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# Comment for new Backset Measurement Procedure on Head Restraints GTR

September '06

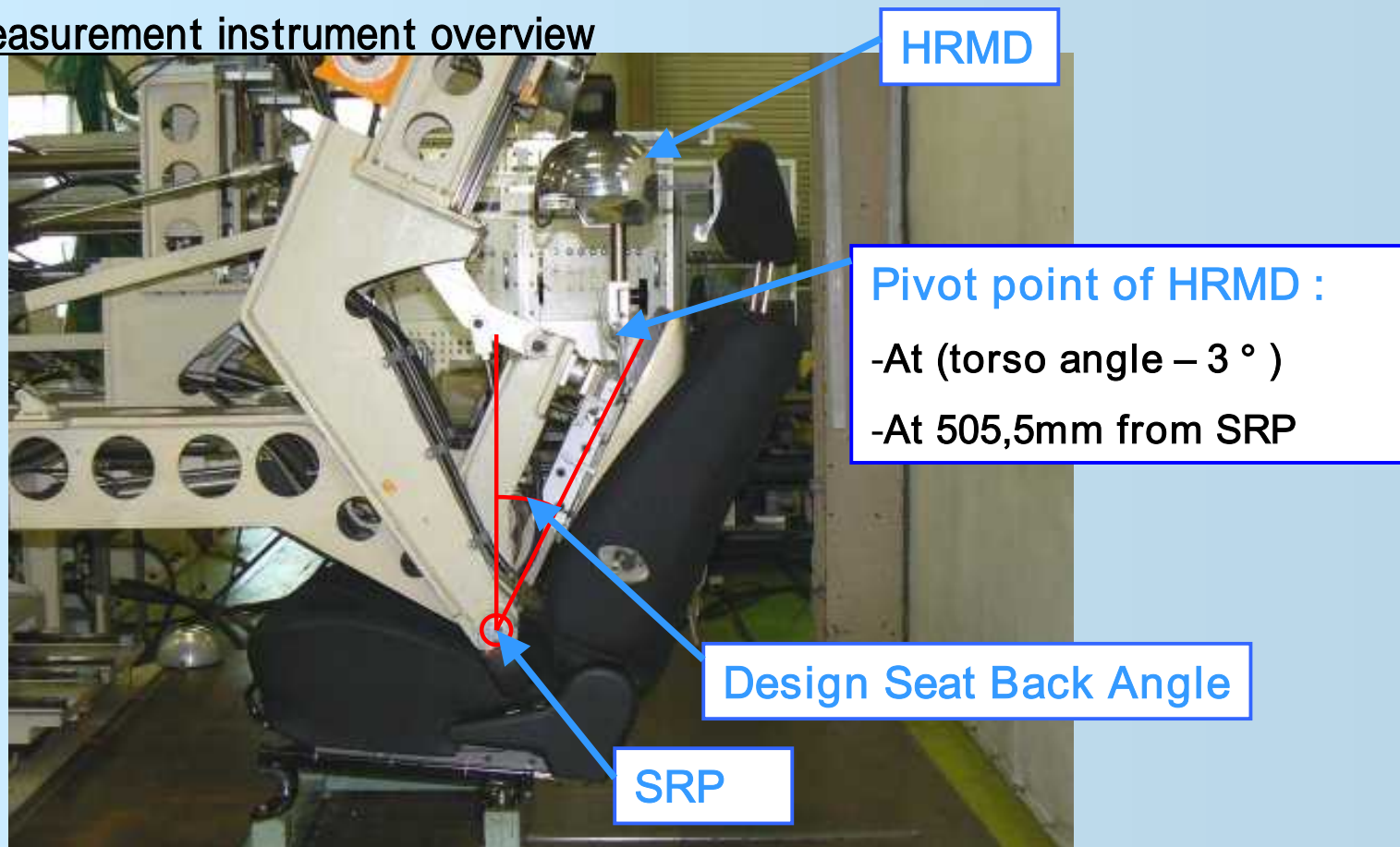
JAPAN MLIT



## Purpose

SRP employed for reduction in dispersion of backset measurement and measuring instrument for design seatback angle reference are created, to verify effect reducing dispersion.

### Measurement instrument overview



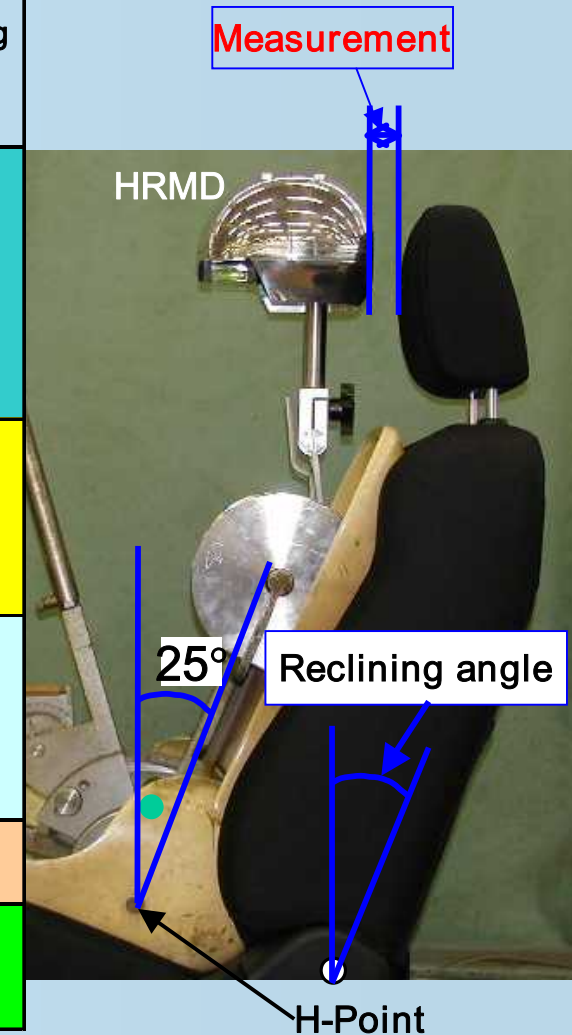


# Evaluate Condition

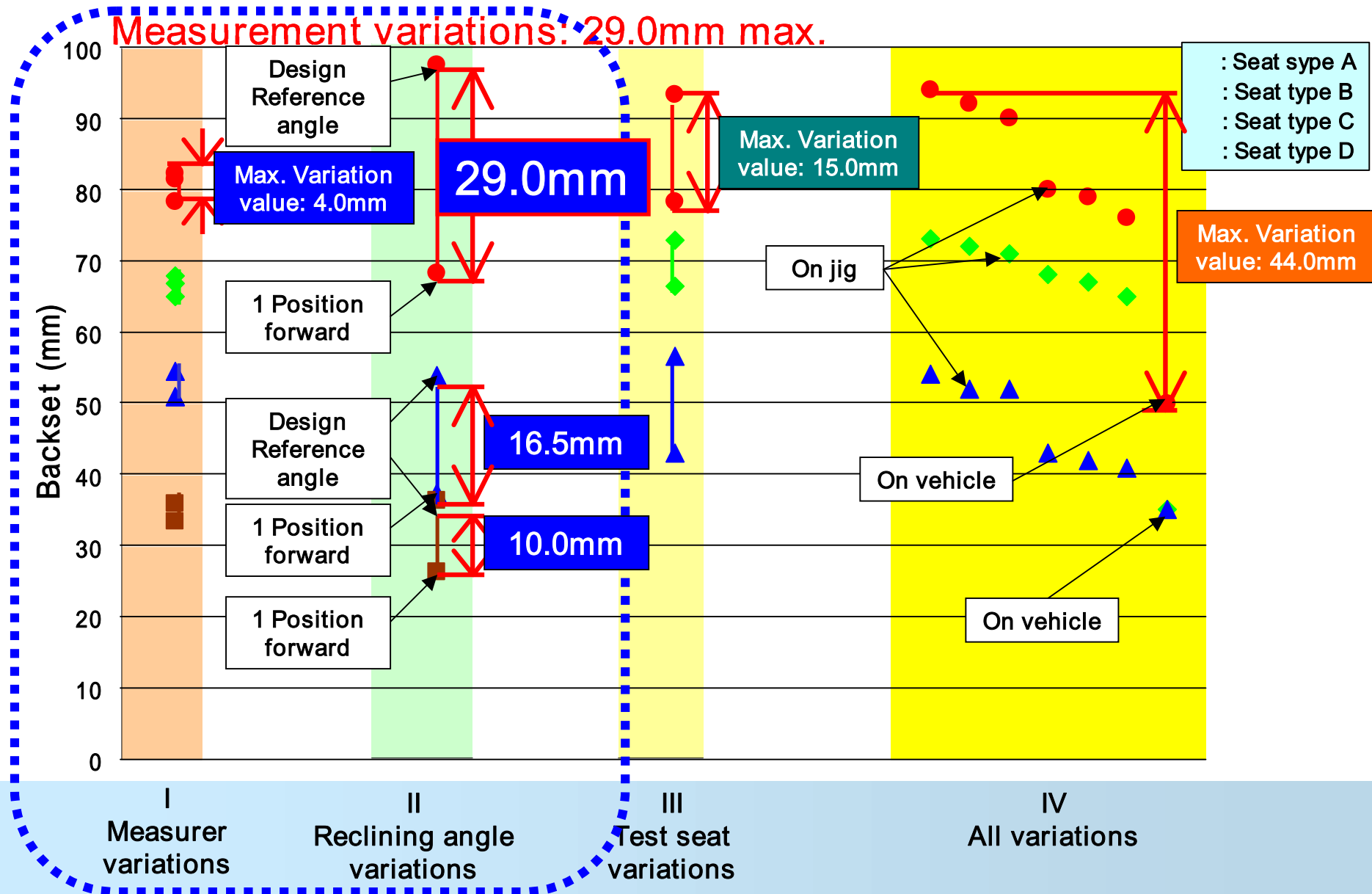
## (1) Previous Equipment

Cited from  
presentation material  
for 4th GTR Meeting

	Case	Seat		No. of measur-ers	No. of measure-ments	No. of measure ring device	Reclining angle	
		Type	No.					
Repeatability	I Measurer variations	A	1	3	3	1	Fixed	
		B	1	3	3	1		
		C	1	3	3	1		
		D	1	6	1 to 5	1		
Reproducibility	II Reclining angle variations	B	1	3	1	1	Not fixed	
		C	1	3	1	1		
		D	1	6	1 to 5	1		
	III Test seat variations	A	3	1	3	3	1	Fixed
		B	3	1	3	3	1	
		C	3	1	3	3	1	
	IV All variations	A	2	2	2	2	1	Not fixed
		C	2	2	2	2	1	
	V Measure ring Device	No tested						



# Measurement Result using Previous HRMD



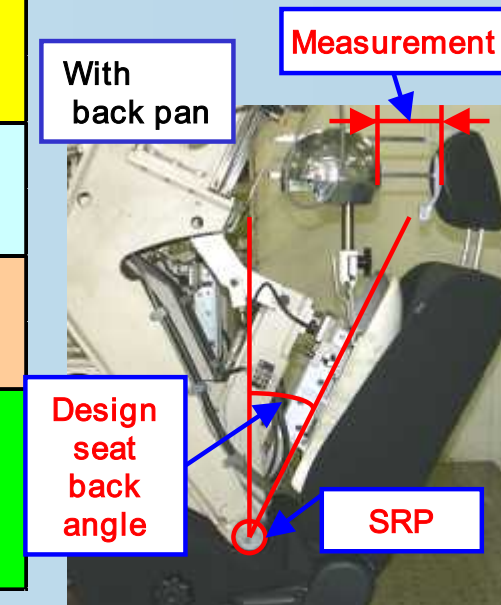
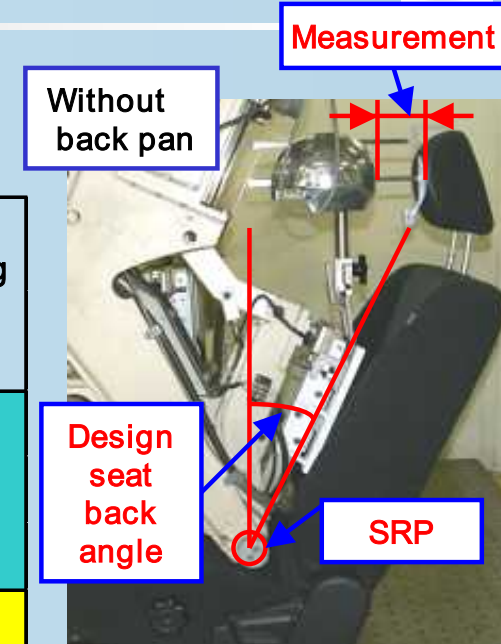
# Evaluate Condition

## (2) New Equipment

### Evaluate variation with and w/o back pan



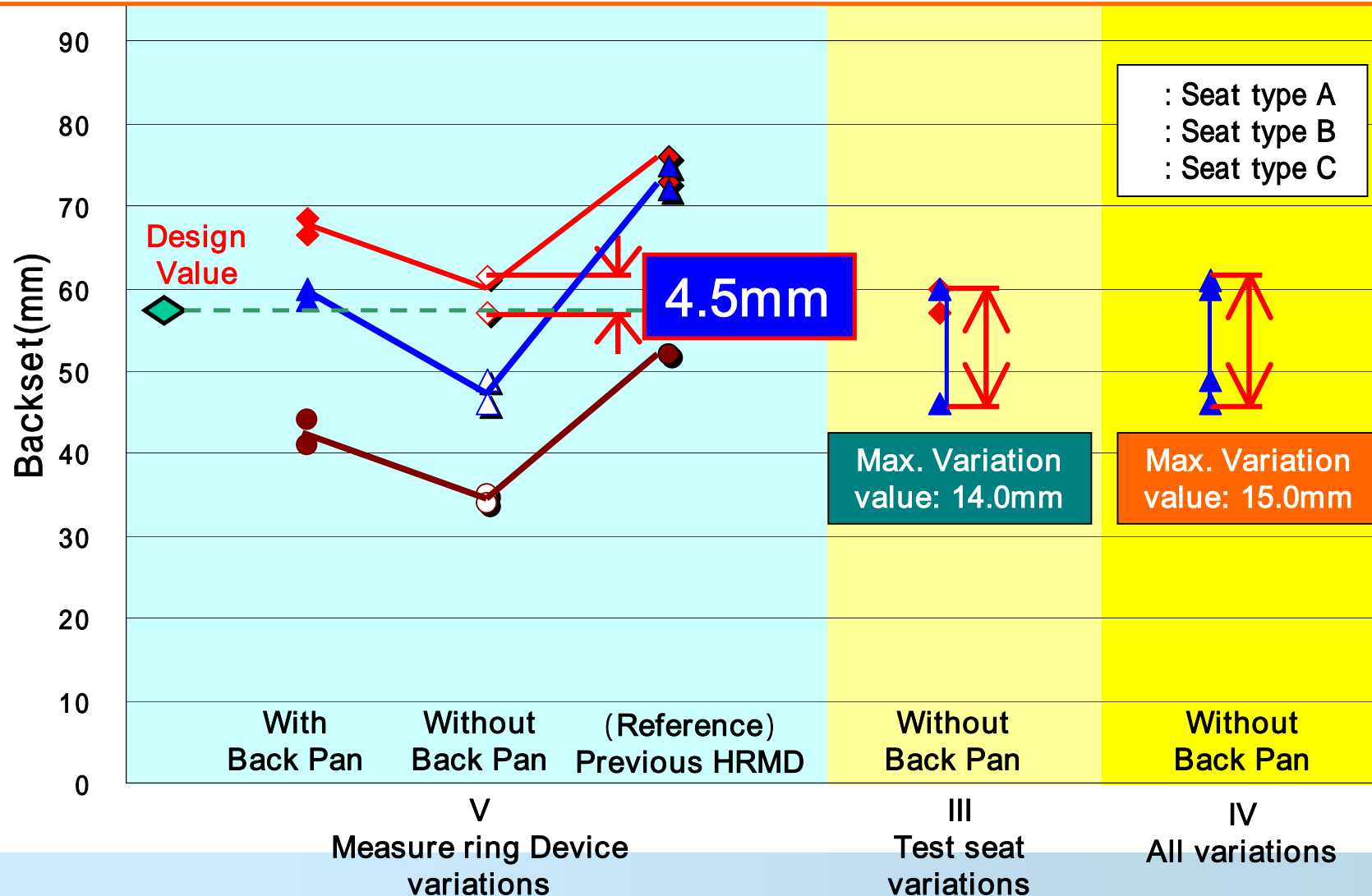
	Case	Seat		No. of measur-ers	No. of measure-ments	No. of measure ring device	Reclining angle
		Type	No.				
Repeatability	I Measurer variations	No Variation					
Reproducibility	II Reclining angle variations	No Variation					
	III Test seat variations	A	3	1	1	1	Fixed
		C	2	1	1	1	
	IV All variations	No Tested					
V Measuring device	A	1	1	1	1	3	Fixed
	B	1	1	1	1	3	
	C	1	1	1	1	2	



# Comparison of new and previous measurements < New measurement Result >



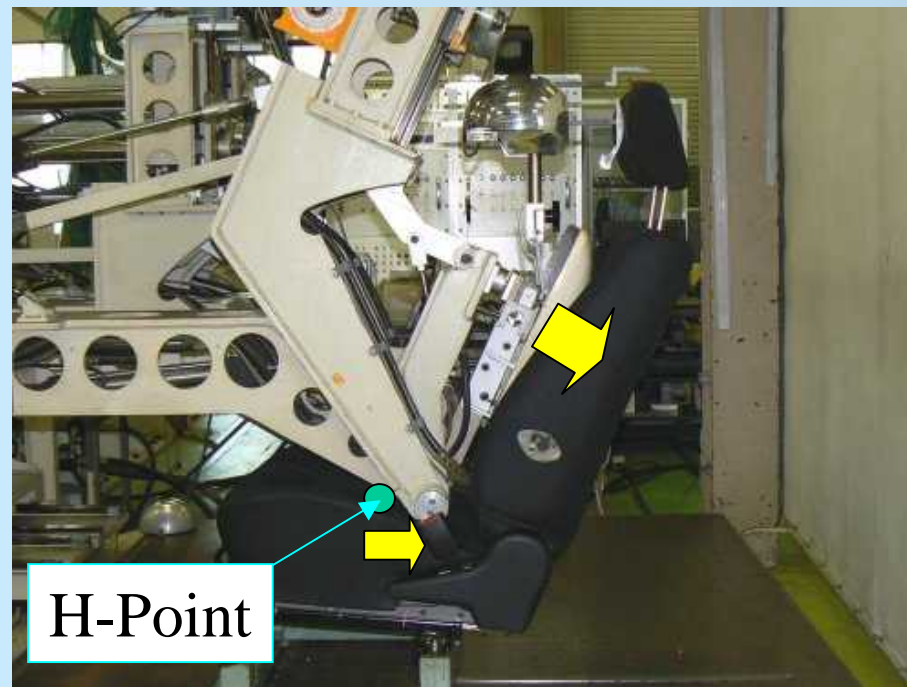
- Drastically reducing dispersion through new measuring method (4.5mm → 29mm)
- Smaller measurement from previous HRMD, to come close to values in drawing
- Total variation is also reduced (15mm → 44mm)





## Discussion

- ◆ Possible to drastically reduce dispersion through new measurement method based on SRP and design reference angle (4.5mm 29mm).
- ◆ When mounting back pan, overload is added due to correction of difference between H-point and SRP, so that backset tilts backward and backset value fluctuates: it should be referred to as “No Back Pan” closer to value in drawing.





# Seat Back Angle Set Procedure

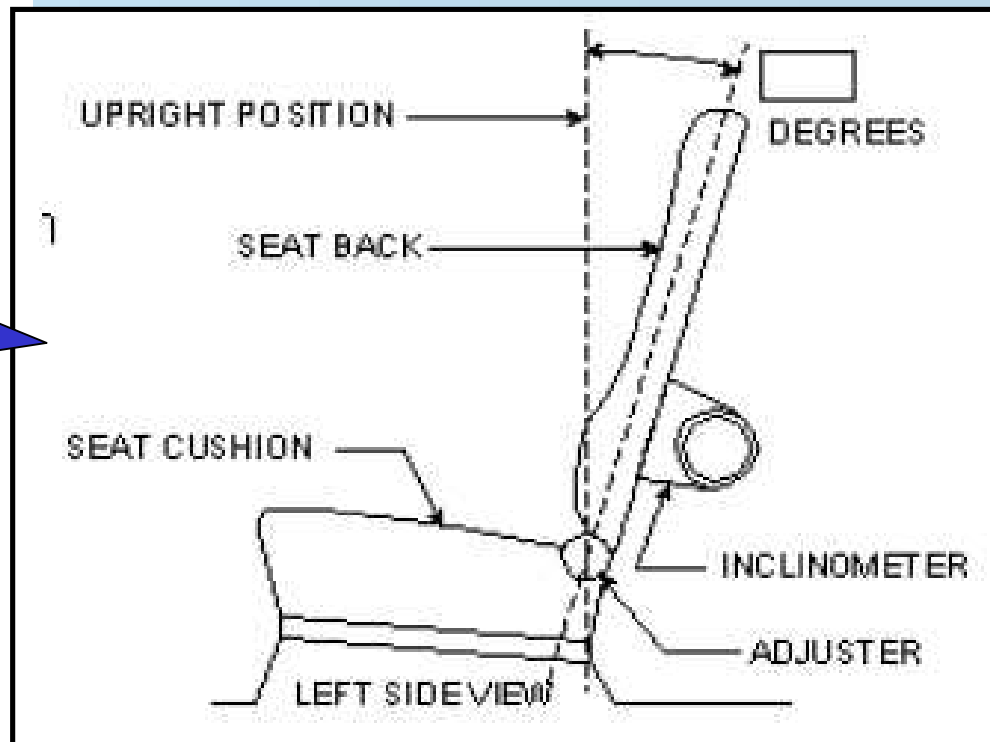
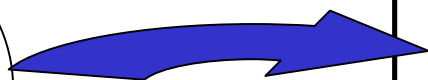
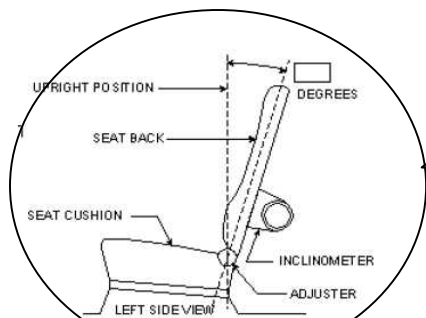
Same as current ECE R17 and FMVSS208, etc.

FORM 208/214/301

## TEST VEHICLE INFORMATION

Vehicle Model Year and Make: \_\_\_\_\_

Vehicle Model and Body Style: \_\_\_\_\_



### 1. NOMINAL DESIGN RIDING POSITION

For adjustable driver and passenger seat backs, describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent if applicable.

Seat back angle for driver's seat = \_\_\_\_ °.

Measurement Instructions:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Seat back angle for passenger's seat = \_\_\_\_ °.

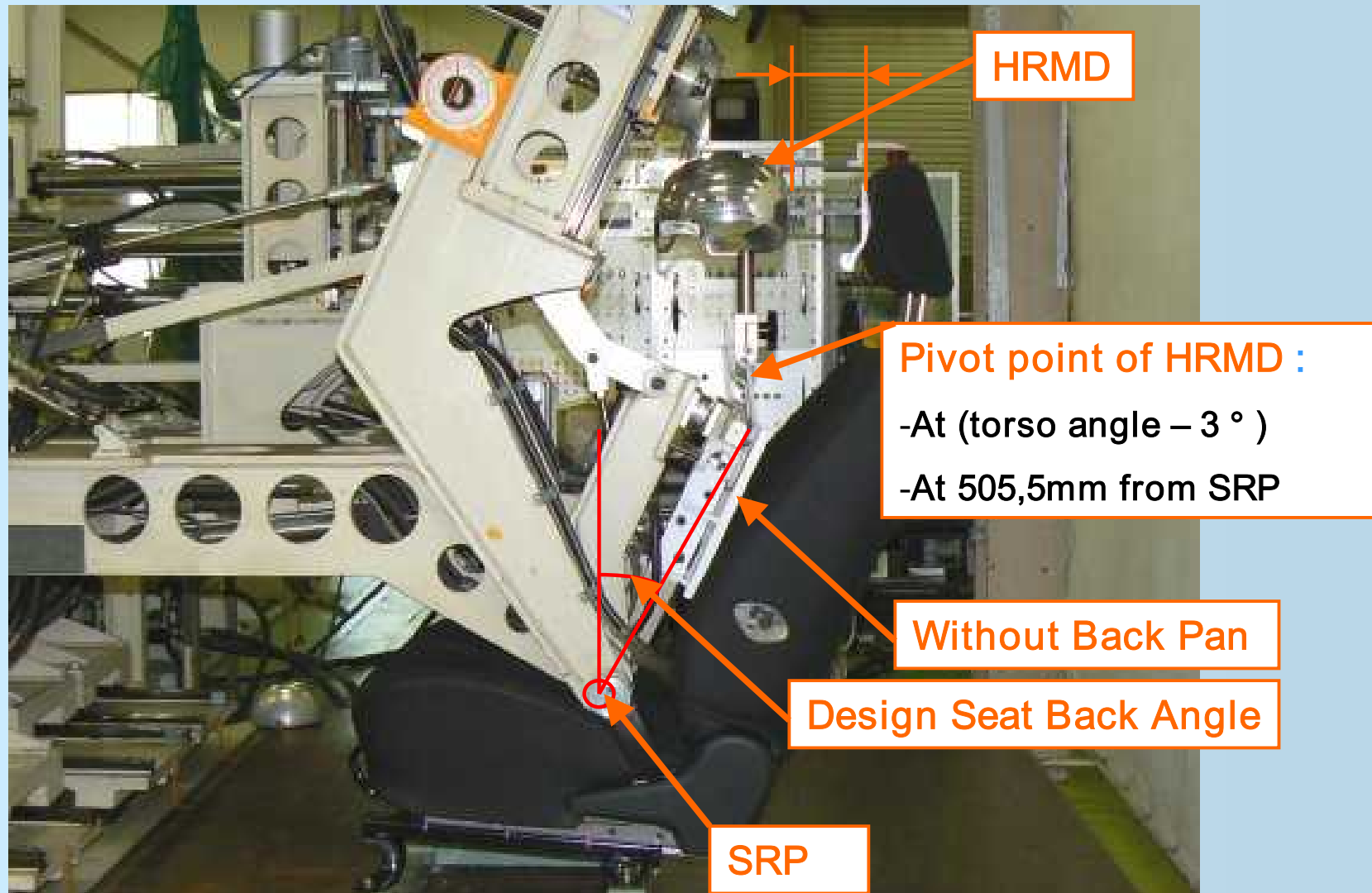
Measurement Instructions:





## Conclusion

### ◆ Propose test apparatus below





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END