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Automotive Seating

Informal document **GRSP-49-33**  
(49th GRSP, 16 - 20 May 2011,  
agenda item 11)

ECE 17 – draft proposal

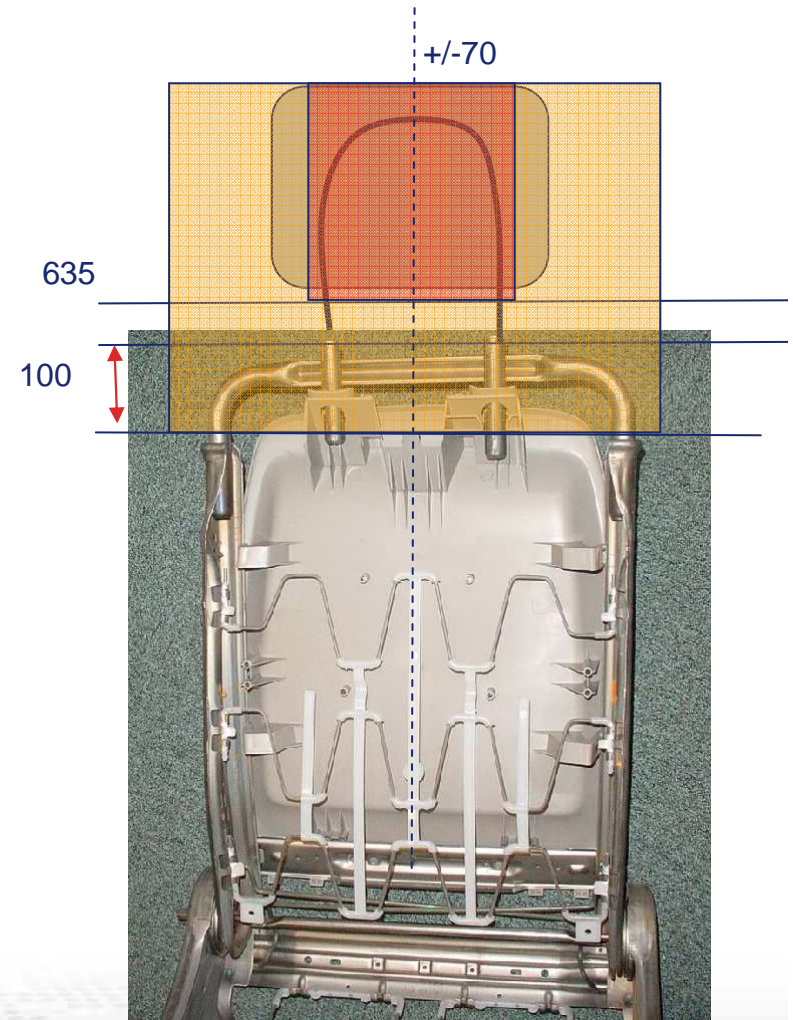
Ines Levallois

GRSP • May 2011



## Detachable head restraint

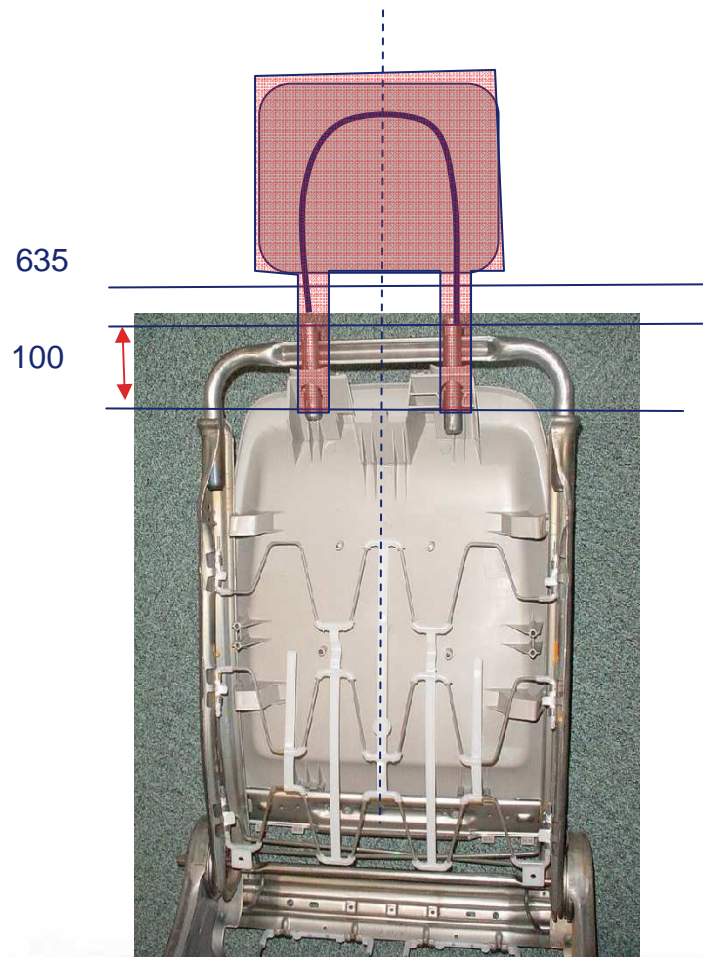
- Requirement :  
Head restraint parts situated in zone 1 (red) or 2 (orange) must meet radius requirements from the front



## Detachable head restraint

- Which head restraint parts are taken ?

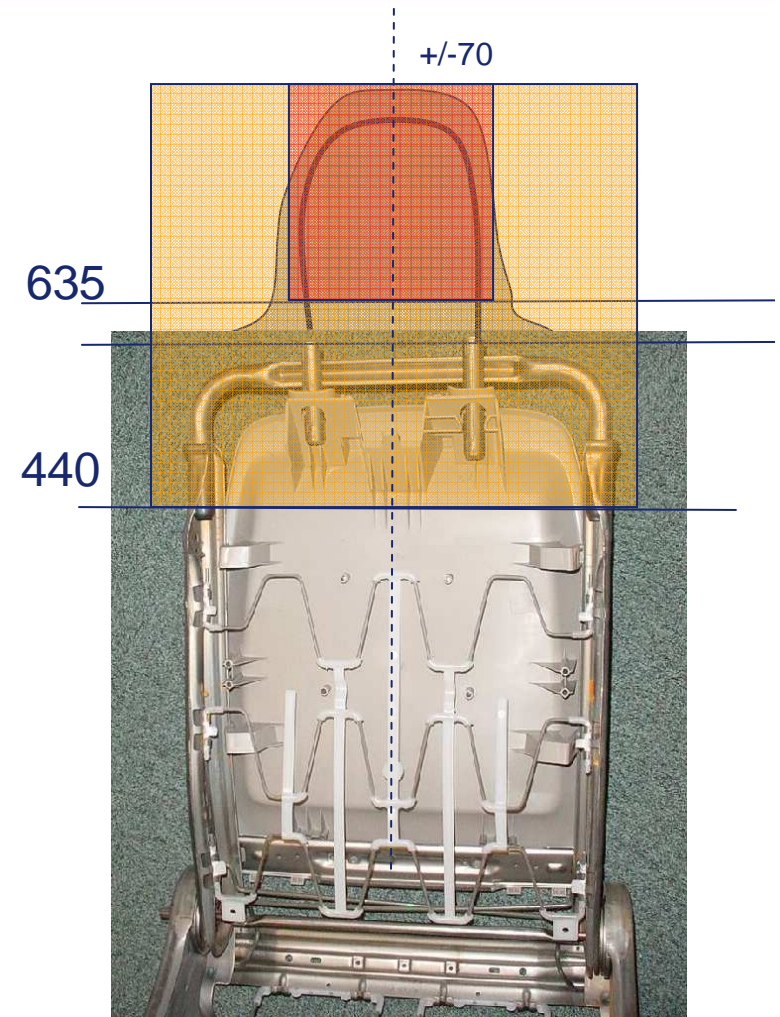
-> **Application :**  
**Only head restraint fixations and inserts are used to verify the radius from the front (parts over 50 Shore A)**



## Integrated head restraints

- Head restraint parts situated in zone 1 (red) or 2 (orange) must meet radius requirements from the front

-> **Problem : it is not clear which parts of the seat are part of the integral head restraint**

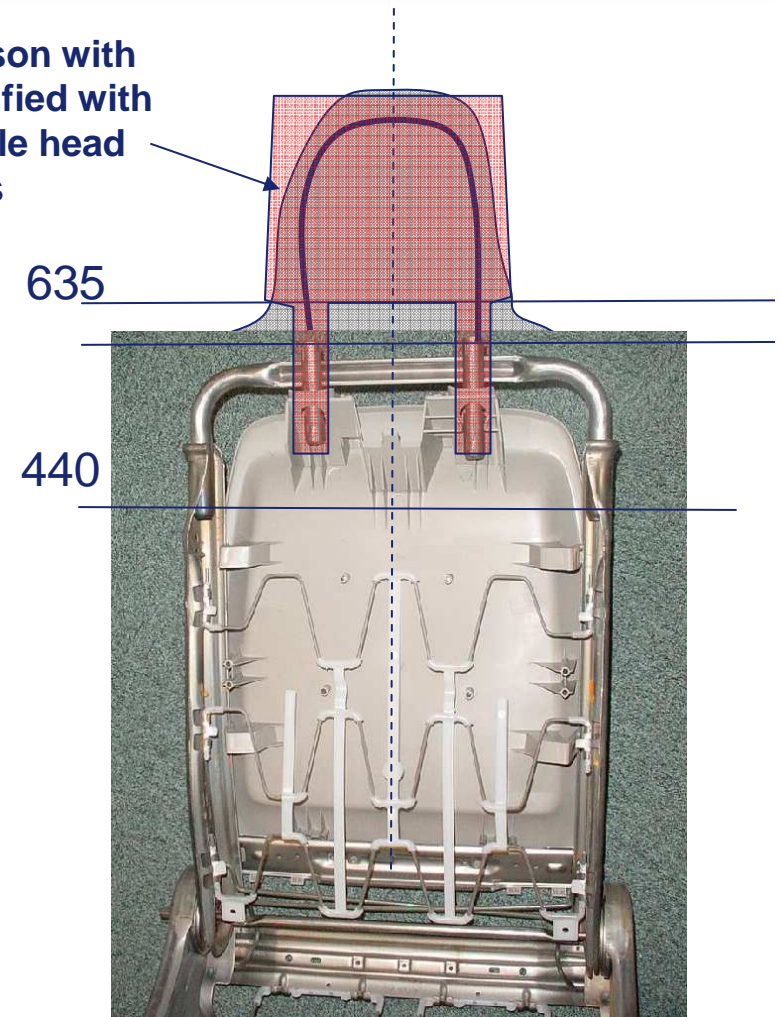




## Integrated head restraints

- **Problem : what is a part of the integral head restraint ?**
- **The seat structure parts did not change, only the foam volume was altered -> therefore the area where the radius are checked shall not differ significantly from seats with detachable head restraints**

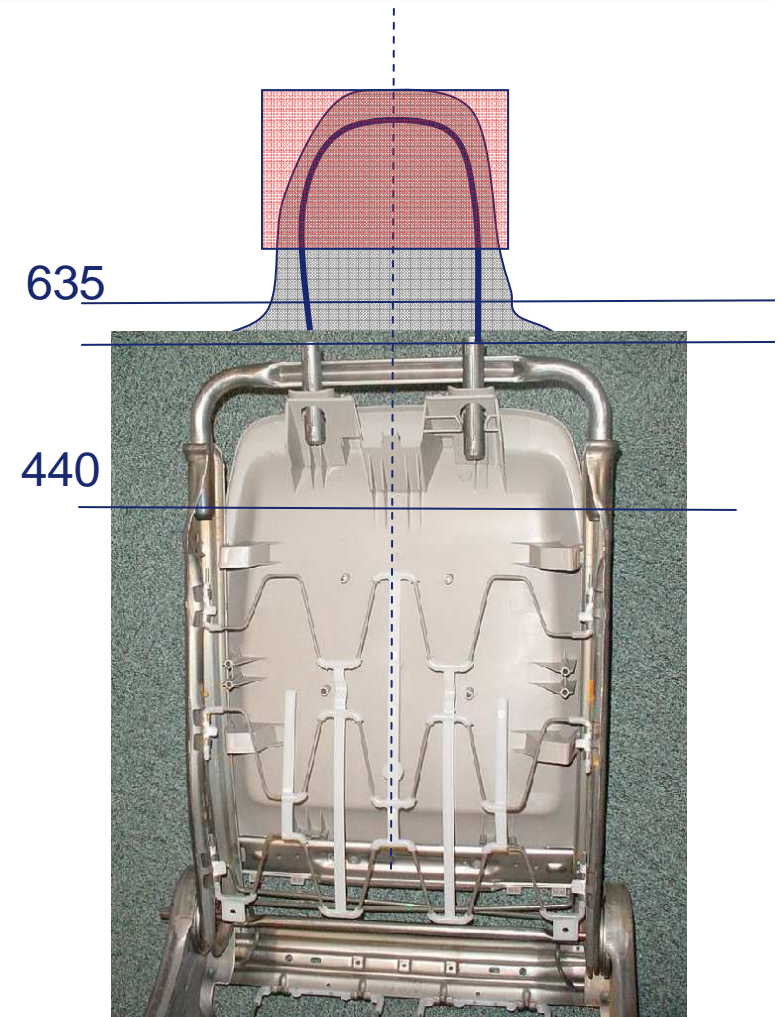
Comparison with parts verified with detachable head restraints



## Integrated head restraints

- **Problem** : what is a part of the integral head restraint ?
- **Alternative 1** : definition of GTR 7 : any seat trim over 700mm and within +/- 85mm

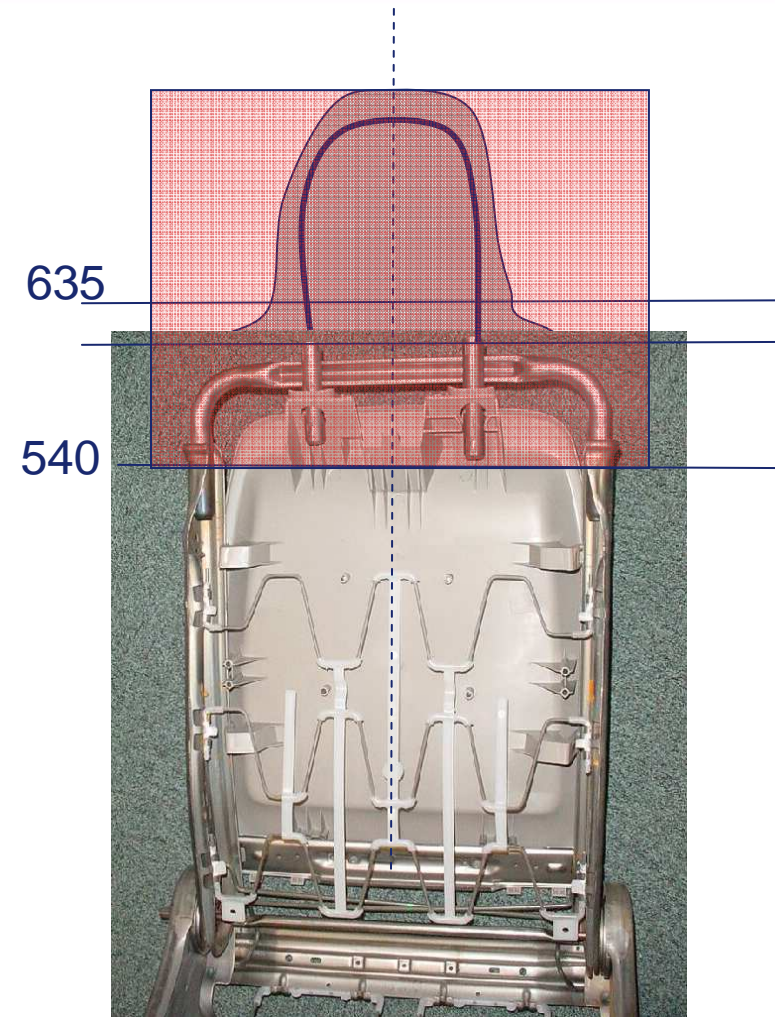
**this area is smaller than the area of detachable head restraints and therefore not appropriate**



## Integrated head restraints

- **Problem : what is a part of the integral head restraint ?**
- **Alternative 2 : any part over 540mm (mentioned for gap and luggage crash test application)**

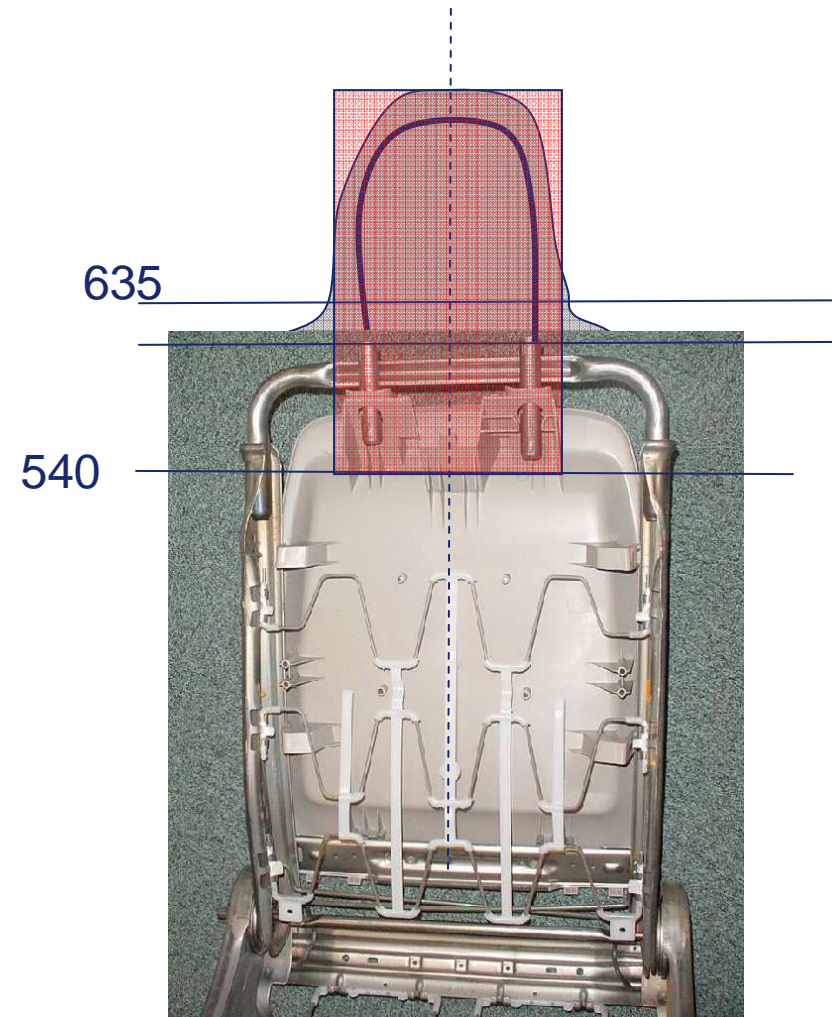
**this area would define that plastic covers and the whole width of the seat structure is a head restraint  
-> no need to have a bigger area than normal head restraints**





## Integrated head restraints

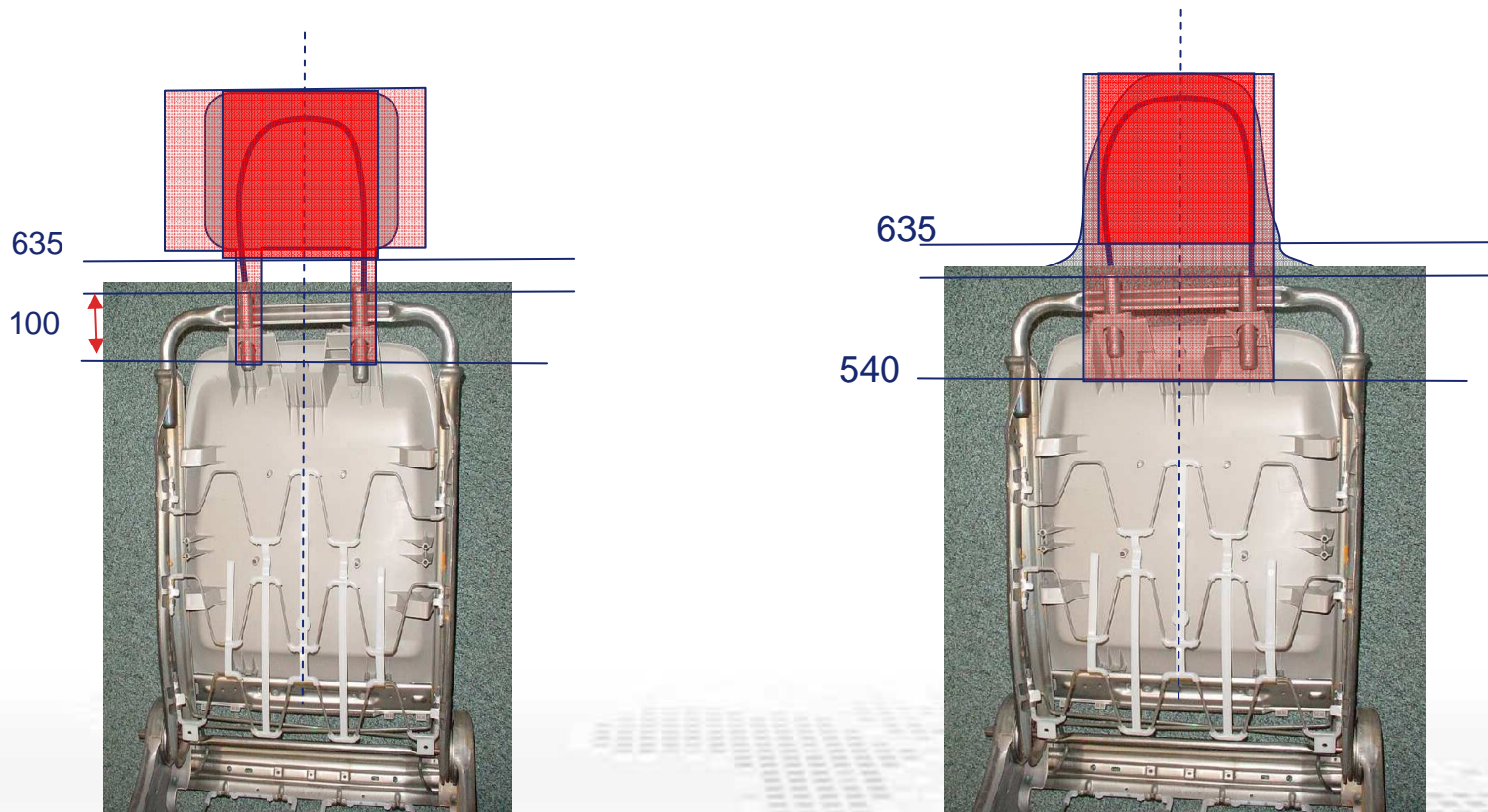
- **Problem : what is a part of the integral head restraint ?**
- **Alternative 3 : compromise of 1 and 2 :  
for integral head restraints the limit is a line at 540mm perpendicular to the torso line within +/- 85mm.**





## Conclusion

**Alternative 3 is the best compromise to define the area where radius apply from the front to integrated head restraints and which avoids to penalize such restraints**





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