



***JAPAN's Comments on
Head Restraint Height
Proposal from
the Netherlands***

GRSP INFORMAL WORKING GROUP ON HEAD RESTRAINTS

June '05

JAPAN MLIT

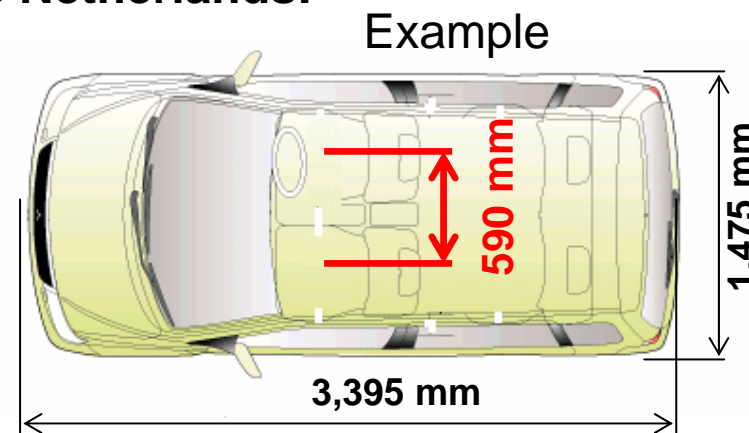
1. Purpose of This Study

To study how the vehicle performance will be affected in the following cases if the maximum head restraint height for front outboard seats is changed from 800 mm to 850 mm as proposed by the Netherlands:

- * Effects on “mini cars,” a unique vehicle category in Japan

What is a mini car?

- * Vehicle width: $\leq 1,480$ mm
- * Overall vehicle length: $\leq 3,400$ mm



- * Effects on Japanese small-stature females (JF5%ile)

	JF5%ile		AF5%ile
	Young female	Old female	
Height	151.1 cm	136.7 cm	153.3 cm
Seated height	82.4 cm	73.7 cm	81.3 cm

Source: *Human Body Dimensions Data for Designs* (1994) by Life Engineering and Industrial Technology Research Institute, Agency of Industrial Science and Technology

2. Study of Possible Effects on Mini Cars

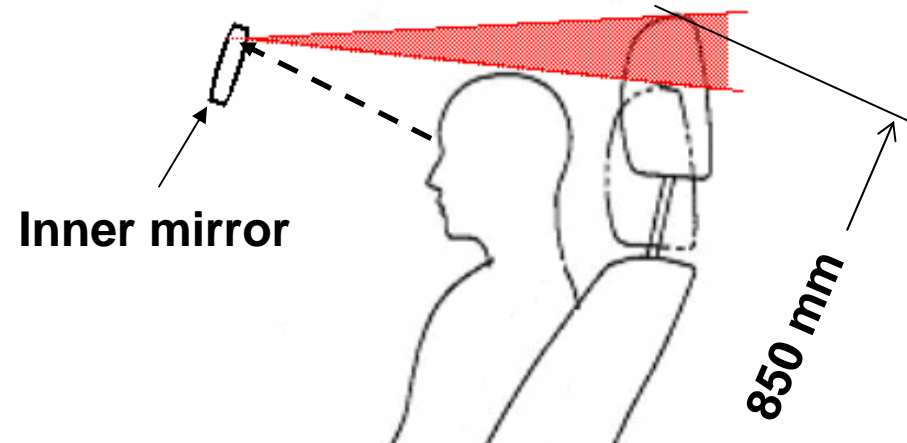
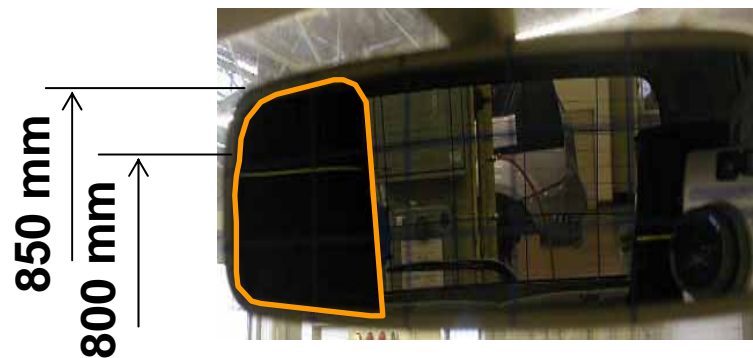
(1) On direct rearward and rearward oblique visibility

Affected by the head restraint width, but hardly affected by its increased height.

(2) On indirect rearward visibility

At the maximum head restraint height, visibility through the inner mirror greatly affected due to a limited vehicle width.

- Height-adjustable head restraints are likely to be required.



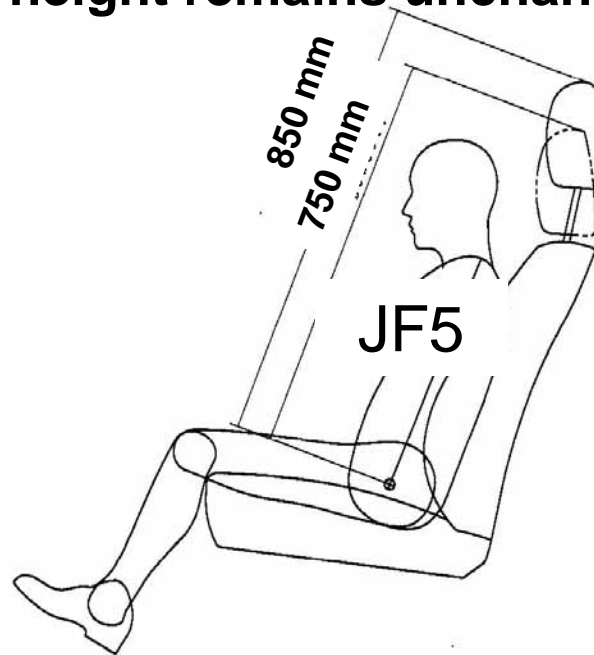
3. Study of Possible Effects on JF5%ile

(1) On direct rearward visibility

Not affected by the increased height of head restraints, provided the seat back height remains unchanged.

(2) On head restraining capability

Not affected by the increased height of head restraints, provided the minimum height remains unchanged.





3. Conclusion

The Netherlands' proposal to change the maximum height to 850 mm is feasible in Japan, provided that the minimum height requirement (750 mm or more) remains unchanged. However, there is a concern about impairment of indirect rearward visibility.



END