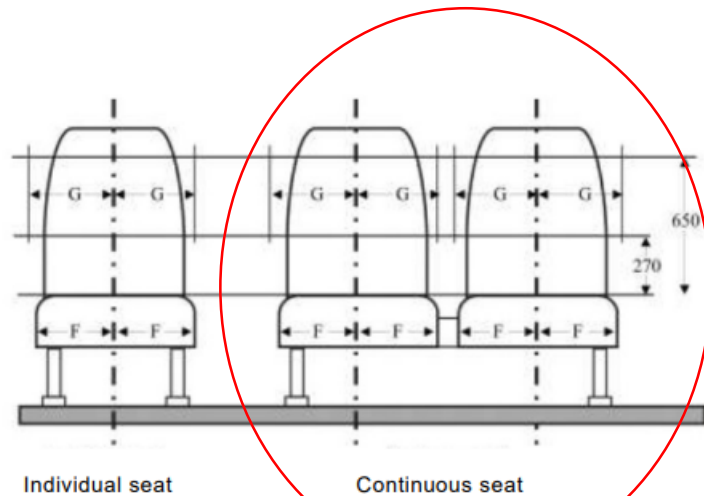
3. Check of required seat distance of 550 mm and 280 mm with ISO/R2
(see UN R 107, annex 3, para. 7.7.8.5.1 and annex 4, figure 13)



Fitting of ISO/R2 needs further 120-130 mm in addition to the required min. distance between seat and partition

Test vehicle: SETRA 517 HDH, VIN: WKK 41021013127263

4. Check if required seat dimensions allow for 2 ISO/B2 side by side
(see UN R 107, annex 3, para. 7.7.8.1 and annex 4, figure 9)



F (mm) min	G (mm) minimum	
	Continuous seats	Individual seats
200*	225	250

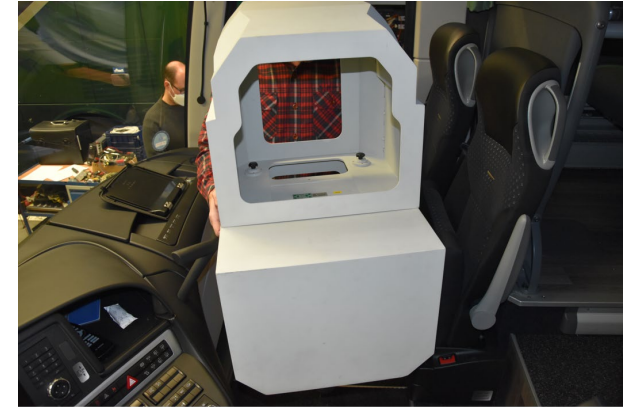
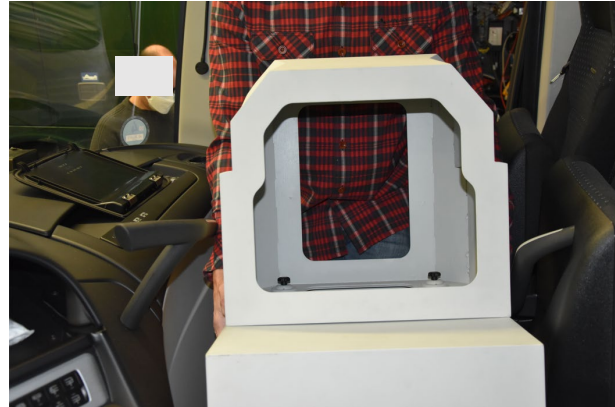
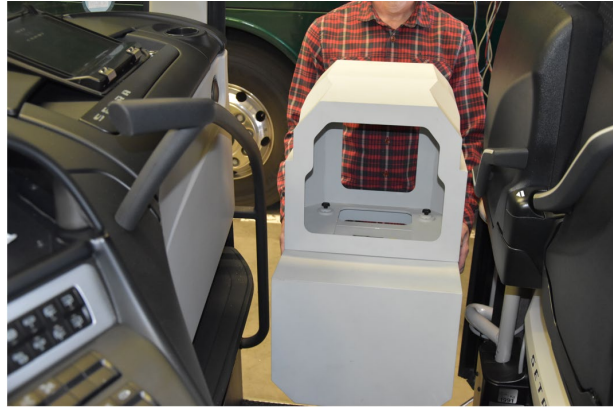
* 225 for Class III.



Fitting of 2 ISO/B2 side by side leads to very little space between the 2 enveloppes. It is questionable, if space is sufficient to reach belt/buckle

Test vehicle: SETRA 517 HDH, VIN: WKK 41021013127263

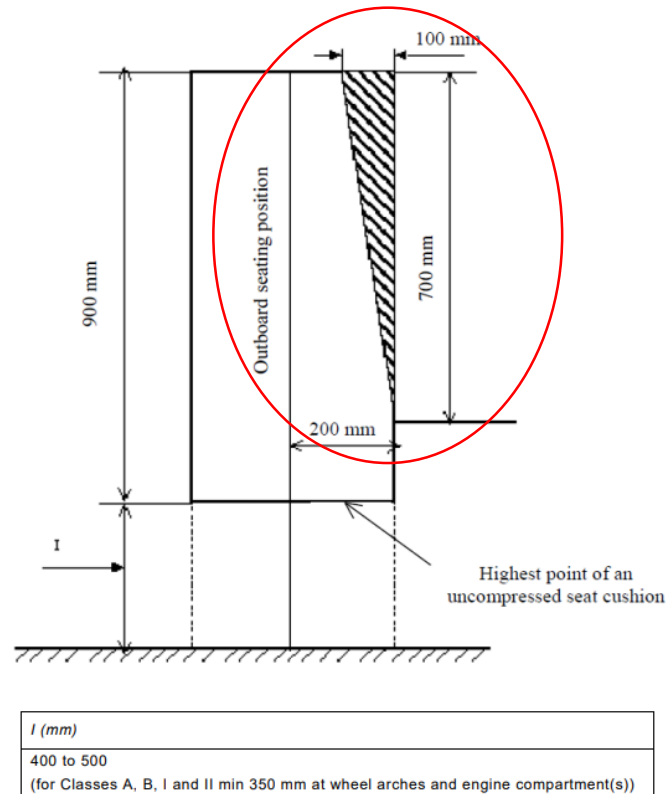
5. Check if ISO/B2 can be moved from outside the vehicle to the seating places
(see UN R 107, annex 3, para. 7.7.1/7.7.5)



Moving ISO/B2 from outside the vehicle to the seating places is possible but very challenging because of narrow gangways and entrance passages

Test vehicle: SETRA 531 DT, VIN: WKK 41001013127215

6. Check if ISO/R2 in the outboard seating position collides with window pillar cover or similar interior parts (see UN R 107, annex 3, para. 7.7.8.6.3.2 and annex 4, figure 15)



Collision of ISO/B2 with window pillar and glass-breaking-device on the upper deck of a class II/III-double-deck vehicle

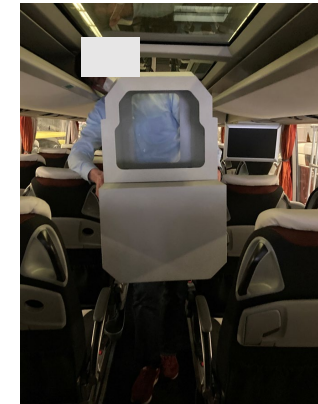
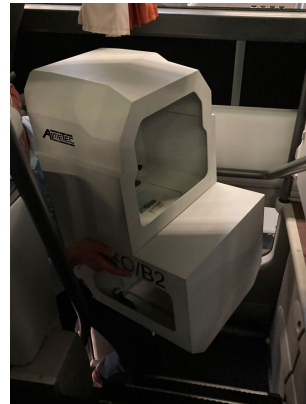
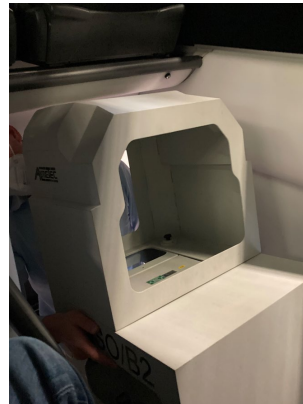
Test vehicle: SETRA 531 DT, VIN: WKK 41001013127215

7. Check if ISO/B2 can be moved from outside the vehicle to the seating places
(see UN R 107, annex 3, para. 7.7.1/7.7.5)

Lower deck



Upper deck



Moving ISO/B2 from outside the vehicle to the seating places is possible but very challenging because of narrow gangways and narrow stepwell

Test vehicle: SETRA 531 DT, VIN: WKK 41001013127215

8. Check if ISO/R2 can be moved from outside the vehicle to the seating places
(see UN R 107, annex 3, para. 7.7.1/7.7.5)

Lower deck



Upper deck



Moving ISO/R2 from outside the vehicle to the seating places is possible but very challenging because of narrow gangways and narrow stepwell