Comparison of ECE R17-08 (including amendment adopted at the 146th WP29(Nov., 08) and ECE R17-09(GRSP/2009/7 with correction proposed by GRSP-45-06).

Legend	Relevant Document
Proposals by EC are in **bold and black.**	**EC: GRSP/2008/11** **EC: GRSP-44-02**
Proposals by Japan are in **bold and red.**	***JAPAN: GRSP/2008/24*** ***EC/JAPAN: GRSP/2009/7***
Amendments proposed in GRSP-45-XX area in **bold and blue.**	**JAPAN: GRSP-45-XX**
Paragraphs without any change are shown in blank.	
Differences from gtr are in Italic and underlined	

Paragraphs moved to other part are in Blue

Differences from gtr are in *Italic and underlined*

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text** Paragraphs moved from other part are in Blue	**Paragraph**	**Text**	**(Relevant proposal)**
			Table of contents, list of annexes, amend to read:	
CONTENTS	REGULATION	CONTENTS	REGULATION	Not changed
	1. Scope			
	2. Definitions			
	3. Application for approval			
	4. Approval			
	5. Requirements			
	6. Tests			
	7. Conformity of production			
	8. Penalties for non-conformity of production			
	9. Modifications of the vehicle type and extension of approval with respect to the seats, their anchorages and/or their head restraints			
	10. Production definitely discontinued			
	11. Instruction for use			
	12. Names and addresses of technical services responsible for conducting approval tests			
	and of administrative departments			
	13. Transitional provisions			
	ANNEXES		ANNEXES	
	Annex 4 - Determination of the height and width of head restraints		**"Annex 1 - Minimum height measurement test procedure**	Added to align with gtr. (**EC: GRSP/2008/11**)
			Annex 2 - Minimum width measurement test procedure	Added to align with gtr. (**EC: GRSP/2008/11**)
	Annex 8 - Determination of dimension "a" of head restraint gaps		**Annex 3 - Gap measurement procedures**	Added to align with gtr. (**EC: GRSP/2008/11**)
			Annex 4 - Backset measurement procedure	Added to align with gtr. (**EC: GRSP/2008/11**)

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
			Annex 5 - Head restraint measuring device (HRMD)	Added to align with gtr. (**EC: GRSP/2008/11**)
	Annex 5 - Details of lines and measurements taken during tests		**Annex 6 - Displacement, backset retention and strength test procedure**	Added to align with gtr. (**EC: GRSP/2008/11**)
			Annex 7 - Energy absorption test procedure *for head restraint*	Added to align with gtr. (**EC: GRSP/2008/11**)
			Annex 8 - Height retention test procedure	Added to align with gtr. (**EC: GRSP/2008/11**)
			Annex 9 - Dynamic performance test procedure	Added to align with gtr. (**EC: GRSP/2008/11**)
			Annex 10 - Non-use position test procedure	Added to align with gtr. (**EC: GRSP/2008/11**)
	Annex 1 - Communication concerning the approval or refusal or extension or withdrawal of approval or production definitely discontinued of a vehicle type with regard to the strength of the seats and their anchorages, in the case either of seats fitted or capable of being fitted with head restraints or of seats not capable of being fitted with such devices and the characteristics of head restraints pursuant to Regulation No. 17		**Annex 11** - Communication concerning the approval or refusal or extension….	Annex number revised. (**EC: GRSP/2008/11**)
	Annex 2 - Arrangements of approval marks		**Annex 12** - Arrangements of approval marks	Annex number revised. (**EC: GRSP/2008/11**)
	Annex 3- Procedure for determining the "H" point and the actual torso angle for seating positions in motor vehicles		**Annex 13** - Procedure for *determining* the "H" point and….	Annex number revised. (**EC: GRSP/2008/11**)
	Annex 6 - Test procedure for checking energy dissipation		**Annex 14 - Test procedure for checking energy dissipation of seat back**	Revised to align with gtr. (**EC: GRSP/2008/11**)
	Annex 7- Method for testing the strength of seat anchorages and their adjustment, locking and displacement systems		**Annex 15** - Method for testing the strength of seat anchorages and their adjustment, locking and displacement systems	Annex number revised. (**EC: GRSP/2008/11**)
	Annex 9 - Test procedure for devices intended to protect the occupants against displacement of luggage		**Annex 16** - Test procedure for devices intended to protect the occupants against displacement of luggage"	Annex number revised. (**EC: GRSP/2008/11**)
TEXT		TEXT		
1	SCOPE	1	SCOPE	Not changed
	This Regulation applies to:			
(a)	Vehicles of categories M1 and N 1/ with regard to the strength of seats and their anchorages and with regard to their head restraints;	(a)		
	1/As defined in Annex 7 to the Consolidated Resolution on the Construction of vehicles (R.E.3), document TRANS/WP.29/78/Rev.1/Amend.2, as last amended by Amendment 4.			
(b)	Vehicles of categories M2 and M3 1/ with regard to seats not covered by Regulation No. 80, in respect of the strength of seats and their anchorages, and in respect of their head restraints;	(b)		
	1/As defined in Annex 7 to the Consolidated Resolution on the Construction of vehicles (R.E.3), document TRANS/WP.29/78/Rev.1/Amend.2, as last amended by Amendment 4.			

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Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
(c)	Vehicles of category M1 with regard to the design of the rear parts of seat backs and the design of devices intended to protect the occupants from the danger resulting from the displacement of luggage in a frontal impact.	(c)		
	It does not apply to vehicles with regard to ~~folding~~, side-facing or rearward-facing seats, or to any head restraint fitted to these seats.			
			Paragraphs 2. to 2.37.5., amend to read:	
2	DEFINITIONS	"2.	DEFINITIONS	
	For the purposes of this Regulation		For the purposes of this Regulation	
Annex 3-2.6.	"Actual torso angle" means the angle measured between a vertical line through the "H" point and the torso line using the back angle quadrant on the 3-D H machine. The actual torso angle corresponds theoretically to the design torso angle (for tolerances see paragraph 3.2.2. below);	**2.1.**	**"Actual torso angle" means the angle measured between a vertical line through the H-point and the torso line using the back angle quadrant on the H-point machine. The actual torso angle corresponds theoretically to the design torso angle.**	Moved from Annex 3(former). (**EC: GRSP/2008/11**)
		2.2.	**"Adjustable head restraint" means a head restraint that is capable of movement independent of the seatback between at least two**	Added to align with gtr. (**EC: GRSP/2008/11**)
2.6.	"Adjustment system" means the device by which the seat or its parts can be adjusted to a position suited to the morphology of the seated occupant. This device may, in particular, permit:	**2.3.**	"Adjustment system" means the device by which the seat or its parts can be adjusted to a position suited to the morphology of the seated occupant. This device may, in particular, permit:	Renumbered. (**EC: GRSP/2008/11**)
2.6.1.	longitudinal displacement;	**(a)**	longitudinal displacement;	Renumbered. (**EC: GRSP/2008/11**)
2.6.2.	vertical displacement;	**(b)**	vertical displacement;	Renumbered. (**EC: GRSP/2008/11**)
2.6.3.	angular displacement;	**(c)**	angular displacement.	Renumbered. (**EC: GRSP/2008/11**)
2.5.	"Anchorage" means the system by which the seat assembly is secured to the vehicle structure, including the affected parts of the vehicle structure;	**2.4.**	**"Anchorage" means the system by which the seat assembly is secured to the vehicle structure, including the affected parts of the vehicle structure.**	Renumbered. (**EC: GRSP/2008/11**)
2.1.	"Approval of a vehicle" means the approval of a vehicle type with regard to the strength of the seats and their anchorages, the design of the rear parts of the seat-backs and the characteristics of their head restraints;	**2.5.**	**"Approval of a vehicle" means the approval of a vehicle type with regard to the strength of the seats and their anchorages, the design of the rear parts of the seat-backs and the characteristics of their head restraints.**	Renumbered. (**EC: GRSP/2008/11**)
		2.6.	**"Backlight" means rearward-facing window glazing located at the rear of the roof panel.**	Added to align with gtr. (**EC: GRSP/2008/11**)
		2.7.	**"Backset" means the *minimum* horizontal distance between the front surface of the head restraint and the *rear surface o* f the head restraint measurement device.**	Added to align with gtr. (**EC: GRSP/2008/11**) Expression is slightly different from gtr.
		2.8.	**"Backset reference point" means the reference point from which the measurement of backset is made.**	Added. (**EC: GRSP/2008/11**)gtr does not define this term.
2.4.	"Bench seat" means a structure complete with trim, intended to seat more than one adult person;	**2.9.**	**"Bench seat" means a structure complete with trim, intended to seat more than one adult person.**	Renumbered. (**EC: GRSP/2008/11**)

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
Annex 3-2.8.	"Centre plane of occupant" (C/LO) means the median plane of the 3-D H machine positioned in each designated seating position; it is represented by the co-ordinate of the "H" point on the "Y" axis. For individual seats, the centre plane of the seat coincides with the centre plane of the occupant. For other seats, the centre plane of the occupant is specified by the manufacturer;	**2.10.**	**"Centre plane of occupant" (C/LO) means the median plane of the *H-point* machine positioned in each designated seating position; it is represented by the co-ordinate of the H-point on the Y-axis. For individual seats, the centre plane of the seat coincides with the centre plane of the occupant. For other seats, the centre plane of the occupant is specified by the manufacturer.**	Moved from Annex 3(former). (**EC: GRSP/2008/11**)gtr uses the term "3-D H machine".
Annex 3-2.7.	"Design torso angle" means the angle measured between a vertical line through the "R" point and the torso line in a position which corresponds to the design position of the seat-back established by the vehicle manufacturer;	**2.11.**	**"Design torso angle" means the angle measured between a vertical line through the R-point and the torso line in a position which corresponds to the design position of the seat-back established by the vehicle manufacturer.**	Moved from Annex 3(former). (**EC: GRSP/2008/11**)
2.12.2.	"Detachable head restraint" means a head restraint consisting of a component separable from the seat designed for insertion and positive retention in the seat-back structure;	**2.12.**	**"Detachable head restraint" means a head restraint consisting of a component separable from the seat, designed for insertion and positive retention in the seat-back structure.**	Renumbered. (**EC: GRSP/2008/11**)
2.7.	"Displacement system" means a device by which the seat or one of its parts can be displaced and/or rotated, without a fixed intermediate position, to permit easy access of occupants to the space behind the seat concerned;	**2.13.**	"Displacement system" means a device by which the seat or one of its parts can be displaced and/or rotated, without a fixed intermediate position, to permit easy access of occupants to the space behind the seat concerned.	Renumbered. (**EC: GRSP/2008/11**)
Annex 3-2.10.	"Fiducial marks" are physical points (holes, surfaces, marks or indentations) on the vehicle body as defined by the manufacturer;	**2.14.**	**"Fiducial marks" are physical points (holes, surfaces, marks or indentations) on the vehicle body as defined by the manufacturer.**	Moved from Annex 3(former). (**EC: GRSP/2008/11**)
2.9.	"Folding seat" means an auxiliary seat intended for occasional use and normally folded;	**2.15.**	"Folding seat" means an auxiliary seat intended for occasional use and normally folded.	Renumbered. (**EC: GRSP/2008/11**)
		2.16.	**"Front contact surface" of a head restraint means the front surface area of the head restraint which is intended to catch the head of the**	Added. (**EC: GRSP/2008/11**)gtr does not define this term.
Annex 3-2.3.	"'H' point" means the pivot centre of the torso and thigh of the 3-D H machine installed in the vehicle seat in accordance with paragraph 4. below. The "H" point is located in the centre of the centreline of the device which is between the "H" point sight buttons on either side of the 3-D H machine. The "H" point corresponds theoretically to the "R" point (for tolerances see paragraph 3.2.2. below). Once determined in accordance with the procedure described in paragraph 4., the "H" point is considered fixed in relation to the seat-cushion structure and to move with it	**2.17.**	**"H-point" means the pivot centre of the torso and thigh of the H-point machine when installed in *the* vehicle seat. Once determined the H-point is considered fixed in relation to the seat-cushion structure and to move with it when the seat is adjusted.**	Moved from Annex 3(former) and revised to align with gtr. (**EC: GRSP/2008/11**)
2.12.	"Head restraint" means a device whose purpose is to limit the rearward displacement of an adult occupant's head in relation to his torso in order to reduce the danger of injury to the cervical vertebrae in the event of an accident;	**2.18.**	"Head Restraint" means, **at any designated seating position, a device that limits rearward displacement of a seated occupant's head relative to the occupant's torso that has a height equal to or greater than 700 mm at any point between two vertical longitudinal planes**	Renumbered and revised to align with gtr. (**EC: GRSP/2008/11**)Expression is different from gtr
		2.19.	**"Head Restraint Height" means the distance from the R-point, measured parallel to the torso *reference* line to the top of the head restraint on a plane normal to the torso *reference* line.**	Renumbered and revised to align with gtr. (**EC: GRSP/2008/11**). Expression is different from gtr.
		2.20.	**"Head Restraint Measurement Device" (HRMD) means a separate head shaped device used with the H-point machine, *fitted* with *a***	Added to align with gtr. (**EC: GRSP/2008/11**).
2.12.1.	"Integrated head restraint" means a head restraint formed by the upper part of the seat-back. Head restraints meeting the definitions of paragraphs 2.12.2. or 2.12.3. below but which can only be detached from the seat or the vehicle structure by the use of tools or by partial or complete removal of the seat covering, meet the	**2.21.**	"Integrated Head Restraint" means a head restraint formed by the upper part of the seat-back. Head restraints meeting the definitions of paragraphs **2.12. or 2.30**., but which can only be detached from the seat or the vehicle structure by the use of tools or by partial or complete removal of the seat covering, meet the present definition.	Renumbered and references revised. (**EC: GRSP/2008/11**).

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Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		2.22.	**"Intended for occupant use" means, when used in reference to the adjustment of a seat and head restraint, adjustment positions used**	Added to align with gtr. (**EC: GRSP/2008/11**).
2.8.	"Locking system" means a device ensuring that the seat and its parts are maintained in the position of use;	**2.23.**	**"Locking system" means a device ensuring that the seat and its parts are maintained in the position of use.**	Renumbered (**EC: GRSP/2008/11**).
2.11.	"Longitudinal plane" means a plane parallel to the median longitudinal plane of the vehicle;	**2.24.**	**"Longitudinal plane" means a plane parallel to the median longitudinal plane of the vehicle.**	Renumbered (**EC: GRSP/2008/11**).
2.15.	"Partitioning system" means parts or devices which, in addition to the seat-backs, are intended to protect the occupants from displaced luggage; in particular, a partitioning system may be constituted by netting or wire mesh located above the level of the seat-backs in their upright or folded down position. Head restraints fitted as standard equipment for vehicles equipped with such parts or devices shall be considered as part of the partitioning system. However, a seat equipped with a head restraint shall not be considered as being on its own a partitioning system.	**2.25.**	"Partitioning system" means parts or devices which, in addition to the seat-backs, are intended to protect the occupants from displaced luggage; in particular, a partitioning system may be constituted by netting or wire mesh located above the level of the seat-backs in their upright or folded down position. Head restraints fitted as standard equipment for vehicles equipped with such parts or devices shall be considered as part of the partitioning system. However, a seat equipped with a head restraint shall not be considered as being on its own a partitioning system.	Renumbered (**EC: GRSP/2008/11**).
2.13.	"R point" means the seating reference point as defined in annex 3 to this Regulation;		Deleted	
Annex 3-2.4.	"'R' point" or "seating reference point" means a design point defined by the vehicle manufacturer for each seating position and established with respect to the three-dimensional reference system;	**2.26.**	"R-point" means **a design point defined by the vehicle manufacturer for each designated seating position and established with respect to the three-dimensional reference system. The R-point:**	Moved from Annex 3(former) and revised to align with gtr. (**EC: GRSP/2008/11**)
		2.26.1.	**establishes the rearmost normal design driving or riding position of each designated seating position in a vehicle;**	Added to align with gtr. (**EC: GRSP/2008/11**)
		2.26.2.	**has coordinates established relative to the designed vehicle structure;**	Added to align with gtr. (**EC: GRSP/2008/11**)
		2.26.3.	**simulates the position of the centre pivot of the human torso and thigh.**	Added to align with gtr. (**EC: GRSP/2008/11**)
Annex 3-2.1.	"Reference data" means one or several of the following characteristics of a seating position:	**2.27.**	**"Reference data" means one or several of the following characteristics of a seating position:**	Moved from Annex 3 (former). (**EC: GRSP/2008/11**)
Annex 3-2.1.1.	the "H" point and the "R" point and their relationship,	**2.27.1.**	**the H-point and the R-point and their relationship;**	Moved from Annex 3 (former). (**EC: GRSP/2008/11**)
Annex 3-2.1.2.	the actual torso angle and the design torso angle and their relationship.	**2.27.2.**	**the actual torso angle and the design torso angle and their relationship.**	Moved from Annex 3 (former). (**EC: GRSP/2008/11**)
2.14.	"Reference line" means the line on the manikin reproduced in annex 3, appendix 1, figure 1, to this Regulation.	**2.28.**	"Reference line" means the line **'r' on the manikin reproduced in Annex 6, Figure 6-1 to this Regulation.**	Renumbered and revised. (**EC: GRSP/2008/11**)gtr does not define this term.
2.3.	"Seat" means a structure which may or may not be integral with the vehicle structure complete with trim, intended to seat one adult person. The term covers both an individual seat or part of a bench seat intended to seat one person. Depending on its orientation, a seat is defined as follows:	**2.29.**	"Seat" means a structure which may or may not be integral with the vehicle structure complete with trim, intended to seat one adult person. The term covers both an individual seat or part of a bench seat intended to seat one person. **Depending on its orientation, a seat is defined as follows:**	Renumbered and reflected the 08 series amendment . (***EC/JAPAN: GRSP/2009/7***)
2.3.1.	"Forward-facing seat" means a seat which can be used whilst the vehicle is in motion and which faces towards the front of the vehicle in such a manner that the vertical plane of symmetry of the seat forms an angle of less than + 10 degrees or - 10 degrees with the vertical plane of symmetry of the vehicle;	**2.29.1.**	"Forward-facing seat" means a seat which can be used whilst the vehicle is in motion and which faces towards the front of the vehicle in such a manner that the vertical plane of symmetry of the seat forms an angle of less than + 10 degrees or - 10 degrees with the vertical plane of symmetry of the vehicle;	Renumbered (***EC/JAPAN: GRSP/2009/7***)

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Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
2.3.2.	"Rearward-facing seat" means a seat which can be used whilst the vehicle is in motion and which faces towards the rear of the vehicle in such a manner that the vertical plane of symmetry of the seat forms an angle of less than + 10 degrees or - 10 degrees with the vertical plane of symmetry of the vehicle;	2.29.2.	"Rearward-facing seat" means a seat which can be used whilst the vehicle is in motion and which faces towards the rear of the vehicle in such a manner that the vertical plane of symmetry of the seat forms an angle of less than + 10 degrees or - 10 degrees with the vertical plane of symmetry of the vehicle;	Renumbered (***EC/JAPAN: GRSP/2009/7***)
2.3.3.	"Side-facing seat" means a seat which, with regard to its alignment with the vertical plane of symmetry of the vehicle, does not meet either of the definitions given in paragraph 2.3.1. or 2.3.2. above;	2.29.3.	"Side-facing seat" means a seat which, with regard to its alignment with the vertical plane of symmetry of the vehicle, does not meet either of the definitions given in paragraph **2.29.1.** or **2.29.2.** above;	Renumbered (***EC/JAPAN: GRSP/2009/7***)
2.12.3.	"Separate head restraint" means a head restraint consisting of a component separate from the seat, designed for insertion and/or positive retention in the structure of the vehicle;	**2.30.**	"Separate Head Restraint" means a head restraint consisting of a component separate from the seat, designed for insertion and/or positive retention in the structure of the vehicle.	Renumbered (**EC: GRSP/2008/11**)
Annex 3-2.2	"Three-dimensional 'H' point machine" (3-D H machine) means the device used for the determination of "H" points and actual torso angles. This device is described in appendix 1 to this annex;	**2.31.**	**"Three-dimensional H-point machine" (H-point machine) means the device used for the determination of "H-points" and actual torso angles.**	Moved from Annex 3 (former). (**EC: GRSP/2008/11**). Expression is different from gtr.
Annex 3-2.9.	"Three dimensional reference system" means a system as described in appendix 2 to this annex;	**2.32.**	**"Three-dimensional reference system" means a system as described in *Annex 13, Appendix 2.***	Moved from Annex 3 (former). (**EC: GRSP/2008/11**).
		2.33.	**"Top of the Head Restraint" means the point on the head restraint centreline with the greatest height.**	Added to align with gtr. (**EC: GRSP/2008/11**)
Annex 3-2.5.	"Torso-line" means the centreline of the probe of the 3-D H machine with the probe in the fully rearward position;	**2.34.**	**"Torso-line" means the centreline of the *head-room* probe of the H-point machine with the probe in the fully rearward position.**	Moved from Annex 3 (former). (**EC: GRSP/2008/11**).
2.10.	"Transverse plane" means a vertical plane perpendicular to the median longitudinal plane of the vehicle;	**2.35.**	"Transverse plane" means a vertical plane perpendicular to the median longitudinal plane of the vehicle.	Renumbered. (**EC: GRSP/2008/11**)
Annex 3-2.11.	"Vehicle measuring attitude" means the position of the vehicle as defined by the co-ordinates of fiducial marks in the three-dimensional reference system.	**2.36.**	**"Vehicle measuring attitude" means the position of the vehicle as defined by the co-ordinates of fiducial marks in the three-dimensional reference system.**	Moved from Annex 3 (former). (**EC: GRSP/2008/11**).
2.2.	"Vehicle type" means a category of motor vehicles which do not differ in such essential respects as:	**2.37.**	"Vehicle type" means a category of motor vehicles which do not differ in such essential respects as:	Renumbered. (**EC: GRSP/2008/11**)
2.2.1.	the structure, shape, dimensions, materials and the mass of the seats, although the seats may differ in covering and colour; differences not exceeding 5 per cent in the mass of the approved seat type shall not be considered significant;	**2.37.1.**	the structure, shape, dimensions, materials and the mass of the seats, although the seats may differ in covering and colour; differences not exceeding 5 per cent in the mass of the approved seat type shall not be considered significant;	Renumbered. (**EC: GRSP/2008/11**)
2.2.2.	the type and dimensions of the adjustment, displacement and locking systems of the seat-back and seats and their parts;	**2.37.2.**	the type and dimensions of the adjustment, displacement and locking systems of the seat-back and seats and their parts;	Renumbered. (**EC: GRSP/2008/11**)
2.2.3	the type and dimensions of the seat anchorages;	**2.37.3.**	the type and dimensions of the seat anchorages;	Renumbered. (**EC: GRSP/2008/11**)
2.2.4.	the dimensions, frame, materials and padding of head restraints, although they may differ in colour and covering;	**2.37.4.**	the dimensions, frame, materials and padding of head restraints, although they may differ in colour and covering;	Renumbered. (**EC: GRSP/2008/11**)
2.2.5.	the type and dimensions of the attachments of the head restraint and the characteristics of the part of the vehicle to which the head restraint is attached, in the case of a separate head restraint;	**2.37.5.**	the type and dimensions of the attachments of the head restraint and the characteristics of the part of the vehicle to which the head restraint is attached, in the case of a separate head restraint;"	Renumbered. (**EC: GRSP/2008/11**)
3	APPLICATION FOR APPROVAL	3	APPLICATION FOR APPROVAL	Not Changed
3.1.	The application for approval of a vehicle type shall be submitted by the vehicle manufacturer or by his duly accredited representative.	3.1.		
3.2.	It shall be accompanied by the following documents in triplicate and the following particulars:	3.2.		

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Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
3.2.1.	a detailed description of the vehicle type with regard to the design of the seats, their anchorages, and their adjustment, displacement and locking systems;	3.2.1.		
3.2.1.1.	A detailed description and/or drawings of the partitioning system, if applicable.	3.2.1.1.		
3.2.2.	drawings, on an appropriate scale and in sufficient detail, of the seats, their anchorages on the vehicle, and their adjustment, displacement and locking systems.	3.2.2.		
3.2.3.	In the case of a seat with a detachable head restraint:	3.2.3.		
3.2.3.1.	a detailed description of the head restraint, specifying in particular the nature of the padding material or materials;	3.2.3.1.		
3.2.3.2.	a detailed description of the location, the type of support and the attachments for mounting the head restraint on the seat.	3.2.3.2.		
3.2.4.	In the case of a separate head restraint:	3.2.4.		
3.2.4.1.	a detailed description of the head restraint, specifying in particular the nature of the padding material or materials;	3.2.4.1.		
3.2.4.2.	a detailed description of the location, and the attachments for fitting the head restraint to the structure of the vehicle.	3.2.4.2.		
3.3.	The following shall be submitted to the technical service responsible for the approval tests:	3.3.		
3.3.1.	a vehicle representative of the vehicle type to be approved or the parts of the vehicle which the technical service deems necessary for approval tests;	3.3.1.		
3.3.2.	an additional set of the seats with which the vehicle is equipped, with their anchorages.	3.3.2.		
3.3.3.	For vehicles with seats fitted or capable of being fitted with head restraints, in addition to the requirements set out in paragraphs 3.3.1. and 3.3.2.:	3.3.3.		
3.3.3.1.	in the case of detachable head restraints: an additional set of seats, fitted with head restraints, with which the vehicle is equipped, together with their anchorages.	3.3.3.1.		
3.3.3.2.	In the case of separate head restraints: an additional set of the seats with which the vehicle is equipped, with their anchorages, an additional set of the corresponding head restraints and the part of the vehicle structure to which the head restraint in fitted, or a	3.3.3.2.		
4	APPROVAL	4	APPROVAL	
4.1.	If the vehicle submitted for approval pursuant to this Regulation meets the relevant requirements (seats fitted with head restraints or capable of being fitted with head restraints), approval of the vehicle type shall be granted.	4.1.		
			Paragraphs 4.2. to 4.3., amend to read:	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
4.2.	An approval number shall be assigned to each type approved. Its first two digits (at present 08, corresponding to the 08 series of amendments) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party may not assign the same number either to the same vehicle type equipped with other types of seats or head restraints or with seats anchored differently on the vehicle (this applies both to seats with and to those without head restraints) or to	"4.2.	An approval number shall be assigned to each type approved. Its first two digits (at present **09**, corresponding to the **09** series of amendments) …..	Series Number revised. (**EC: GRSP/2008/11**, amended by ***EC/JAPAN: GRSP/2009/7*** to reflect the 08 series amendment)
4.3.	Notice of approval or extension or refusal of approval of a vehicle type pursuant to this Regulation shall be communicated to the Parties to the Agreement applying this Regulation by means of a form conforming to the model in annex 1 to this Regulation.	4.3.	Notice of approval …. of a form conforming to the model in **Annex 11** to this Regulation."	Reference revised. (**EC: GRSP/2008/11**)
4.4.	There shall be affixed, conspicuously and in a readily accessible place specified on the approval form, to every vehicle conforming to a vehicle type approved under this Regulation, an international approval mark consisting of:	4.4.		
			Paragraph 4.4.1. the footnote 2/, amend to read:	
4.4.1.	a circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval; 2/	"4.4.1.	a circle…. 2/	
2/	1 for Germany, 2 for France, 3 for Italy, 4 for the Netherlands, 5 for Sweden, 6 for Belgium, 7 for Hungary, 8 for the Czech Republic, 9 for Spain, 10 for Serbia, 11 for the United Kingdom, 12 for Austria, 13 for Luxembourg, 14 for Switzerland, 15 (vacant), 16 for Norway, 17 for Finland, 18 for Denmark, 19 for Romania, 20 for Poland, 21 for Portugal, 22 for the Russian Federation, 23 for Greece, 24 for Ireland, 25 for Croatia, 26 for Slovenia, 27 for Slovakia, 28 for Belarus, 29 for Estonia, 30 (vacant), 31 for Bosnia and Herzegovina, 32 for Latvia, 33 (vacant), 34 for Bulgaria, 35 (vacant), 36 for Lithuania, 37 for Turkey, 38 (vacant), 39 for Azerbaijan, 40 for The former Yugoslav Republic of Macedonia, 41 (vacant), 42 for the European Community (Approvals are granted by its Member States using their respective ECE symbol), 43 for Japan, 44 (vacant), 45 for Australia, 46 for Ukraine, 47 for South Africa, 48 for New Zealand, 49 for Cyprus, 50 for Malta, 51 for the	2/	……. 50 for Malta, 51 for the Republic of Korea, 52 for Malaysia, 53 for Thailand, **54 and 55 (vacant), 56 for Montenegro, 57 (vacant) and 58 for Tunisia**. Subsequent numbers…"	Member states list updated (**EC: GRSP/2008/11**).
4.4.2.	the number of this Regulation, followed by the letter "R", a dash and the approval number, to the right of the circle prescribed in paragraph 4.4.1.	4.4.2.		
			Paragraph 4.4.3., amend to read:	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
4.4.3.	However, if the vehicle is equipped with one or more seats fitted or capable of being fitted with head restraints, approved as meeting the requirements under paragraphs 5.1. and 5.2. below, the number of this Regulation shall be followed by the letters "RA". The form conforming to the model in annex 1 to this Regulation shall indicate which seat(s) of the vehicle is (are) fitted or capable of being fitted with head restraints. The marking shall also indicate that any remaining seats in the vehicle, not fitted or capable of being fitted with head restraints, are approved and meet the requirements of paragraph 5.1. below of this Regulation.	"4.4.3.	However, if the vehicle is equipped with one or more seats fitted or capable of being fitted with head restraints, approved as meeting the requirements under paragraphs **5.2.** and **5.3.** below, the number of this Regulation shall be followed by the letters "RA". The form conforming to the model in **Annex 11** to this Regulation shall indicate which seat(s) of the vehicle is (are) fitted or capable of being fitted with head restraints. The marking shall also indicate that any remaining seats in the vehicle, not fitted or capable of being fitted with head restraints, are approved and meet the requirements of paragraph **5.2.** below of this Regulation."	Reference revised. (**EC: GRSP/2008/11** and ***EC/JAPAN: GRSP/2009/7***)
4.5.	If the vehicle conforms to a vehicle type approved under one or more other Regulations annexed to the Agreement in the country which has granted approval under this Regulation, the symbol prescribed in paragraph 4.4.1. need not be repeated; in such a case the Regulation and approval numbers and the additional symbols of all the Regulations under which approval has been granted in the country which has granted approval under this Regulation shall be placed in vertical columns to the right of the symbol prescribed in	4.5.		
4.6.	The approval mark shall be clearly legible and be indelible.	4.6.		
4.7.	The approval mark shall be placed close to or on the vehicle data plate affixed by the manufacturer.	4.7.		
			Paragraph 4.8., amend to read:	
4.8.	Examples of arrangements of approval marks are given in annex 2 to this Regulation.	"4.8.	…….. of approval marks are given in **Annex 12** to this Regulation."	Reference revised. (**EC: GRSP/2008/11**)
5	REQUIREMENTS	5		
5.1.	General requirements	5.1.		Not changed
5.1.1.	The installation of side-facing seats shall be prohibited in vehicles of categories M1, N1, M2 (of class III or B) and M3 (of class III or	5.1.1.		
5.1.2.	It does not apply to ambulances or to vehicles intended for use by the armed services, civil defence, fire services and forces responsible for maintaining public order.	5.1.2.		
5.1.3.	It shall also not apply to vehicles of category M3 (of class III or B) of a technically permissible maximum laden mass exceeding 10 tonnes in which side facing seats are grouped together at the rear of the vehicle to form an integrated room of up to 10 seats. Such side-facing seats shall be fitted with, at least, a head restraint and a two-point belt with retractor type-approved in accordance with Regulation No. 16. The anchorages for the safety belts shall comply	5.1.3.		
5.2.	General requirements applicable to all seats of vehicles of category M1 3/	5.2.		
	3/Vehicles of category M2, which are approved to this Regulation as an alternative to Regulation No. 80 (in line with paragraph 1.2. to that Regulation) shall also meet the requirements of this			

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
5.2.1.	Every adjustment and displacement system provided shall incorporate a locking system, which shall operate automatically. Locking systems for armrests or other comfort devices are not necessary unless the presence of such devices will cause additional risk of injury to the occupants of a vehicle in the event of a	5.2.1.		
			Paragraph 5.2.2., amend to read:	
5.2.2.	The unlocking control for a device as referred to in paragraph 2.7. shall be placed on the outside of the seat close to the door. It shall be easily accessible, even to the occupant of the seat immediately behind the seat concerned.	"5.2.2.	…..a device as referred to in paragraph **2.13.** shall be placed on the outside of ……"	Reference revised. (**EC: GRSP/2008/11**)
			Paragraph 5.2.3., amend to read:	
5.2.3.	The rear parts of seats situated in area 1, defined in paragraph 6.8.1.1. shall pass the energy dissipation test in accordance with the requirements of annex 6 to this Regulation.	"5.2.3.	……in accordance with the requirements of **Annex 14** to this Regulation."	Reference revised. (**EC: GRSP/2008/11**)
			Paragraph 5.2.3.1. and 5.2.3.2, amend to read:	
5.2.3.1.	This requirement is deemed to be met if in the tests carried out by the procedure specified in annex 6 the deceleration of the headform does not exceed 80 g continuously for more than 3 ms. Moreover, no dangerous edge shall occur during or remain after the test.	"5.2.3.1.	……..by the procedure specified in **Annex 14** the deceleration of ..."	Reference revised. (**EC: GRSP/2008/11**)
5.2.3.2.	The requirements of paragraph 5.1.3. shall not apply to rearmost seats, to back-to-back seats or to seats that comply with the provisions of Regulation No. 21 "Uniform Provisions concerning the Approval of Vehicles with regard to their Interior Fittings" (E/ECE/324-E/ECE/TRANS/505/Rev.1/Add.20/Rev.2, as last	5.2.3.2.	The requirements of paragraph **5.2.3.** shall not apply to rearmost seats, to back-to-back seats or to seats that comply with the provisions of Regulation No. 21 "Uniform Provisions concerning the Approval of Vehicles with regard to their Interior Fittings" (E/ECE/324-E/ECE/TRANS/505/Rev.1/Add.20/Rev.2, as last amended).	Reference revised. (***EC/JAPAN: GRSP/2009/7***)
			Paragraphs 5.2.4. to 5.2.4.1.4., amend to read:	
5.2.4.	The surface of the rear parts of seats shall exhibit no dangerous roughness or sharp edges likely to increase the risk of severity of injury to the occupants. This requirement is considered as satisfied if the surface of the rear parts of seats tested in the conditions specified in paragraph 6.1. exhibit radii of curvature not less than: 2.5 mm in area 1, 5.0 mm in area 2, 3.2 mm in area 3. These areas are defined in paragraph 6.8.1.	"5.2.4.	The surface…… These areas are defined in paragraph 6.8.1.	
5.2.4.1.	This requirement does not apply to:	5.2.4.1.	This requirement does not apply to:	
5.2.4.1.1.	the parts of the different areas exhibiting a projection of less than 3.2 mm from the surrounding surface, which shall exhibit blunted edges, provided that the height of the projection is not more than	**(a)**	the parts of the different areas exhibiting a projection of less than 3.2 mm from the surrounding surface, which shall exhibit blunted edges, provided that the height of the projection is not more than half its width;	Renumbered. (**EC: GRSP/2008/11)**
5.2.4.1.2.	Rearmost seats, to back-to-back seats or to seats that comply with the provisions of Regulation No. 21 "Uniform Provisions concerning the Approval of Vehicles with regard to their Interior Fittings" (E/ECE/324-E/ECE/TRANS/505/Rev.1/ Add.20/Rev.2, as	**(b)**	rearmost seats, ~~to~~ back-to-back seats or ~~to~~ seats that comply with the provisions of Regulation No. 21 "Uniform Provisions concerning the Approval of Vehicles with regard to their Interior Fittings" (E/ECE/324‑E/ECE/TRANS/505/Rev.1/ Add.20/Rev.2, as last	Renumbered. (**EC: GRSP/2008/11)**

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
5.2.4.1.3.	Rear parts of seats situated below a horizontal plane passing through the lowest R point in each row of seats. (Where rows of seats have different heights, starting from the rear, the plane shall be turned up or down forming a vertical step passing through the R point of the row of seats immediately in front);	**(c)**	rear parts of seats situated below a horizontal plane passing through the lowest R-point in each row of seats. (Where rows of seats have different heights, starting from the rear, the plane shall be turned up or down forming a vertical step passing through the R-point of the row of seats immediately in front);	Renumbered. (**EC: GRSP/2008/11)**
5.2.4.1.4.	parts such as "flexible wire mesh".	**(d)**	parts such as "flexible wire mesh".	Renumbered. (**EC: GRSP/2008/11)**
			Paragraph 5.2.4.2., amend to read:	
5.2.4.2.	In area 2, defined in paragraph 6.8.1.2., surfaces may exhibit radii less than 5 mm, but not less than 2.5 mm provided that they pass the energy-dissipation test prescribed in annex 6 to this Regulation. Moreover, these surfaces must be padded to avoid direct contact of the head with the seat frame structure.	"5.2.4.2.	……. test prescribed in **Annex 14** to this Regulation. Moreover,……."	Reference revised. (**EC: GRSP/2008/11**)
			Paragraph 5.2.4.3., amend to read:	
5.2.4.3.	If the areas defined above contain parts covered with material softer than 50 Shore A hardness, the above requirements, with the exception of those relating to the energy-dissipation test in accordance with the requirements of annex6, shall apply only to the	"5.2.4.3.	……in accordance with the requirements of **Annex 14**, shall apply only ……."	Reference revised. (**EC: GRSP/2008/11**)
5.2.5.	No failure shall be shown in the seat frame or in the seat anchorage, the adjustment and displacement systems or their locking devices during or after the tests prescribed in paragraphs 6.2. and 6.3. Permanent deformations, including ruptures, may be accepted, provided that these do not increase the risk of injury in the event of a collision and the prescribed loads were sustained.	5.2.5.		
			Paragraph 5.2.6., amend to read:	
5.2.6.	No release of the locking systems shall occur during the tests described in paragraph 6.3. and in annex 9, paragraph 2.1.	"5.2.6.	……the tests described in paragraph 6.3. and in **Annex 16**, paragraph 2.1."	Reference revised. (**EC: GRSP/2008/11**)
			Paragraph 5.2.7., amend to read:	
5.2.7.	After the tests, the displacement systems intended for permitting or facilitating the access of occupants must be in working order; they must be capable, at least once, of being unlocked and must permit the displacement of the seat or the part of the seat for which they are intended. Any other displacement systems, as well as adjustment systems and their locking systems are not required to be in working order. In the case of seats provided with head restraints, the strength of the seat-back and of its locking devices is deemed to meet the requirements set out in paragraph 6.2. when, after testing in accordance with paragraph 6.4.3.6., no breakage of the seat or seat-back has occurred: otherwise, it must be shown that the seat is capable of meeting the test requirements set out in paragraph 6.2. In the case of seats (benches) with more places to sit than head restraints, the test described in paragraph 6.2. shall be carried out.	"5.2.7.	After the tests,…. In the case …….after testing in accordance with **Annex 6**, **paragraph 4.,** no breakage….."	Reference revised. (**EC: GRSP/2008/11**)
5.3.	General specifications applicable to seats of vehicles of categories N1, N2 and N3 and to seats of vehicles of categories M2 and M3 not covered by Regulation No. 80	5.3.		Not changed

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
	With the exception of the provisions of paragraph 5.1., the requirements also apply to side-facing seats of all categories of vehicles."			
5.3.1.	Seats and bench seats must be firmly attached to the vehicle.	5.3.1.		
5.3.2.	Sliding seats and bench seats must be automatically lockable in all the positions provided.	5.3.2.		
5.3.3.	Adjustable seat-backs must be lockable in all the positions	5.3.3.		
5.3.4.	All seats which can be tipped forward or have fold-on backs must lock automatically in the normal position.	5.3.4.		
5.4.	Mounting of head restraints	5.4.		
5.4.1.	A head restraint shall be mounted on every outboard front seat in every vehicle of category M1. Seats fitted with head restraints, intended for fitment in other seating positions and in other categories of vehicles may also be approved to this Regulation.	5.4.1.		
			Paragraph 5.4.2., amend to read:	
5.4.2.	A head restraint shall be mounted on every outboard front seat in every vehicle of category M2 with a maximum mass not exceeding 3,500 kg and of category N1; head restraints mounted in such vehicles shall comply with the requirements of Regulation No. 25, as amended by the 03 series of amendments.	"5.4.2.	A head restraint shall be mounted on every outboard front seat in *every vehicle of category M 2* ~~with a maximum mass not exceeding 3,500 kg~~ and of category N_1. ~~head restraints mounted in such vehicles shall comply with the requirements of Regulation No. 25, as amended by the 03 series of amendments~~."	Application of mandatory head restraint in the outboard front seat is expanded to M2 over 3,500 kg, i.e., up to 5,000kg, which is broader than gtr scope (up to 4,500kg). Mandatory requirements for N category vehicles are limited upt ot 3,500kg, while gtr requires up to 4,500kg. N1 and M2 models are required to meet R17 instead of R25. (**EC: GRSP/2008/11**)
5.5.	Special requirements for seats fitted or capable of being fitted with head restraints	5.5.		
5.5.1.	The presence of the head restraint must not be an additional cause of danger to occupants of the vehicle. In particular, it shall not in any position of use exhibit any dangerous roughness or sharp edge liable to increase the risk or seriousness of injury to the occupants.	5.5.1.		
5.5.2.	Parts of the front and rear faces of the head restraints situated in area 1, as defined in paragraph 6.8.1.1.3. below shall pass the energy absorption test.	5.5.2.		
			Paragraph 5.5.2.1.to 5.5.6., amend to read:	
5.5.2.1.	This requirement is deemed to be met if in the tests carried out by the procedure specified in annex 6 the deceleration of the headform does not exceed 80 g continuously for more than 3 ms. Moreover, no dangerous edge shall occur during or remain after the test.	"5.5.2.1.	……the procedure specified in **Annex 7**, the deceleration of ……"	Reference revised. (**EC: GRSP/2008/11**)
5.5.3.	Parts of the front and rear faces of head restraints situated in area 2, as defined in paragraph 6.8.1.2.2. below, shall be so padded as to prevent any direct contact of the head with the components of the structure and shall meet the requirements of paragraph 5.1.4. above applicable to the rear parts of seats situated in area 2.	5.5.3.	Parts of the front and rear faces of head restraints situated in area 2, as defined in paragraph 6.8.1.2.2. below, shall be so padded as to prevent any direct contact of the head with the components of the structure and shall meet the requirements of paragraph **5.2.4.** above applicable to the rear parts of seats situated in area 2.	Reference revised. (***EC/JAPAN: GRSP/2009/7***)

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
5.5.4.	The requirements of paragraphs 5.4.2. and 5.4.3. above, shall not apply to parts of rear faces of head restraints designed to be fitted to seats behind which no seat is provided.	5.5.4.	The requirements of paragraphs **5.5.2.** and **5.5.3**. above, shall not apply to parts of rear faces of head restraints designed to be fitted to seats behind which no seat is provided.	Reference revised. (***EC/JAPAN: GRSP/2009/7***)
5.5.5.	The head restraint shall be secured to the seat or to the vehicle structure in such a way that no rigid and dangerous parts project from the padding of the head restraint or from its attachment to the seat-back as a result of the pressure exerted by the headform during the test.	5.5.5.		
5.5.6.	In the case of a seat fitted with a head restraint, the provisions of paragraph 5.1.3. may, after agreement of the technical service, be considered to be met if the seat fitted with its head restraint complies with the provisions of paragraph 5.4.2. above.	5.5.6.	In the case of a seat fitted with a head restraint, the provisions of paragraph **5.2.3.** may, after agreement of the technical service, be considered to be met if the seat fitted with its head restraint complies with the provisions of paragraph **5.5.2.** above.	Reference revised. (***EC/JAPAN: GRSP/2009/7***)
			Insert new paragraphs 5.6. to 5.9., to read:	
		"5.6.	**Performance Requirements**	Revised to align with gtr (**EC: GRSP/2008/11**)
		5.6.1.	**General Requirements**	Revised to align with gtr (***JAPAN: GRSP/2008/24***)
		5.6.1.1.	**Each front outboard head restraint shall conform to either paragraph 5.6.1.1.1. or paragraph 5.6.1.1.2.**	ADded to align with gtr (**EC: GRSP/2008/11**) and amended to allow Dynamic Test with BioRID (***JAPAN: GRSP/2008/24***)
		5.6.1.1.1.	**The head restraint shall conform to paragraphs 5.6.2.1., 5.6.3. through 5.6.7., 5.7., 5.8., and 5.10., of this Regulation.**	Added to align with gtr (***JAPAN: GRSP/2008/24***). ECE unique requirement for contact surface height is included.
		5.6.1.1.2.	**The head restraint shall conform to paragraphs 5.6.2.1., 5.6.3. through 5.6.5., 5.6.7., 5.8., 5.9., and 5.10. of this Regulation.**	Added to allow Dynamic Test with BioRID(***JAPAN: GRSP/2008/24***). ECE unique requirement for contact surface height is included.
		5.6.1.2.	**For vehicles equipped with front centre head restraints, the head restraint shall conform to either paragraph 5.6.1.2.1. or paragraph 5.6.1.2.2.**	Added to align with gtr (**EC: GRSP/2008/11**) and amended to allow Dynamic Test with BioRID (***JAPAN: GRSP/2008/24***)
		5.6.1.2.1	**The head restraint shall conform to paragraphs 5.6.2.2., 5.6.3. through 5.6.5., 5.6.7., 5.7., 5.8., and 5.10. of this Regulation.**	Added to align with gtr (***JAPAN: GRSP/2008/24***). ECE unique requirement for contact surface height is included.
		5.6.1.2.2.	**The head restraint shall conform to paragraphs 5.6.2.2., 5.6.3. through 5.6.5., 5.6.7., 5.8., 5.9., and 5.10. of this Regulation.**	Added to allow Dynamic Test with BioRID(***JAPAN: GRSP/2008/24***). ECE unique requirement for contact surface height is included.

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		5.6.1.3	**For vehicles equipped with rear outboard head restraints, the head restraint shall conform to either paragraph 5.6.1.3.1. or paragraph 5.6.1.3.2.**	ADded to align with gtr (**EC: GRSP/2008/11**) and amended to allow Dynamic Test with BioRID (***JAPAN: GRSP/2008/24***)
		5.6.1.3.1.	**The head restraint shall conform to paragraphs 5.6.2.4., 5.6.3. through 5.6.5., 5.6.7., 5.7., 5.8., and 5.10. of this Regulation.**	Added to align with gtr (***JAPAN: GRSP/2008/24***). ECE unique requirement for contact surface height is included.
		5.6.1.3.2.	**The head restraint shall conform to paragraphs 5.6.2.4., 5.6.3. through 5.6.5., 5.6.7., 5.8., 5.9., and 5.10. of this Regulation.**	Added to allow Dynamic Test with BioRID(***JAPAN: GRSP/2008/24***). ECE unique requirement for contact surface height is included.
		5.6.1.4.	**For vehicles equipped with rear centre head restraints, the head restraint shall conform to either paragraph 5.6.1.4.1. or 5.6.1.4.2.**	ADded to align with gtr (**EC: GRSP/2008/11**) and amended to allow Dynamic Test with BioRID (***JAPAN: GRSP/2008/24***)
		5.6.1.4.1.	**The head restraint shall conform to paragraphs 5.6.2.6., 5.6.3. through 5.6.5., 5.6.7., 5.7., 5.8., and 5.10. of this Regulation.**	Added to align with gtr (***JAPAN: GRSP/2008/24***). ECE unique requirement for contact surface height is included.
		5.6.1.4.2.	**The head restraint shall conform to paragraphs 5.6.2.6., 5.6.3. through 5.6.5., 5.6.7., 5.8., 5.9., and 5.10. of this Regulation.**	Added to allow Dynamic Test with BioRID(***JAPAN: GRSP/2008/24***). ECE unique requirement for contact surface height is included.
		5.6.1.5.	***If it is impossible to seat*** **the test dummy** ***at the designated seating positions*** **specified under paragraph 5.9. of this regulation, the applicable head restraint shall conform to either paragraph 5.6.1.1.1., or 5.6.1.2.1, or 5.6.1.3.1., or 5.6.1.4.1. of this regulation, as appropriate.**	Added to align with gtr. (***JAPAN: GRSP/2008/24*** , amended by **EC: GRSP-44-02**), and then amended by ***EC/JAPAN: GRSP/2009/7***)
		5.6.2.	**Minimum Height:**	
			The minimum height ***requirements*** **shall be demonstrated in accordance with** ***the provisions of*** **Annex 1.**	Added to align with gtr. (**EC: GRSP/2008/11**)
		5.6.2.1.	**Front outboard designated seating positions**	Added to align with gtr. (**EC: GRSP/2008/11**) requirement is not changed,.
			The top of a head restraint located in a front outboard designated seating position shall have a height of:	
			(a) not less than 800 mm in at least one position of head restraint adjustment; and	
			(b) not less than 750 mm in any position of head restraint adjustment ***except as provided for in paragraph 5.6.2.3. of this Regulation.***	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		5.6.2.2.	**Front centre designated seating positions equipped with head restraints**	Added to align with gtr. (**EC: GRSP/2008/11**) . Highest position height requirement is changed from 800mm to 750mm.
			The top of a head restraint located in the front centre designated seating position shall have a height not less than 750 mm in any position of adjustment, except as provided for in paragraph 5.6.2.3. of this Regulation.	
		5.6.2.3.	**Exception**	
5.6.4.	The dimensions mentioned in paragraphs 5.5.2. and 5.5.3.1. above may be less than 800 mm in the case of front seats and 750 mm in the case of other seats to leave adequate clearance between the head restraint and the interior surface of the roof, the windows or any part of the vehicle structure; however, the clearance shall not exceed 25 mm. In the case of seats fitted with displacement and/or adjustment systems, this shall apply to all seat positions. Furthermore, by derogation to paragraph 5.5.3.2. above, there shall not be any "use position" resulting in a height lower than 700 mm.		***The requirements of paragraphs 5.6.2.1. and 5.6.2.2. of this Regulation do not apply*** **if the interior surface of the vehicle roofline, including the headliner, physically prevents a head restraint, located in the front designated seating position, from attaining the required *height*. In those instances *in which the head restraint cannot attain the required height, when measured in accordance with Annex 1*, the vertical distance between the top of the head restraint and the interior surface of the roofline, including the headliner, shall not exceed *25 mm in the lowest position of seat adjustment, or* 50 mm *in the case of* convertible vehicles; *in any horizontal position of seat adjustment; and the highest position of head restraint adjustment* intended for occupant use.**	Revised to align with gtr, by adding provision for convertible. (**EC: GRSP/2008/11**) gtr does not specify the horizontal position of seat adjustment.
		5.6.2.4.	**Rear outboard designated seating positions equipped with head restraints**	Added to align with gtr. (**EC: GRSP/2008/11**) requirement is not changed,.
			Except as provided in paragraph 5.6.2.5. of this Regulation, when	
		5.6.2.5.	**Exception**	
5.6.4.	The dimensions mentioned in paragraphs 5.5.2. and 5.5.3.1. above may be less than 800 mm in the case of front seats and 750 mm in the case of other seats to leave adequate clearance between the head restraint and the interior surface of the roof, the windows or any part of the vehicle structure; however, the clearance shall not exceed 25 mm. In the case of seats fitted with displacement and/or adjustment systems, this shall apply to all seat positions. Furthermore, by derogation to paragraph 5.5.3.2. above, there shall not be any "use position" resulting in a height lower than 700 mm.		**The requirements of paragraph 5.6.2.4. of this Regulation do not apply if the interior surface of the vehicle roofline, including the headliner or backlight, physically prevent a head restraint, located in the rear outboard designated seating position, from attaining the required height. In those instances *in which this head restraint cannot attain the required height, when measured in accordance with Annex 1*, the maximum vertical distance between the top of the head restraint and interior surface of the roofline, including the headliner, or the backlight shall not exceed *25 mm in the lowest position of seat adjustment, or* 50 mm *in the case of* convertible vehicles; *in any horizontal position of seat adjustment; and* the highest position *of head restraint adjustment* intended for occupant**	Revised to align with gtr, by adding provision for convertible. (**EC: GRSP/2008/11**) gtr does not specify the horizontal position of seat adjustment.
5.6.5.	By derogation to the height requirements mentioned in paragraphs 5.5.2. and 5.5.3.1. above, the height of any head restraint designed to be provided in rear centre seats or seating positions shall be not less than 700 mm.	**5.6.2.6.**	**When measured in accordance with Annex 1, the top of any head restraint designed to be provided in rear centre seats or seating positions shall be not less than 700 mm.**	Renumbered and revised (***JAPAN: GRSP/2008/24***). Requirement is not changed. gtr specify this height in
		5.6.3.	**Minimum width**	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
5.11.	The width of the head restraint shall be such as to provide appropriate support for the head of a person normally seated. As determined according to the procedure described in paragraph 6.6. below, the head restraint shall cover an area extending not less than 85 mm to each side of the vertical median plane of the seat for which the head restraint is intended.		**When measured in accordance with Annex 2, the lateral width of a head restraint shall be not less than 85 mm on either side of the torso line (distances L and L' as per Annex 2) *of the seat for which the head restraint is intended.***	Renumbered and revised to align with gtr. (**EC: GRSP/2008/11**) Requirement is not changed.
		5.6.4.	**Gaps within head restraint**	
5.10.	In the case of head restraints adjustable for height one or more gaps, which regardless of their shape can show a distance "a" of more than 60 mm when measured as described in paragraph 6.7. below, are permitted on the part of the device serving as a head restraint provided that, after the additional test under paragraph 6.4.3.3.2. below, the requirements of paragraph 5.11. below are still met.		**If a head restraint has any gap greater than 60 mm, when measured in accordance with Annex 3, the maximum rearward displacement *shall comply with the requirements of paragraph 5.7.2.* when the head restraint is tested at that gap.**	Renumbered and revised to align with gtr. (**EC: GRSP/2008/11**, with reference number amended by ***EC/JAPAN: GRSP/2009/7***) Requirement is not changed.
5.9.	In the case of head restraints integral with the seat-back, the area to be considered is:		**In the case of head restraints integral with the seat-back, the area to be considered is:**	Renumbered and revised (**EC: GRSP/2008/11**). ECE unique requirement.
	above a plane perpendicular to the reference line at 540 mm from the R point.		**above a plane perpendicular to the torso reference line at 540 mm from the R-point.**	
	Between two vertical longitudinal planes passing at 85 mm on either side of the reference line. In this area, one or more gaps which regardless of their shape can show a distance "a" of more than 60 mm when measured as described in paragraph 6.7. below, are permitted provided that, after the additional test under paragraph 6.4.3.3.2. below, the requirements of paragraph 5.11.		**between two vertical longitudinal planes passing at 85 mm on either side of the reference line.**	
		5.6.5.	**Gaps between head restraint and the top of the seat back**	
5.8.	There shall be no gap of more than 60 mm between the seat-back and the head restraint in the case of a device not adjustable for height.		**When measured in accordance with Annex 3, there shall not be a gap greater than 60 mm between the bottom of the head restraint and the top of the seat back if the head restraint *is* not *adjustable vertically between in-use positions.***	Renumbered and revised to align with gtr (**EC: GRSP/2008/11**). Requirement is not changed. , but provisions for separate head restraint is deleted.
	If the head restraint is adjustable for height it shall, in its lowest position, be not more than 25 mm from the top of the seat-back. In the case of seats or bench seats adjustable in height provided with separate head restraints, this requirement shall be verified for all the positions of the seat or bench seat.		**When measured in accordance with Annex 3, there shall not be a gap greater than 25 mm between the bottom of a *vertically adjustable* head restraint and the top of the seat back, with the head restraint adjusted to its lowest height position.**	
		5.6.6.	***Minimum* backset *for front outboard designated seating positions***	Added to align with gtr (**EC: GRSP/2008/11**).
		5.6.6.1.	**For adjustable head restraints, the requirements *of this Regulation* shall be met with the top of the head restraint in all height positions of adjustment between 750 mm and 800 mm, inclusive. If the top of the head restraint, in its lowest position of adjustment, is above 800 mm, the requirements of this Regulation shall be met at that position only.**	Added to align with gtr (**EC: GRSP/2008/11**).

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		5.6.6.2.	**At the choice of the manufacturer, the backset shall be measured using either the H-point or the R-point as the backset reference point.**	Added to align with gtr (**EC: GRSP/2008/11**). gtr requires to demonstrate the compliance by taking the mean of 3 measurements.
		5.6.6.3.	***The backset*** **, when measured as specified in Annex 4,** ***shall not be more than 45 mm, when using the R-point as the backset reference point, or 55mm when using the H-point as the backset reference***	Added to align with gtr (**EC: GRSP/2008/11**).
		5.6.6.4.	**If the front outboard head restraint is not attached to the seat back, the head restraint** ***cannot be adjusted*** **such that the backset is more than** ***required in paragraph 5.6.6.3*** **when the seat back inclination is positioned closer to vertical than the position specified in Annex 4.**	Added to align with gtr (**EC: GRSP/2008/11**, with reference amended by ***EC/JAPAN: GRSP/2009/7***). gtr requires this provision only in the case of measurement using the H-point as the reference point.
5.7.1.	The height of the part of the device on which the head rests, measured as described in paragraph 6.5. below, shall in the case of a head restraint adjustable for height be not less than 100 mm.	**5.6.7.**	**The height of the intended front contact surface area of a head restraint shall be not less than 100 mm when measured on a plane parallel to the torso reference line.**	Renumbered (**EC: GRSP/2008/11**)
		5.7.	**Static performance requirements**	
			Each head restraint shall conform ***with the following static requirements.***	Added to align with gtr (**EC: GRSP/2008/11**)
		5.7.1.	**Energy absorption**	
5.2.3.1.	This requirement is deemed to be met if in the tests carried out by the procedure specified in annex 6 the deceleration of the headform does not exceed 80 g continuously for more than 3 ms. Moreover, no dangerous edge shall occur during or remain after the test.		**When the front surface of the head restraint is impacted in accordance with Annex 7, the deceleration of the headform shall not exceed 785 m/s^2 (80g) continuously for more than 3 milliseconds.** ***Moreover, no dangerous edge shall occur during or remain after the test.***	Renumbered and revised to align with gtr (**EC: GRSP/2008/11**). Requirement is not changed. Gtr does not specify a requirement of dangerous edge.
		5.7.2.	**Displacement and Backset Retention**	Added to align with gtr (**EC: GRSP/2008/11**, with reference amended by ***EC/JAPAN: GRSP/2009/7***).
			If the head restraint has a fixed backset then the head restraint **shall conform to** ***paragraph 5.7.2.1.***	
			If the head restraint has an adjustable backset then, at the choice of the manufacturer, **the head restraint shall conform to** ***either the requirements of paragraph 5.7.2.1. when tested in the rearmost (relative to the seat) position of adjustment or with the requirements of paragraph 5.7.2.2.***	
		5.7.2.1.	**Displacement**	Renumbered and revised to align with gtr (**EC: GRSP/2008/11**). gtr does not specify tolerance for moment. Terms are different from gtr.

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
5.12.	The head restraint and its anchorage shall be such that the maximum backward displacement X of the head permitted by the head restraint and measured in conformity with the static procedure laid down in paragraph 6.4.3. below, is less than 102 mm.		**When the head restraint is tested in accordance with Annex 6, the headform shall not be displaced more than 102 mm perpendicularly and rearward of the displaced extended torso *reference* line, *'r1'*, during the application of a 373 ± *7.5* Nm moment about the R-point.**	
		5.7.2.2.	**Displacement and Backset Retention**	Added to align with gtr (**EC: GRSP/2008/11**).
			When the head restraint is tested in any position of backset	
		(a)	**Not be displaced more than 25 mm during the application of the initial reference moment of 37 ± *0.7* Nm;**	gtr does not specify tolerance for moment.
		(b)	**Not be displaced more than 102 mm perpendicularly and rearward of the displaced extended torso *reference* line, *'r1'*, during the application of a 373 ± *7.5* Nm moment about the R-point; and**	gtr does not specify tolerance for moment. Terms are different from gtr.
		(c)	**Return to within 13 mm of its initial reference position after the following sequence occurs: application of a 373 ± *7.5* Nm moment about the R-point; reduction of the moment to 0 Nm; and by re-application of the initial reference load 37 ± *0.7* Nm.**	gtr does not specify tolerance for moment.
		5.7.3.	**Head restraint *and its anchorage* strength**	Renumbered and revised to align with gtr (EC: GRPS/2008/11), amended to apply head restraint anchorage(***JAPAN: GRSP/2008/24***). gtr does not apply this to head restraint anchorage.
5.13.	The head restraint and its anchorage shall be strong enough to bear without breakage the load specified in paragraph 6.4.3.6. below. In the case of head restraints integral with the seat-back, the requirements of this paragraph shall apply to the part of the seat-back structure situated above a plane perpendicular to the reference line at 540 mm from the R point.		**When the head restraint *and its anchorage* *are* tested in accordance with Annex 6, the load applied to the head restraint shall reach 890 N ± *5 N* and remain at *this load* for a *minimum* period of 5 seconds *unless any breakage of the seat or head restraint occurs.***	gtr does not prohibit breakage during maintaining the lodad.
		5.7.4.	**Adjustable head restraint height retention**	Added to align with gtr (**EC: GRSP/2008/11**)
			When tested in accordance with Annex 8, the mechanism of the	
		5.8.	**Non-use positions**	
5.6.3.2.	there shall be no "use position" resulting in a height of less than 750 mm;	**5.8.1.**	**A driver head restraint shall not have a non-use position**	Renumbered and revised to align with gtr (**EC: GRSP/2008/11**) Current R17 allow non-use position in driver's seat if it automatically returns to the
5.6.3.4.	in the case of front seats head restraints may be such that they can be automatically displaced when the seat is not occupied, to a position resulting in a height of less than 750 mm, provided that they automatically return to the position of use when the seat is occupied.	**5.8.2.**	**A front outboard passenger head restraint may be adjusted to a position at which its height does not comply with the requirements of paragraph 5.6.2.1. of this Regulation. However, in any such position, the front outboard passenger head restraint shall meet paragraph 5.8.4.1. of this Regulation.**	Renumbered and revised to align with gtr (**EC: GRSP/2008/11**, with reference amended by ***EC/JAPAN: GRSP/2009/7***) requirement for front outboard seat is not changed.

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
5.6.3.3.	in the case of seats other than the front seats the head restraints may be such that they can be displaced to a position resulting in a height of less than 750 mm, provided that such position is clearly recognizable to the occupant as not being included for the use of the head restraint;	**5.8.3.**	**All rear head restraints and any front centre head restraint may be adjusted to a position at which *its* height does not comply with the requirements of paragraphs 5.6.2.2., 5.6.2.4. or 5.6.2.6. of this Regulation. However, in any such position, the head restraint shall also meet one additional requirement from a set of several alternative test requirements.**	Renumbered and revised to align with gtr (**EC: GRSP/2008/11** with reference amended by ***EC/JAPAN: GRSP/2009/7***) Judgment criteria for non-use position are clarified. Front center seat have more options than current requirement.
			The set of alternative test requirements may be, at the choice of the	
		5.8.4.	**Alternative requirements *for head restraints capable of a non-use position***	Added to align with gtr (**EC: GRSP/2008/11** with reference amended by ***EC/JAPAN: GRSP/2009/7***)
			All of the items described in paragraphs 5.8.4.1. through 5.8.4.5. are permitted as additional features.	
		5.8.4.1.	**In all designated seating positions equipped with head restraints, except the driver's designated seating position, the head restraint shall automatically return from a non-use position to a position in which its minimum height is not less than that specified in paragraph 5.6.2. of this Regulation when a 5th percentile female Hybrid III test dummy is positioned in the seat in accordance with Annex 10. At the option of the manufacturer, instead of using a 5th percentile female Hybrid-III test dummy, human *surrogates* may be**	Added to align with gtr (**EC: GRSP/2008/11** with reference amended by ***EC/JAPAN: GRSP/2009/7***)
		5.8.4.2.	**In *all rear and* front centre designated seating positions equipped with head restraints, the head restraint shall, when tested in accordance with Annex 10, be capable of manually rotating either forward or rearward by not less than 60 degrees from any position of adjustment intended for occupant use in which its minimum height is not less than that specified in paragraph 5.6.2. of this Regulation.**	Added to align with gtr (**EC: GRSP/2008/11** with reference amended by ***EC/JAPAN: GRSP/2009/7***)
		5.8.4.3.	**When measured in accordance with Annex 10, *the height of* the lower edge of the head restraint (HLE) shall be not more than 460 mm, but not less than 250 mm from the R-Point and the thickness (S) shall not be less than 40 mm.**	Added to align with gtr (**EC: GRSP/2008/11** with HLE value amended by ***JAPAN: GRSP/2008/24***)
		5.8.4.4.	**When tested in accordance with Annex 10, the head restraint shall cause the torso *reference* line angle to be at least 10 degrees closer to vertical than when the head restraint is in any position of adjustment in which its height is not less than that specified in paragraph 5.6.2. of this Regulation *and its backset is not more than that specified in paragraph 5.6.6.3. of this Regulation.***	Added to align with gtr (**EC: GRSP/2008/11** with reference amended by ***JAPAN: GRSP/2008/24***) gtr does not specify the backset of the in-use position.

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		5.8.4.5.	**The head restraint shall be marked with a label in the form of a pictogram which may include explanatory text. The label shall either provide an indication when the head restraint is in a non-use position or provide information to enable an occupant to determine whether the head restraint is in a non-use position. The label shall be durably affixed and located such that it is clearly visible by an occupant when entering the vehicle to the designated seating position. Examples of possible designs of pictograms are shown in Figure 1.**	Added to align with gtr (**EC: GRSP/2008/11**)
			(Figure)	
			Figure 1. Non-use warning labels	
		5.9.	***Dynamic performance requirements:***	
		5.9.1.	***Each head restraint, when tested during forward acceleration or deceleration of the dynamic test platform, in accordance with Annex 9, shall conform to the requirements of paragraph 5.9.2.***	Added to allow dynamic requirements option using BioRID, which are not included in gtr (***JAPAN: GRSP/2008/24*** , amended by **EC: GRSP-44-02,** and then by ***EC/JAPAN: GRSP/2009/7***)
		5.9.2.	***Each head restraint shall limit the maximum rearward head O.C. (occipital condyle) anterior/posterior movement, relative to T1 (First Thoracic Vertebra) adjusted by the seat back posterior inclination angle, to [52] mm for the dummy;***	Added to allow dynamic requirements option using BioRID, which are not included in gtr (***JAPAN: GRSP/2008/24*** , amended by ***EC/JAPAN: GRSP/2009/7***)
			Paragraphs 5.6. to 5.13. (former), should be deleted	Delete the requirements which are covered in new paragraph. However, there is no paragraph corresponding to paragraph 5. 7 (former). (**EC: GRSP/2008/11**) .
5.6.	Height of head restraints		(Deleted, prescribed in Paragraph 5.6.2.)	
5.6.1.	The height of head restraints shall be measured as described in paragraph 6.5. below.		(Deleted, prescribed in Paragraph 5.6.2.)	
5.6.2.	For head restraints not adjustable for height, the height shall be not less than 800 mm in the case of front seats and 750 mm in the case of other seats.		(Deleted, prescribed in Paragraph 5.6.2.)	
5.6.3.	For head restraints adjustable for height:		(Deleted, prescribed in Paragraph 5.6.2.)	
5.5.3.1.	the height shall be not less than 800 mm in the case of front seats and 750 mm in the case of other seats; this value shall be obtained in a position between the highest and lowest positions to which adjustment is possible;		(Deleted, prescribed in Paragraph 5.6.2.)	
5.7.	In the case of a seat capable of being fitted with a head restraint, the provisions of paragraphs 5.1.3. and 5.4.2. above shall be verified.		(Deleted)	Requirement for a seat capable of being fitted with a head restraint is deleted. (**EC: GRSP/2008/11**)
			Paragraph 5.14. (former), renumber as 5.10. and amend to read:	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
5.14.	If the head restraint is adjustable, it shall C311not be possible to *raise it beyond the maximum operational height* except by deliberate action on the part of the user distinct from any act necessary for its adjustment.	"**5.10.**	……. maximum operational height**, or remove it,** except by ……."	Renumbered and revised to align with gtr. (**EC: GRSP/2008/11**) gtr does not specify conditions for change of height above the maximum point.
			Paragraph 5.15. (former), renumber as 5.11. and amend to read:	
5.15.	The strength of the seat-back and of its locking devices is deemed to meet the requirements set out in paragraph 6.2. below when, after testing in accordance with paragraph 6.4.3.6. below, no breakage of the seat or seat-back has occurred; otherwise, it shall be shown that the seat is capable of meeting the test requirements set out in paragraph 6.2. below.	"**5.11.**	…….after testing in accordance with **Annex 6, paragraph 4.,** no breakage of……. in paragraph 6.2. below **without breakage.**"	Renumbered, reference amended, and revised. (**EC: GRSP/2008/11**) Requirement prohibiting breakage is added.
			Paragraph 5.16. (former), renumber as 5.12.	
5.16.	Special requirements regarding the protection of occupants from displaced luggage	**5.12.**		Renumbered (***EC/JAPAN: GRSP/2009/7***)
			Paragraph 5.16.1. (former), renumber as 5.12.1. and amend to read:	
5.16.1.	Seat-backs	"**5.12.1.**	…	
	Seat-backs and/or head restraints located such that they constitute the forward boundary of the luggage compartment, all seats being in place and in the normal position of use as indicated by the manufacturer, shall have sufficient strength to protect the occupants from displaced luggage in a frontal impact. This requirement is deemed to be met if, during and after the test described in annex 9, the seat-backs remain in position and the locking mechanisms remain in place. However, the deformation of the seat-backs and their fastenings during the test is permitted, provided that the forward contour of the parts of the tested seat-back and/or head restraints, that are harder than 50 Shore A, does not move forward		… after the test described in **Annex 16,** the seat-backs remain in position and …	Renumbered, and reference revised. (**EC: GRSP/2008/11**)
(a)	a point of 150 mm forward of the R point of the seat in question, for the parts of the head restraint;	(a)		
(b)	a point of 100 mm forward of the R point of the seat in question, for parts of the seat-back; excluding the rebound phases of the test blocks. For integrated head restraints, the limit between the head restraint and the seat-back is defined by the plane perpendicular to the reference line 540 mm from the R point. All measurements shall be taken in the longitudinal median plane of the corresponding seat or seating position for each seating position constituting the forward boundary of the luggage compartment. During the test described in annex 9, the test blocks shall remain behind the seat-back(s) in question.	(b)	During the test described in **Annex 16,** the test blocks shall remain behind the seat-back(s) in question."	Rreference revised . (**EC: GRSP/2008/11**)
			Paragraph 5.16.2. (former), renumber as 5.12.2. and amend to read:	
5.16.2.	Partitioning systems	"**5.12.2.**	Partitioning systems	Renumbered, and reference revised . (**EC: GRSP/2008/11**)

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
	At the request of the vehicle manufacturer, the test described in annex 9 may be carried out with the partitioning systems in place, if these systems are fitted as standard equipment for the particular type of vehicle. Partitioning systems, netting wire mesh located above the seat-backs in their normal position of use, shall be tested according to paragraph 2.2. of annex 9. This requirement is deemed to be met if, during the test, the partitioning systems remain in position. However, the deformation of the partitioning systems during the test is permitted, provided that the forward contour of the partitioning (including parts of the tested seat-back(s) and/or head restraint(s) that are harder than 50 Shore A does not move forward of a transverse vertical plane which		At the request of….described in **Annex 16** may be carried …… Partitioning systems,……. to paragraph 2.2. of **Annex 16.** …	
(a)	a point of 150 mm forward of the R point of the seat in question, for parts of the head restraint;	(a)		
(b)	a point of 100 mm forward of the R point of the seat in question, for parts of the seat-back and part of the partitioning system others than the head restraint. For integrated head restraint, the limit between the head restraint and the seat-back is the one defined in paragraph 5.15.1. All measurements shall be taken in the longitudinal median plane of the corresponding seat or seating position for each seating position constituting the forward boundary of the luggage compartment. After the test, no sharp or rough edges likely to increase the danger or severity of injuries of the occupants shall be present.	(b)	For integrated….one defined in paragraph **5.12.1.** All measurements ……..."	Reference revised. (**EC: GRSP/2008/11**)
			Paragraph 5.16.3. (former), renumber as 5.12.3. and amend to read:	
5.16.3.	The requirements mentioned in paragraphs 5.13.1. and 5.13.2.*/ above shall not apply to luggage retention systems which are activated automatically in case of an impact. The manufacturer shall demonstrate to the satisfaction of the technical service that the protection offered by such systems is equivalent to that described in paragraphs 5.15.1. and 5.15.2.	"**5.12.3.**	The requirements mentioned in paragraphs **5.12.1.** and **5.12.2.** above shall not apply to…….described in paragraphs **5.12.1.** and **5.12.2.**"	Renumbered, and reference revised . (**EC: GRSP/2008/11**)
6	TESTS	6		
6.1.	General specifications applicable to all tests	6.1.		
			Paragraph 6.1.1., amend to read:	
6.1.1.	The seat-back, if adjustable, shall be locked in a position corresponding to a rearward inclination as close as possible to 25 degrees from the vertical of the torso reference line of the manikin described in annex 3, unless otherwise specified by the	"6.1.1.	……..described in **Annex 6**, unless otherwise specified by the manufacturer."	Reference revised . (**EC: GRSP/2008/11**)
6.1.2.	When a seat, its locking mechanism and its installation are identical or symmetrical with respect to another seat on the vehicle, the technical service may test only one such seat.	6.1.2.		
6.1.3.	In the case of seats with adjustable head restraints, the tests shall be conducted with the head restraints placed in the most unfavourable position (generally, the highest position) allowed by its adjusting	6.1.3.		
6.2.	Test of strength of the seat-back and its adjustment systems	6.2.		

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
			Paragraph 6.2.1., amend to read:	
6.2.1.	A force producing a moment of 53 daNm in relation to the R point shall be applied longitudinally and rearwards to the upper part of the seat-back frame through a component simulating the back of the manikin shown in annex 3 to this Regulation. In the case of a bench seat, where part or all of the supporting frame (including that of the head restraints) is common to more than one seating position, the test shall be conducted simultaneously for all those seating	"6.2.1.	…….shown in **Annex 13, Appendix 1**, to this Regulation. In the case of ……."	Reference revised. (**EC: GRSP/2008/11**)
6.3.	Test of strength of the seat anchorage and the adjustment, locking and displacement systems	6.3.		
			Paragraph 6.3.1., amend to read:	
6.3.1.	A longitudinal horizontal deceleration or, at the choice of the applicant, acceleration of not less than 20 g shall be applied for 30 milliseconds in a direction to the whole shell of the vehicle imitating a frontal collision, in accordance with the requirements of Annex 7, paragraph 1. At the request of the manufacturer the test pulse described in Annex 9 - appendix may be used alternatively.	"6.3.1.	…… **of Annex 15, paragraph 1.** At the request of the manufacturer, the test pulse described in **the Appendix of Annex 16** may be used alternatively."	Reference revised . (**EC: GRSP/2008/11**)
6.3.2.	A longitudinal deceleration or, at the choice of the applicant, acceleration in accordance with the requirements of paragraph 6.3.1. shall be applied imitating a rear collision.	6.3.2.		
6.3.3.	The requirements of paragraphs 6.3.1. and 6.3.2. above shall be verified for all positions of the seat. In the case of seats fitted with an adjustable head restraint, the test shall be conducted with the head restraints placed in the most unfavourable position (generally the highest position) allowed by its adjusting system. During the test the seat shall be so positioned that no external factor shall prevent the release of the locking systems. These conditions shall be considered to be met if the seat is tested after being adjusted in the following positions: the longitudinal adjustment is fixed one notch or 10 mm rearward of the most forward normal driving position or position of use as indicated by the manufacturer (for seats with independent vertical adjustment, the cushion shall be placed in its highest position); the longitudinal adjustment is fixed one notch or 10 mm forward of the most rearward normal driving position or position of use as indicated by the manufacturer (for seats with independent vertical adjustment, the cushion shall be placed in its lowest position), and, where appropriate, in accordance with the requirements of	6.3.3.		
6.3.4.	In cases where the arrangement of the locking systems is such that, in a seat position other than those defined in paragraph 6.3.3. above, the distribution of the forces on the locking devices and seat anchorages would be less favourable than with either configuration defined in paragraph 6.3.3., the tests shall be conducted for that less favourable seating position.	6.3.4.		

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
			Paragraph 6.3.5., amend to read:	
6.3.5.	The test conditions of paragraph 6.3.1. shall be considered to be satisfied if, at the request of the manufacturer, they are replaced by a collision test of the complete vehicle in running order against a rigid barrier as laid down in paragraph 2. of annex 7 to this Regulation. In this case, the seat shall be adjusted for the least favourable conditions of distribution of stresses in the anchorage system as provided for in paragraphs 6.1.1., 6.3.3. and 6.3.4. above.	"6.3.5.	…….in paragraph 2. of **Annex 15** to this Regulation……."	Reference revised . (**EC: GRSP/2008/11**)
6.4.	Test of the performance of the head restraint	6.4.		
6.4.1.	If the head restraint is adjustable, it shall be placed in the most unfavourable position (generally the highest position) allowed by its adjustment system.	6.4.1.		
6.4.2.	In the case of a bench seat, where part or all of the supporting frame (including that of the head restraints) is common to more than one seating position, the test shall be conducted simultaneously for all those seating positions.	6.4.2.		
			Paragraph 6.4.3., amend to read:	
6.4.3.	Test	"6.4.3.	**Test for determining rearward displacement for head restraint.**	Revised and subparagraphs deleted. (**EC: GRSP/2008/11**).
			The procedures for testing rearward displacement and strength are as specified in Annex 6."	
			Paragraphs 6.4.3.1 to 6.4.3.6., should be deleted	
6.4.3.1.	All lines, including the projections of the reference line, shall be drawn in the vertical median plane of the seat or seating position concerned (see annex 5 to this Regulation).		(Deleted)	
6.4.3.4.	The tangent Y to the spherical headform, parallel to the displaced reference line, is determined.		(Deleted)	
6.4.3.5.	The distance X, provided for in paragraph 5.11. above, between the tangent Y and the displaced reference line is measured.		(Deleted)	
			Insert a new paragraph 6.4.4., to read:	
		"**6.4.4.**	**Demonstrate compliance with paragraphs 5.6. through 5.8. of this Regulation with any adjustable lumbar support adjusted to its most rearward nominal design position. If the seat cushion adjusts independently of the seat back, position the seat cushion such that the lowest H-point position is achieved with respect to the seat back. These conditions, however, may be superseded by the detailed test procedures described in the Annexes.**"	Added. (**EC: GRSP/2008/11**) No equivalent provision in gtr.
6.5.	Determination of the height of the head restraint	6.5.		
			Paragraph 6.5.1., amend to read:	
6.5.1.	All lines, including the projection of the reference line, shall be drawn in the vertical median plane of the seat or seating position concerned, the intersection of such plane with the seat determining the contour of the head restraint and of the seat-back (see figure 1 of annex 4 to this Regulation).	"6.5.1.	The height of any head restraint is determined in accordance with Annex 1."	Revised and delete unnecessary paragraphs (**EC: GRSP/2008/11**).
			Paragraphs 6.5.2. to 6.5.4., should be deleted.	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
6.5.2.	The manikin described in annex 3 to this Regulation shall be placed in a normal position on the seat.		(Deleted)	
6.5.3.	The projection of the reference line of the manikin shown in annex 3 to this Regulation is then, in the seat concerned, drawn in the plane specified in paragraph 6.4.3.1. above. The tangent S to the top of the head restraint is drawn perpendicular to the reference line.		(Deleted)	
6.5.4.	The distance "h" from the R point to the tangent S is the height to be taken into consideration in implementing the requirements of paragraph 5.5. above.		(Deleted)	
			Paragraphs 6.6. to 6.6.2., amend to read:	
6.6.	Determination of the width of the head restraint	"6.6.	Determination of the width of the head restraint	Revised (**EC: GRSP/2008/11**).
	(see figure 2 of annex 4 to this Regulation)		~~(see figure 2 of Annex 4 to this Regulation)~~	
6.6.1.	The plane S1, perpendicular to the reference line and situated 65 mm below the tangent S defined in paragraph 6.5.3. above, determines a section in the head restraint bounded by the outline C.	6.6.1.	**The width of any head restraint is determined in accordance with Annex 2.**	Revised (**EC: GRSP/2008/11**).
6.6.2.	The width of the head restraint to be taken into consideration in implementing the requirements of paragraph 5.10. above, is the distance "L" measured in the plane S1 between the vertical longitudinal planes P and P'.	6.6.2.	The width of the head restraint to be taken into consideration in implementing the requirements of paragraph **5.6.3.** above, is the distance "L" **and "L'"** measured in the plane S1 between the vertical longitudinal planes P and P'."	Revised (***EC/JAPAN: GRSP/2009/7***)
6.6.3.	*The width of the head restraint shall if necessary also be determined in the plane perpendicular to the reference line 635 mm above the R point of the seat, this distance being measured along the reference line.*	6.6.3.		gtr does not have a provision for measurement at 635 mm above the R point (paragraph 6. 6. 3, not changed).
			Paragraphs 6.7. and 6.7.1., amend to read:	
6.7.	Determination of distance "a" of head restraint gaps	"6.7.	Determination of distance "a" of head restraint gaps	Revised (**EC: GRSP/2008/11**).
	(see annex 8 to this Regulation)		~~(see annex 8 of this Regulation)~~	
6.7.1.	The distance "a" shall be determined for each gap and in relation to the front face of the head restraint, by means of a sphere having a diameter of 165 mm.	6.7.1.	The distance "a" **of head restraint gaps is determined in accordance with Annex 3.**"	Revised and delete unnecessary paragraphs (**EC: GRSP/2008/11**).
			Paragraphs 6.7.2. and 6.7.3., should be deleted	
6.8.	Tests for checking energy dissipation on the seat-back and head restraint	6.8.		
6.8.1.	The surfaces of the rear parts of seats to be checked are those situated in the areas defined below which can be contacted by a 165 mm diameter sphere when the seat is mounted in the vehicle.	6.8.1.		
6.8.1.1.	Area 1	6.8.1.1.		
6.8.1.1.1.	In the case of separate seats without head restraints, this area shall include the rear part of the seat-back between the longitudinal vertical planes situated at 100 mm on either side of the longitudinal median plane of the seat centre line, and above a plane perpendicular to the reference line 100 mm below the top of the seat	6.8.1.1.1.		

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
6.8.1.1.2.	In the case of bench seats without head restraints, this area shall extend between the longitudinal vertical planes situated at 100 mm on either side of the longitudinal median plane of each designated outboard seating position defined by the manufacturer and above a plane perpendicular to the reference line 100 mm below the top of the seat-back.	6.8.1.1.2.		
6.8.1.1.3.	In the case of seats or bench seats with head restraints, this area shall extend between the longitudinal vertical planes, on either side of and 70 mm from the longitudinal median plane of the seat or of the seating position concerned and situated above the plane perpendicular to the reference line 635 mm from the R point. For the test, the head restraint, if adjustable shall be placed in the most unfavourable position (generally the highest) permitted by its	6.8.1.1.3.		
6.8.1.2.	Area 2	6.8.1.2.		
6.8.1.2.1.	In the case of seats or bench seats without head restraints and seats or bench seats with detachable or separate head restraints, area 2 shall extend above a plane perpendicular to the reference line 100 mm distant from the top of the seat-back, other than parts of area 1.	6.8.1.2.1.		
6.8.1.2.2.	In the case of seats or bench seats with integrated head restraints, area 2 shall extend above a plane perpendicular to the reference line 440 mm distant from the R point of the seat or of the seating position concerned, other than parts of area 1.	6.8.1.2.2.		
6.8.1.3.	Area 3	6.8.1.3.		
			Paragraph 6.8.1.3.1., amend to read:	
6.8.1.3.1.	Area 3 is defined as the part of the back of the seat or the bench seats situated above the horizontal planes defined in paragraph 5.1.4.1.3. above, excluding parts situated in area 1 and area 2.	"6.8.1.3.1.	…..or the bench seats situated above **a** horizontal plane **through the R-point of the seat, but** excluding parts situated in …."	Revised (**EC: GRSP/2008/11**)
			Paragraph 6.9., amend to read:	
6.9.	Equivalent test methods	"6.9.		
	If a test method other than those specified in paragraphs 6.2., 6.3., 6.4. above and annex 6 is used, its equivalence shall be proved.		…..above and **Annex 14** is used, its equivalence shall be proved."	Reference revised (**EC: GRSP/2008/11**)
7	CONFORMITY OF PRODUCTION	7		
	The conformity of production procedures shall comply with those set out in the Agreement, appendix 2 (E/ECE/324-E/ECE/TRANS/505/Rev.2), with the following requirements:			
			Paragraph 7.1., amend to read:	
7.1.	Every vehicle approved pursuant to this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements set out in paragraph 5. above. However, in the case of head restraints as defined in paragraph 2.12.2. and 2.12.3 above, nothing shall prevent the vehicle from conforming to the vehicle type approved, even if it is marketed with seats not fitted with head restraints.	"7.1.	…….in paragraphs **2.12.** and **2.30.** above, nothing shall prevent the ……."	Reference revised (**EC: GRSP/2008/11**)

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
7.2.	The competent authority which granted type approval may at any time verify the conformity control methods applied for each production unit. The authority may also carry out random checks on serially-manufactured vehicles in respect to the requirements set out in paragraph 5. above.	7.2.		
8	PENALTIES FOR NON-CONFORMITY OF PRODUCTION	8		
8.1.	The approval granted in respect of a vehicle type pursuant to this Regulation may be withdrawn if the requirements laid down in paragraph 7.1. above are not complied with or if the vehicles fail in the checks prescribed in paragraph 7. above.	8.1.		
			Paragraph 8.2., amend to read:	
8.2.	If a Party to the Agreement applying this Regulation withdraws an approval it has previously granted, it shall forthwith so notify the other Contracting Parties applying this Regulation by means of a communication form conforming to the model in annex 1 to this Regulation.	"8.2.	……..conforming to the model in **Annex 11** to this Regulation."	Reference revised (**EC: GRSP/2008/11**)
9	MODIFICATIONS OF THE VEHICLE TYPE AND EXTENSION OF APPROVAL WITH RESPECT TO THE SEATS, THEIR ANCHORAGES AND/OR THEIR HEAD RESTRAINTS	9		
9.1.	Every modification of the vehicle type with respect to the seats, their anchorages and/or their head restraints shall be notified to the administrative department which approved the vehicle type. The department may then either:	9.1.		
9.1.1.	consider that the modifications made are unlikely to have an appreciable adverse effect, and that in any event the vehicle still complies with the requirements; or	9.1.1.		
9.1.2.	consider that the modifications are sufficiently unimportant for the results specified in paragraph 6.2., 6.3. and 6.4. above to be verified by calculations based on the approval test results; or	9.1.2.		
9.1.3.	require a further report from the technical service responsible for conducting the tests.	9.1.3.		
9.2.	Confirmation or refusal of approval, specifying the modifications, shall be communicated to the Parties to the Agreement applying this Regulation by means of the procedure laid down in paragraph 4.3. above.	9.2.		
			Paragraph 9.3., amend to read:	
9.3.	The competent authority issuing the extension of approval shall assign a series number for such an extension and inform thereof the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in annex 1 to this Regulation.	"9.3.	…….conforming to the model in **Annex 11** to this Regulation."	Reference revised (**EC: GRSP/2008/11**)
10	PRODUCTION DEFINITELY DISCONTINUED	10		
			Paragraph 10.1., amend to read:	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
10.1.	If the holder of the approval completely ceases to manufacture a device approved in accordance with this Regulation, he shall so inform the authority which granted the approval. Upon receiving the relevant communication that authority shall inform thereof the other Parties to the 1958 Agreement applying this Regulation by means of a communication form conforming to the model in annex 1 to this Regulation.	"10.1.	…..conforming to the model in **Annex 11** to this Regulation."	Reference revised (**EC: GRSP/2008/11**)
11	INSTRUCTIONS FOR USE	11		
11.1.	For seats fitted with adjustable head restraints, the manufacturers shall provide instructions on how to operate, adjust, lock and, where applicable, remove the head restraints.	11.1.		
12	NAMES AND ADDRESSES OF TECHNICAL SERVICES RESPONSIBLE FOR CONDUCTING APPROVAL TESTS AND OF ADMINISTRATIVE DEPARTMENTS	12		
	The Parties to the Agreement applying this Regulation shall communicate to the United Nations Secretariat the names and addresses of the technical services responsible for conducting approval tests and of the administrative departments which grant approval and to which forms certifying approval or extension or refusal or withdrawal of approval, issued in other countries, are to			
			Paragraphs 13. to 13.12., amend to read:	
13	TRANSITIONAL PROVISIONS	"13.	TRANSITIONAL PROVISIONS	
13.1.	As from the official date of entry into force of the 06 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approvals under this Regulation as amended by the 06 series of amendments.		(Deleted)	
13.2.	As from 1 October 1999, Contracting Parties applying this Regulation shall grant ECE approvals only if the requirements of this Regulation, as amended by the 06 series of amendments, are satisfied.		(Deleted)	
13.3.	As from 1 October 2001, Contracting Parties applying this Regulation may refuse to recognize approvals which were not granted in accordance with the 06 series of amendments to this		(Deleted)	
13.4.	As from the official date of entry into force of the 07 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approvals under this Regulation as amended by the 07 series of amendments.	**13.1.**	As from the official date of entry into force of the 07 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approvals under this Regulation as amended by the 07 series of amendments.	Renumbered (**EC: GRSP/2008/11**)
13.5.	As from 24 months after the date of entry into force of the 07 series of amendments, Contracting Parties applying this Regulation shall grant ECE approval only if the vehicle type to be approved complies with the requirements of this Regulation as amended by the 07 series of amendments.	**13.2.**	As from 24 months after the date of entry into force of the 07 series of amendments, Contracting Parties applying this Regulation shall grant ECE approval only if the vehicle type to be approved complies with the requirements of this Regulation as amended by the 07 series of amendments.	Renumbered (**EC: GRSP/2008/11**)

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
13.6.	As from 48 months after the date of entry into force of the 07 series of amendments, existing approvals to this Regulation shall cease to be valid, except in the case of vehicle types which comply with the requirements of this Regulation as amended by the 07 series of amendments.	**13.3.**	As from 48 months after the date of entry into force of the 07 series of amendments, existing approvals to this Regulation shall cease to be valid, except in the case of vehicle types which comply with the requirements of this Regulation as amended by the 07 series of amendments.	Renumbered (**EC: GRSP/2008/11**)
13.7.	As from the official date of entry into force of the 08 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approvals under this Regulation as amended by the 08 series of amendments.	**13.4.**	As from the official date of entry into force of the 08 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approvals under this Regulation as amended by the 08 series of amendments.	Renumbered (***EC/JAPAN: GRSP/2009/7***)
13.8.	As from 24 months after the date of entry into force of the 08 series of amendments, Contracting Parties applying this Regulation shall grant ECE approvals only if the requirements of this Regulation, as amended by the 08 series of amendments, are satisfied.	**13.5.**	As from 24 months after the date of entry into force of the 08 series of amendments, Contracting Parties applying this Regulation shall grant ECE approvals only if the requirements of this Regulation, as amended by the 08 series of amendments, are satisfied.	Renumbered (***EC/JAPAN: GRSP/2009/7***)
13.9.	As from 36 months after the date of entry into force of the 08 series of amendments, Contracting Parties applying this Regulation may refuse to recognize approvals which were not granted in accordance with the 08 series of amendments to this Regulation.	**13.6.**	As from 36 months after the date of entry into force of the 08 series of amendments, Contracting Parties applying this Regulation may refuse to recognize approvals which were not granted in accordance with the 08 series of amendments to this Regulation.	Renumbered (***EC/JAPAN: GRSP/2009/7***)
13.10.	Notwithstanding paragraphs 13.8. and 13.9., approvals of the vehicle categories which are not affected by the 08 series of amendments shall remain valid and Contracting Parties applying the Regulation shall continue to accept them."	**13.7.**	Notwithstanding paragraphs 13.8. and 13.9., approvals of the vehicle categories which are not affected by the 08 series of amendments shall remain valid and Contracting Parties applying the Regulation shall continue to accept them."	Renumbered (***EC/JAPAN: GRSP/2009/7***)
13.11.	As long as there are no requirements forbidding side-facing seats in their national requirements at the time of acceding to this Regulation, Contracting Parties may continue to allow the fitting of side-facing seats for the purpose of national approval and in this case these bus categories cannot be type approved under this	**13.8.**	As long as there are no requirements forbidding side-facing seats in their national requirements at the time of acceding to this Regulation, Contracting Parties may continue to allow the fitting of side-facing seats for the purpose of national approval and in this case these bus categories cannot be type approved under this Regulation	Renumbered (***EC/JAPAN: GRSP/2009/7***)
13.12.	The exemption referred to in paragraph 5.1.3. shall cease to have effect on 20 October 2010. It may be extended if reliable accident statistics are available and there has been further development of restraint systems."	**13.9.**	The exemption referred to in paragraph 5.1.3. shall cease to have effect on 20 October 2010. It may be extended if reliable accident statistics are available and there has been further development of restraint systems."	Renumbered (***EC/JAPAN: GRSP/2009/7***)
		13.10.	***As from the official date of entry into force of the [09] series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approvals under this Regulation as amended by the [09] series of amendments.***	Added（**EC: GRSP/2008/11**, amended by ***EC/JAPAN: GRSP/2009/7*** ）
		13.11.	***As from [24] months after the date of entry into force of the [09] series of amendments, Contracting Parties applying this Regulation shall grant ECE approval only if the vehicle type to be approved complies with the requirements of this Regulation as amended by the [09] series of amendments.***	Added（**EC: GRSP/2008/11**, amended by ***EC/JAPAN: GRSP/2009/7*** ）
		13.12.	***As from [48] months after the date of entry into force of the [09] series of amendments, existing approvals to this Regulation shall cease to be valid, except in the case of vehicle types which comply with the requirements of this Regulation as amended by the [09] series of amendments. "***	Added（**EC: GRSP/2008/11**, amended by ***EC/JAPAN: GRSP/2009/7*** ）
			Insert new Annexes 1 to 10, to read:	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		"Annex 1	**Minimum Height Measurement Test Procedure**	Added to align with gtr (**EC: GRSP/2008/11**). , with some later amendment
		1	**PURPOSE**	
			The purpose of this test procedure is to demonstrate compliance with the minimum height requirements described in paragraph 5.6.2. of this Regulation.	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2	**PROCEDURE FOR HEIGHT MEASUREMENT**	
			Compliance with the requirements of paragraph 5.6.2. of this Regulation shall be demonstrated by using the height measurement apparatus defined in paragraph 2.2. below.	Reference amended (***EC/JAPAN: GRSP/2009/7***)
			The seat shall be adjusted such that its H-point coincides with the R-point; if the seat back is adjustable, it is set at the design seat back angle; both these adjustments shall be in accordance with the requirements of paragraph 2.1. below. The height of the head restraint shall be the distance between point A and the intersection of lines AE and FG.	
		2.1.	**Relationship between the H-point and the R-point**	
			When the seat is positioned in accordance to the manufacturer's specifications, the H-point, as defined by its co-ordinates, shall lie within a square of 50 mm side length with horizontal and vertical sides whose diagonals intersect at the R-point, and the actual torso	
		2.1.1.	**If these conditions are met, the R-point and the design torso angle shall be used to determine the height of the head restraints in accordance with this annex.**	
		2.1.2.	**If the H-point or the actual torso angle does not satisfy the requirements of paragraph 2.1., the H-point and the actual torso angle shall be determined twice more (three times in all). If the results of two of these three operations satisfy the requirements, the**	
		2.1.3.	**If the results of at least two of the three operations described in paragraph 2.1.2. do not satisfy the requirements of paragraph 2.1., the centroid of the three measured points or the average of the three measured angles shall be used and be regarded as applicable in all cases where the R-point or the design torso angle is referred to in this annex.**	
		2.2.	**Height measuring apparatus**	
			The height measurement apparatus consists of (see Figure 1-1):	
		2.2.1.	**A straight edge AE. The lower point A is placed at the R-point location in accordance with paragraph 2.1. of this annex. The line AE shall be parallel to the design torso angle.**	
		2.2.2.	**A straight edge FG, perpendicular to the line AE and in contact with the top of the head restraint. The height of the head restraint shall be the distance between point A and the intersection of the lines AE and FG.**	
		2.3.	**Height measurement for front outboard head restraints**	
		2.3.1.	**If adjustable, adjust the top of the head restraint to the highest position and measure the height.**	

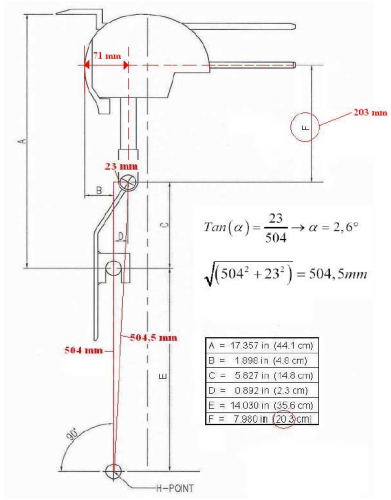
R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
			If adjustable, adjust the top of the head restraint to the lowest position intended for normal use, other than any non-use position described in paragraph 5.8. of this Regulation, and measure the height	
		2.3.2.	**For front outboard head restraints that are prevented by the interior surface of the vehicle roofline from meeting the required height as specified in paragraph 5.6.2.1. of this Regulation, the requirements of paragraph 5.6.2.3. of this Regulation shall be assessed by the following procedure:**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2.3.2.1.	**Adjust the head restraint to its maximum height and measure the clearance between the top of the head restraint and the interior surface of the roofline or the rear backlight, by attempting to pass a 25 ± 0.5 mm sphere between them. In the case of convertibles, the diameter of the sphere *shall be* 50 ± 0.5 mm.**	
		2.3.2.2.	**Adjust the top of the head restraint to the lowest position of adjustment intended for normal use, other than any non-use position described in paragraph 5.8. of this Regulation, and measure the height**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2.4.	**Height measurement for centre and rear outboard head restraints**	
		2.4.1.	**If adjustable, adjust the top of the head restraint to the lowest position of adjustment intended for normal use, other than any non-use position described in paragraph 5.8. of this Regulation and measure the height**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2.4.2.	**For head restraints that are prevented by the interior surface of the vehicle roofline or rear backlight from meeting the required height as specified in paragraph 5.6.2.2. or 5.6.2.4. of this Regulation, the requirements of paragraphs 5.6.2.3. and 5.6.2.5. shall be assessed by the following procedure:**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2.4.2.1.	**If adjustable, adjust the head restraint to its maximum height and measure the clearance between the top of the head restraint or the seat back at all seat back angles for intended use and the interior surface of the roofline or the rear backlight, by attempting to pass a 25 ± 0.5 mm sphere between them. In the case of convertibles, the diameter of the sphere shall be 50 ± 0.5 mm.**	
			(Figure)	
			Figure 1-1	
		Annex 2	**MINIMUM WIDTH MEASUREMENT TEST PROCEDURE**	Added to align with gtr (**EC: GRSP/2008/11**), with some later amendment
		1	**PURPOSE**	
			The purpose of this test procedure is to demonstrate compliance with the minimum width requirements described in paragraph 5.6.3. of this Regulation.	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2	**PROCEDURE FOR WIDTH MEASUREMENT**	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		2.1.	**The seat shall be adjusted such that its H-point coincides with the R-point; if the seat back is adjustable, it is set at the design seat back angle; both these adjustments shall be in accordance with the requirements of paragraph 2.1. of Annex 1.**	
		2.2.	**The plane S1 is a plane perpendicular to the reference line and situated 65 ± 3 mm below the top of the head restraint.**	
		2.3.	**Planes P and P' are vertical longitudinal planes, *tangent* to each side of the head restraint to be measured.**	
		2.4.	**Measure the distances L and L' in the plane S1 between the vertical longitudinal planes passing through the torso line and the planes P and P'.**	
			(Figure)	
			Figure 2-1	
		Annex 3	**Gap measurement procedures**	Added to align with gtr (**EC: GRSP/2008/11**), with some later amendment
		1	**PURPOSE**	
			The purpose of this test procedure is to evaluate any gaps within head restraints as well as gaps between the bottom of the head restraint and the top of the seat back, in accordance with the requirements of paragraphs 5.6.4. and 5.6.5. of this Regulation.	Reference amended (***EC/JAPAN: GRSP/2009/7***)
			Any gaps within the head restraint shall be measured using the sphere procedure described in paragraph 2. *below* .	
			Gaps between the bottom of the head restraint and the top of the seat back shall be measured using the sphere procedure described in paragraph 2. *below* or, at the option *of the manufacturer* , using the linear procedure described in paragraph 3. *below* .	
		2	**GAP MEASUREMENT USING A SPHERE**	
		2.1.	**The seat shall be adjusted such that its H-point coincides with the R-point; if the seat back is adjustable, it is set at the design seat back angle; both these adjustments shall be in accordance with the requirements of paragraph 2.1. of Annex 1.**	
		2.2.	**The head restraint shall be adjusted to its lowest height position and any backset position intended for occupant use.**	
		2.3.	**The area of measurement is anywhere *on the front surface of the head restraint* between two vertical longitudinal planes passing at 85 mm on either side of the torso line and above the top of the seat back.**	
6.7.2.	The sphere shall be put into contact with the gap in a point of the gap area which allows the maximum sphere intrusion, considering no load is to be applied.	**2.4.**	**Applying a load of no more than 5 N against the area of measurement specified in paragraph 2.2. above, place a 165 ± 2 mm diameter spherical headform against any gap such that at least two points of contact are made within the area.**	

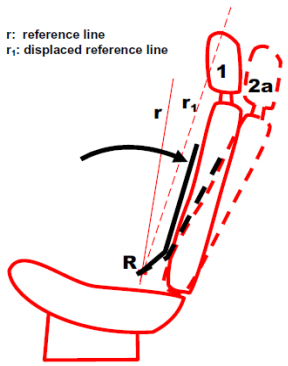
R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
6.7.3.	The distance between the two points of contact of the sphere with the gap will constitute the distance "a" to be considered for the evaluation of the provisions under paragraphs 5.8. and 5.9. above.	**2.5.**	**Determine the gap dimension by measuring the straight line distance between the inner edges of the two furthest contact points, as shown in Figures 3-1 and 3-2.**	
		2.6.	**For gaps within the head restraint, not exceeding 60 mm, no further measurements shall be made.**	
6.4.3.3.2.	In the cases described in paragraphs 5.8. and 5.9. above, the test shall be repeated by applying to each gap, using a sphere of 165 mm in diameter, a force: passing through the centre of gravity of the smallest of the sections of the gap, along transversal planes parallel to the reference line, and reproducing a moment of 37.3 daNm about the R point.	**2.7.**	**For gaps within the head restraint, *exceeding* 60 mm, in order to demonstrate compliance with the requirements of paragraph 5.6.4. of this Regulation, the seat back displacement test procedure described in Annex 6 shall be performed, by applying to each gap, using a sphere of 165 mm in diameter, a force passing through the centre of gravity of the smallest of the sections of the gap, along transversal planes parallel *to the torso line, and reproducing a moment of 373 Nm about the R-point***	Reference amended (***EC/JAPAN: GRSP/2009/7***)
			(Figure)	
			Figure 3-1 - Measurement of a horizontal gap "a".	
			(Figure)	
			Figure 3-2 - Measurement of a vertical gap "a".	
		3	***VERTICAL* MEASUREMENT OF GAP *BETWEEN SEAT BACK AND HEAD RESTRAINT***	
		3.1.	**The seat shall be adjusted such that its H-point coincides with the R-point; if the seat back is adjustable, it is set at the design seat back angle; both these adjustments shall be in accordance with the requirements of paragraph 2.1. of Annex 1.**	
		3.2.	**The head restraint shall be adjusted to its lowest height *for normal occupant use* and any backset position intended for occupant use.**	
		3.3.	**The gap shall be measured as the perpendicular distance between two parallel planes, described as follows (see Figure 3-3):**	
			(a) each plane shall be perpendicular to the design torso line;	
			(b) one of the planes shall be tangent to the bottom of the head restraint;	
			(c) the other plane shall be tangent to the top of the seat back.	
			(Figure)	
			Figure 3-3	
		Annex 4	**BACKSET MEASUREMENT PROCEDURE**	Added to align with gtr,. (**EC: GRSP/2008/11**) with some later amendment
		1	**PURPOSE**	
			Demonstrate compliance with paragraph 5.6.6. by *measurement of the backset.*	Reference amended (***EC/JAPAN: GRSP/2009/7***)
			Two methods are available in accordance with paragraph 5.6.6.2.:	Reference amended (***EC/JAPAN: GRSP/2009/7***)
			(a) using the H-point as the backset reference point (see paragraph 2. below).	

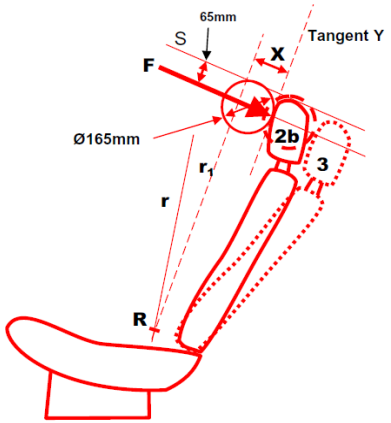
R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
			or	
			(b) using the R-point as the backset reference point (paragraph 3. below).	
		2	**BACKSET MEASUREMENT USING THE H-POINT AS BACKSET REFERENCE POINT**	
			Demonstrate compliance with paragraph 5.6.6.3. by measuring the backset of the head restraint using the three-dimensional H-point machine, defined in Annex 13, Appendix 1, and the HRMD (see Annex 5). This procedure uses the H-point as the *initial backset* reference point.	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2.1.	**The test vehicle shall be levelled using the door sill (front to rear level) and centre luggage compartment (side to side level) as reference points.**	
		2.2.	**The test vehicle shall be preconditioned at a temperature of 20 °C ± 10 °C to ensure that the seat material reaches room temperature.**	
		2.3.	**Remove the head-room probe from the three-dimensional H-point machine and install the two washers (supplied with the HRMD) in the spaces remaining on the H point pivot.**	
		2.4.	**Set up the seat as described in Annex 13, paragraph 3.3. If the seat back is adjustable, it is set at an initial inclination position closest to design angle as measured by the three-dimensional H-point machine. If there is more than one inclination position closest to design angle, set the seat back inclination to the position closest to and rearward of the design angle.**	
		2.5.	**Set up the H-point machine as described in Annex 13, paragraphs 3.4. through 3.10.**	
		2.6.	**Confirm the H-point assembly is level, facing directly forward and located in the centreline of the vehicle seat. As necessary reposition the seat pan.**	
		2.7.	**Install the right and left buttock weights. Install four of the torso weights used in Annex 13, paragraph 3.11., and the two larger HRMD chest weights; alternating left to right. The HRMD torso weights shall be installed last and with the flat side down. Maintain H-point machine level.**	
		2.8.	**Confirm the actual torso angle is ± 1° of the design torso angle by placing an inclinometer on the lower brace of the torso weight hangers. If the measured angle is outside this range, if possible adjust the seat back angle to be ± 1° of the design seat back angle. If an adjustment is made, remove the buttock and torso weights and repeat the steps contained in paragraphs 3.9. through 3.10. of Annex 13, along with steps as described in paragraphs 2.6. and 2.7. of this annex until the actual torso angle is ± 1° of the design seat back angle.**	
		2.9.	**Perform the steps contained in paragraph 3.12. of Annex 13.**	
		2.10.	**Attach the HRMD to the three-dimensional H-point machine.**	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		2.11.	**Confirm the actual torso angle remained ± 1° of the design seat back angle by placing an inclinometer on the lower brace of the torso weight hangers. If the actual torso angle is outside this range, if possible carefully adjust the seat back angle to be ± 1° of the design seat back angle. If the legs and seat pan of the three-dimensional H-point machine move during this procedure, remove the HRMD, the buttock and torso weights, and repeat the steps contained in paragraphs 3.9. through 3.11. of Annex 13, along with steps as described in paragraph 2.6. through 2.10. of this annex until the actual torso angle is ± 1° of the design seat back angle.**	
		2.12.	**Level the HRMD and extend the sliding scale on the back of the head until it contacts the head restraint. Confirm that the scale is positioned laterally within 15 mm of the *head restraint centreline* and take the backset measurement.**	
		3	**BACKSET MEASUREMENT USING THE R-POINT *AS BACKSET REFERENCE POINT***	
		3.1.	**Backset measuring apparatus**	
			The backset measurement apparatus consists of (see Figure 4-1):	
		3.1.1.	**A straight edge (lower arm) AB. The lower point A is placed at the R point location. Point B is located at a distance of 504.5 mm from the R point. The line AB shall be 2.6 degrees forward to the design torso angle.**	
		3.1.2.	**A straight edge (upper arm) BC. Point C is located at a distance of 203 mm vertically up from point B.**	
		3.2.	**Adjust the seat such that its H-point coincides with the R-point, in accordance with the following requirements.**	
		3.2.1.	**Relationship between the H-point and the R-point**	
			When the seat is positioned in accordance to the manufacturer's specifications, the H‑point, as defined by its co-ordinates, shall lie within a square of 50 mm side length with horizontal and vertical sides whose diagonals intersect at the R-point, and the actual torso angle shall be within 5 degree of the design torso angle.	
		3.2.2.	**If these conditions are met, the R-point and the design torso angle shall be used to demonstrate compliance with the provisions of paragraph 5.6.6. of this Regulation.**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		3.2.3.	**If the H-point or the actual torso angle does not satisfy the requirements of paragraph 3.2.1., the H-point and the actual torso angle shall be determined twice more (three times in all). If the results of two of these three operations satisfy the requirements, the conditions of paragraph 3.2.2. shall apply.**	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		3.2.4.	**If the results of at least two of the three operations described in paragraph 3.2.3. do not satisfy the requirements of paragraph 3.2.1., the centroid of the three measured points or the average of the three measured angles shall be used and be regarded as applicable in all cases where the R-point or the design torso angle is referred to in this annex**	
		3.3.	**Adjust the seat back to its design angle.**	
		3.4.	**Adjust the front head restraint so that its top is at any height between and inclusive of 750 mm and 800 mm. If the lowest position of adjustment is above 800 mm, adjust the head restraint to that lowest position of adjustment.**	
		3.5.	**In the case of head restraint with adjustable backset, adjust the head restraint at the most rearward position, such that the backset is in the maximum position.**	
		3.6.	**Establish point D on the head restraint, point D being the intersection of a line drawn from point C horizontally in the x-direction, with the front surface of the head restraint.**	
		3.7.	**Measure the distance CD. The backset shall be the measured distance CD minus 71 mm.**	
			(Figure)	
			Figure 4-1	
		Annex 5	**Head Restraint Measuring Device (HRMD)**	Added to align with gtr (**EC: GRSP/2008/11**).
				Detailed explanations are added to the figure in gtr.**(EC: GRSP/2008/11)**

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		Annex 6	**Displacement, Backset Retention and Strength Test Procedures**	Added to align with gtr, unless otherwise noted (**EC: GRSP/2008/11**), with some later amendment
		1	**PURPOSE**	
			To **demonstrate compliance with the requirements of paragraphs 5.7.2. and 5.7.3 of this Regulation.**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2	**PROCEDURES FOR DISPLACEMENT**	
			The load vectors that generate moment on the head restraint are initially contained in a vertical plane parallel to the vehicle longitudinal *centreline* .	
		2.1.	**Seat set-up**	
			If the seat back is adjustable, it is adjusted to a position specified by the vehicle manufacturer. If there is more than one inclination position closest to the position specified by the manufacturer, set the seat back inclination to the position closest to and rearward of the manufacturer specified position. If the head restraint position is independent of the seat back inclination position, compliance is determined at a seat back inclination position specified by the manufacturer. Adjust the head restraint to the highest position of vertical adjustment intended for occupant use. Adjust the head restraint to the rearmost (relative to the seat) position of horizontal adjustment backset position.	
		2.2.	**In the seat, place a test device having, when viewed laterally, the back pan dimensions and torso *reference* line (vertical centre line) of the three dimensional H-point machine, as specified in Annex 13, with the head room probe in the full back position.**	
6.4.3.2.	The displaced reference line is determined by applying to the part simulating the back of the manikin referred to in annex 3 to this Regulation an initial force producing a rearward moment of 37.3 daNm about the R point.	**2.3.**	**Establish the displaced torso *reference* line *' r1 '* by creating a rearward moment of 373 *± 7.5* Nm about the R-point by applying a force to the seat back through the back pan at the rate of 2.5 Nm/second to 37.3 Nm/second. The initial location on the back pan of the moment generating force vector has a height of 290 mm ± 13 mm. Apply the force vector normal to the torso *reference* line and maintain it within 2 degrees of a vertical plane parallel to the vehicle longitudinal *centreline* . Constrain the back pan to rotate about the R-point. Rotate the force vector direction with the back pan. *(see Figure 6-1)***	Revised (***EC/JAPAN: GRSP/2009/7***). Terms are different from gtr.

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
				This figure and notes area not included in gtr. **(EC: GRSP/2008/11)**
			Figure 6-1.	
			Notes:	
			Position 1.Original unloaded position.	
			Position 2a.Displaced position by applying to the manikin's back a moment of 373 ± 7.5 Nm about the R-point, defining the position of the displaced torso reference line 'r 1'.	
6.4.3.3.	By means of a spherical headform 165 mm in diameter an initial force producing a moment of 37.3 daNm about the R point is applied at right angles to the displaced reference line at a distance of 65 mm below the top of the head restraint, the reference line being kept in its displaced position in accordance with paragraph 6.4.3.2.	**2.4.**	**Maintain the position of the back pan as established in paragraph 2.3. of this annex. Using a 165 ± 2 mm diameter spherical headform establish the headform initial reference position by applying, perpendicular to the displaced torso line, a rearward initial load at the seat centreline at a height 65 ± 3 mm below the top of the head restraint that will produce a 373 ± 7.5 Nm moment about the R-point. *Maintain* this moment for *at least* 5 seconds *and then record* the rearward displacement of the headform *with the load applied.***	gtr does not specify tolerance for moment.
		2.5.	**When determining the rearward displacement for head restraints at**	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
				This figure and notes area not included in gtr. **(EC: GRSP/2008/11)**
			Figure 6-2.	
			Notes:	
			Position 2b.Displaced position by applying to the 165 mm sphere a force F producing a moment of 373 ± 7.5 Nm about the R-point, keeping the displaced torso reference line 'r1' in place.	
			Position 3.Position after displacement by the force F increased to 890 ± 5 N.	
6.4.3.3.1.	If the presence of gaps prevents the application of the force prescribed in paragraph 6.4.3.3. at 65 mm from the top of the head restraint, the distance may be reduced so that the axis of the force passes through the centre line of the frame element nearest to the gap.	**2.6.**	**If the presence of gaps prevents the application of the force, as described in paragraph 2.4. of this annex at 65 ± 3 mm from the top of the head restraint, the distance may be reduced so that the axis of the force passes through the centre line of the frame element nearest to the gap.**	
		2.7.	**Increase the initial load at the rate between 2.5 Nm/second and 37.3 Nm/second until a 373 ± 7.5 Nm moment about the R-point is produced. Maintain the load level producing that moment for not less than 5 seconds and then measure the rearward displacement of the headform relative to the displaced torso reference line.**	Added (**EC: GRSP/2008/11**). No equivalent requirement in gtr.
		3	**Procedure for backset retention and displacement.**	

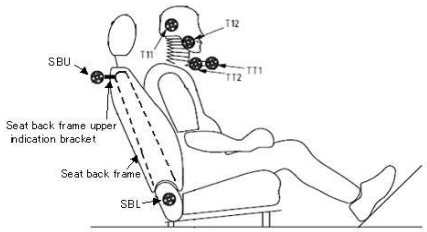
R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		3.1.	**If the seat back is adjustable, it is adjusted to a position specified by the vehicle manufacturer. If there is more than one inclination position closest to the position specified by the manufacturer, set the seat back inclination to the position closest to and rearward of the manufacturer specified position. If the head restraint position is independent of the seat back inclination position, compliance is determined at a seat back inclination position specified by the manufacturer. *Adjust the head restraint to the rearmost (relative to the seat) position of horizontal adjustment backset position.* Adjust the head restraint to the highest position of vertical adjustment intended for occupant use.**	gtr does not require to adjust the head restraint to the rearmost (relative to the seat) position of horizontal adjustment backset position. (**EC: GRSP/2008/11**)
		3.2.	**Adjust the head restraint to any backset position.**	
		3.3.	**In the seat, place a test device having the back pan dimensions and torso line (vertical centre line), when viewed laterally, with the head-room probe in the full back position, of the three-dimensional H-point machine;**	
		3.4.	**Establish the displaced torso line by creating a *posterior* moment of 373 ± 7.5 Nm about the R-point by applying a force to the seat back through the back pan at the rate between 2.5 Nm/second and 37.3 Nm/second. The initial location on the back pan of the moment generating force vector has a height of 290 mm ± 13 mm. Apply the force vector normal to the torso line and maintain it within 2 degrees of a vertical plane parallel to the vehicle longitudinal *centreline*. Constrain the back pan to rotate about the R-point. Rotate the force vector direction with the back pan**	
		3.5.	**Maintain the position of the back pan as established in paragraph 3.4. of this annex. Using a 165 ± 2 mm diameter spherical headform, establish the headform initial reference position by applying, perpendicular to the displaced torso line, a rearward initial load at the seat centreline at a height 65 ± 3 mm below the top of the head restraint that will produce a 37 *± 0.5* Nm moment about the R-point. Measure the rearward displacement of the headform during the application of the load.**	gtr does not specify tolerance for moment.
		3.6.	**If the presence of gaps prevents the application of the force, as described in paragraph 3.5. of this annex at 65 ± 3 mm from the top of the head restraint, the distance may be reduced so that the axis of the force passes through the centre line of the frame element nearest to the gap.**	
		3.7.	**Increase the initial load at the rate of 2.5 Nm/second to 37.3 Nm/second until a 373 *± 7.5* Nm moment about the R-point is produced. Maintain the load level producing that moment for not less than 5 seconds and then measure the rearward displacement of the headform relative to the displaced torso line.**	gtr does not specify tolerance for moment.

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		3.8.	**Reduce the load at the rate of 2.5 Nm/second to 37.3 Nm/second until 0 Nm. Wait 10 minutes. Re-load to 37 ± *0.7* Nm about the R-point. While maintaining the load level producing that moment, measure the rearward displacement of the headform position with respect to its initial reference position.**	gtr does not specify tolerance for moment.
		4	**Strength.**	
6.4.3.6.	To check the effectiveness of the head restraint, the initial load specified in paragraphs 6.4.3.3. and 6.4.3.3.2. is increased to 89 daN unless the breakage of the seat or seat-back occurs earlier.	**4.1.**	**Increase the load specified in paragraph 3.8. of this annex at a rate between 5 N/second and 200 N/second to 890 N ± *5* N and maintain the applied load for not less than 5 seconds *without any breakage of the seat or head restraint.***	gtr does not specify tolerance for the moment. Gtr does not prohibit breakage during maintaining the load . (**EC:**
		Annex 7	**Energy Absorption Test Procedure for Head Restraint**	Added to align with gtr, unless otherwise noted (**EC: GRSP/2008/11**)
		1	**PURPOSE**	
			Evaluate the energy absorption ability of the head restraint by demonstrating compliance with paragraph 5.7.1. of this Regulation in accordance with this Annex.	
		2	**SEAT SET-UP**	
			The seat shall be either mounted in the vehicle or firmly secured to the test bench, as mounted in the vehicle with the attachment parts provided by the manufacturer, so as to remain stationary when the impact is applied. The seat back *is adjusted as specified in paragraph 6.1.1. of the Regulation.* The head restraint shall be mounted on the seat-back as in the vehicle. Where the head restraint is separate, it shall be secured to the part of the vehicle structure to which it is normally attached.	Seat back angle is different R17: 25 degrees (according to paragraph 6. 1. 1) gtr: design position specified by the vehicle manufacturer. (EC: GRSP/2008/11)
		3	**PROCEDURES FOR ENERGY ABSORPTION**	
			Adjustable head restraints shall be measured in any height and backset position of adjustment.	
		3.1.	**Test equipment.**	
		3.1.1.	**Use an impactor with a semispherical headform of a 165 ± 2 mm diameter *for the impacting part of the impactor.* The headform and associated base have a combined mass such that at a speed of not more than 24.1 km/h at the time of impact an energy of 152 ± 6 Joule will be reached.**	gtr does not specify tolerance for energy. (**EC: GRSP/2008/11**)
		3.1.2.	**Instrument the impactor with an acceleration sensing device whose output is recorded in a data channel that conforms to the requirements for a 600 Hz channel class filter as specified in ISO Standard 6487 (2002); The axis of the acceleration-sensing device coincides with the geometric center of the headform and the direction of impact. As an alternative the impactor can be equipped with 2 accelerometers sensing in the direction of impact and placed symmetrically in comparison to the geometric centre of the spherical headform. In this case the deceleration rate shall be taken as the simultaneous average of the readings on the two**	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		3.2.	**Accuracy of the test equipment.**	
			The recording instruments used shall be such that measurements can be made with the following degrees of accuracy:	
		3.2.1.	**Acceleration:**	
			Accuracy = ± 5 per cent of the actual value;	
			Cross-axis sensitivity = < 5 per cent of the lowest point on the scale.	
		3.2.2.	**Speed:**	
			Accuracy: ± 2.5 per cent of the actual value;	
			Sensitivity: 0.5 km/h.	
		3.2.3.	**Time recording:**	
			The instrumentation shall enable the action to be recorded throughout its duration and readings to be made to within one one-thousandth of a second;	
			The beginning of the impact at the moment of first contact between the headform and the item being tested shall be detected on the recordings used for analyzing the test.	
		3.3.	**Test procedure**	
		3.3.1.	**Propel the impactor toward the head restraint. At the time of impact the impactor speed shall be not more than 24.1 km/h.**	
		3.3.2.	**Impact the front *contact* surface of the *seat or* head restraint at any point with a height greater than 635 mm from the R-point and within a distance of *70 mm from* the head restraint vertical centreline and measure the deceleration.**	
		3.3.2.1.	***For the front face of the head restraint, the direction of impact from the front towards the rear* shall be within ± 2 degrees of being horizontal and parallel to the vehicle longitudinal axis.**	
		3.3.2.2.	**For the rear face, the direction of impact from the rear towards the front shall be in a longitudinal plane at an angle of 45° downwards from the vertical.**	No equivalent provision in gtr. (**EC: GRSP/2008/11**)
		3.3.3.	**The front and rear zones are respectively bounded by the horizontal plane tangential to the top of the head restraint as determined in paragraph 6.5. of this Regulation.**	No equivalent provision in gtr. (**EC: GRSP/2008/11**)
			Annex 8	Added to align with gtr unless otherwise noted (**EC: GRSP/2008/11**), with some later amendment
			Height Retention Test Procedure	
		1	**PURPOSE**	
			Demonstrate compliance with paragraph 5.7.4. of this Regulation in accordance with this annex.	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2	**PROCEDURES FOR TEST**	
		2.1.	**Seat set-up**	
			Adjust the adjustable head restraint so that its top is at any of the following height positions at any backset position:	

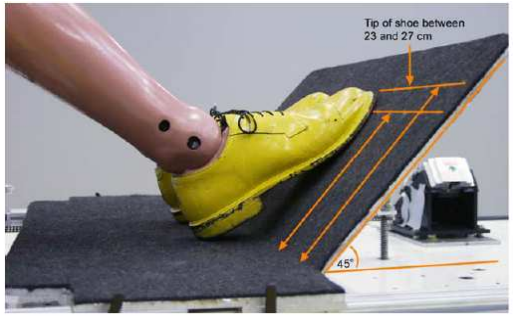
R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		2.1.1.	**For front outboard designated seating positions:**	
		2.1.1.1.	**The highest position; and**	
		2.1.1.2.	**Not less than, but closest to 800 mm;**	
		2.1.2.	**For rear outboard and front centre designated seating positions:**	
		2.1.2.1.	**The highest position; and**	
		2.1.2.2.	**Not less than, but closest to 750 mm.**	
		2.1.3.	**For rear centre designated seating positions:**	
		2.1.3.1.	**The highest position; and**	
		2.1.3.2.	**Not less than, but closest to 700 mm.**	
		2.2.	**Orient a cylindrical test device having a 165 ± 2 mm diameter in plane view (perpendicular to the axis of revolution), and a 152 ± 2 mm length in profile (through the axis of revolution) such that the axis of the revolution is horizontal and in the longitudinal vertical plane through the longitudinal *centreline* of the head restraint. Position the midpoint of the bottom surface of the cylinder in contact with the head restraint.**	gtr does not specify tolerance for the test device length. (**EC: GRSP/2008/11**)
		2.3.	**Establish initial reference position by applying a vertical downward load of 50 ± 1 N at a rate of 250 ± 50 N/minute. Determine the reference position *of the cylinder* after 5 seconds *while maintaining* this load. Mark the initial reference position for the head restraint.**	
		2.4.	**Measure the vertical distance between the lowest point on the underside of the head restraint and the top of the seat back (see paragraph 2.9.).**	
		2.5.	**Increase the load at the rate of 250 ± 50 N/minute to at least 500 N and maintain this load for not less than 5 seconds.**	
		2.6.	**Reduce the load at a rate of 250 ± 50 N/m until the load is completely removed. Maintain this condition for no more than two minutes. Increase the load at a rate of 250 ± 50 N/minute to 50 ± 1 N and, after 5 seconds *and while maintaining* this load, determine the position of the cylindrical device with respect to its initial reference position.**	
		2.7.	**Repeat the measurement of the vertical distance measured between the lowest point on the underside of the head restraint and the top of the seat back. (see paragraph 2.9. of this annex)**	
		2.8.	**Compare the measurements from paragraphs 2.4. and 2.7. The difference is the measurement required to comply with paragraph 5.7.4. of the Regulation.**	
		2.9.	**If the design of the head restraint is such that it is not possible to measure to the top of the seat then the vertical measurement shall be taken by marking a horizontal line across the front of the seat back at least 25 mm below the lowest point of the head restraint and the measurement shall be taken from this line to the underside of the head restraint.**	

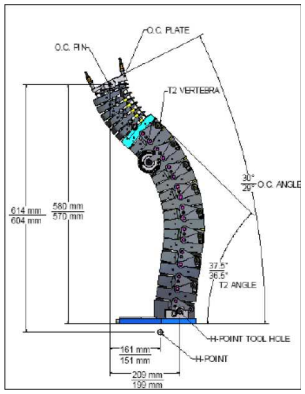
R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		Annex 9	***Dynamic Performance Test Procedure***	Added to allow the dynamic option using BioRID,(***JAPAN: GRSP/2008/24***) with some later amendment
		1	***PURPOSE***	
			Demonstrate compliance with paragraph 5.9. of this Regulation in accordance with this Annex, using a 50th percentile male BioRID II test dummy.	
		2	***TEST CONDITIONS***	
			The test procedure described in this annex is to be performed using any or all of the following as appropriate:	Amended by **EC: GRSP-44-02** and then by ***EC/JAPAN: GRSP/2009/7***
		2.1	***A seat equipped with its head restraint and all necessary attachment hardware, as well as all necessary equipment for the activation of dynamic head restraint which is triggered externally to the seat. Where manufacturer requests, a seat belt, equivalent of that used in the vehicle, and its anchorages may be used.***	Amended by ***EC/JAPAN: GRSP/2009/7***
		2.2	***When additional support is provided by the vehicle body structures, a vehicle body in white including at least the seat to be tested and all necessary seat and head restraint equipment, as well as all necessary equipment for the activation of dynamic head restraint which is triggered externally to the seat. Where manufacturer requests, a seat belt and its anchorages may be used.***	Amended by ***EC/JAPAN: GRSP/2009/7***
		3	***TEST EQUIPMENT***	
		3.1.	***An acceleration or deceleration test sled***	
		3.2.	***Dummy***	Amended by ***EC/JAPAN: GRSP/2009/7***
		3.2.1.	***The dummy shall be a BioRID II 50th percentile male test dummy.***	Amended by **EC: GRSP-44-02**
		3.3.	***Recording equipment required:***	Amended by ***EC/JAPAN: GRSP/2009/7***
		3.3.1.	***Film targets, as described in Figure 9-1 and Table 9-1, shall be applied on the head, T1 bracket, seat back frame upper indication bracket and seat back recliner or lower part of the seat back frame lower, at the side which the test institutes in consultation with the manufacturer consider to be more appropriate for the test.***	Amended by **EC: GRSP-44-02** and then by ***EC/JAPAN: GRSP/2009/7***

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
				
			Figure 9-1 Video motion target placements	
			Table 9-1 Video motion target placement description	Amended by ***EC/JAPAN: GRSP/2009/7***
			Target Number / ***Target location***	Amended by ***EC/JAPAN: GRSP/2009/7***
			T11 / ***Head centre of gravity*** ***The detailed location of the head centre of gravity target is below. The x-axis location is 63.5 ± 2.5 mm from the interface surface between the skull and the skull cap. The z-axis location is 35.6 ± 2.5 mm from the bottom surface of the skull.***	
			T12 / ***Head second target to determine the location of the OC position to take account of the head rotation***	
			TT1 / ***T1 bracket distal***	
			TT2 / ***T1 bracket proximal***	
			SBU / ***Seat back frame upper indication bracket.*** ***The bracket is rigidly installed in the seat back frame upper which the test institutes in consultation with the manufacturer consider to be more appropriate for the***	
			SBL / ***Seat back recliner***	
		3.3.2.	***A camera shall be mounted off-board, perpendicular to the direction of sled travel, at the side of the sled to be tested. It shall show a side view of the torso, head, the complete seat, and video motion targets. The seat back, the head restraint, the upper body parts of the test dummy, and video motion targets shall be visible on the film/video during a time interval equal to or longer than 250 ms after the onset of the sled deceleration/acceleration (t0). The camera frame rate shall be equal to or greater than 500 frames/sec. The camera system meets the SAE J211-2 part 2.***	Amended by ***EC/JAPAN: GRSP/2009/7***
		3.3.3.	***Equipment for measuring and recording sled accelerations.***	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		4	***PROCEDURES FOR TEST SET-UP***	
		4.1.	***Mount the seat, including all of its adjustment mechanisms and hardware that normally connects it to the vehicle floor and toe board which consists of a horizontal section and a section oriented 45° from the horizontal, - or vehicle body in white as appropriate according to paragraph 2 of this Annex on a dynamic test platform so that the seat's orientation relative to the horizontal is the same as it would be in its vehicle and so that movement between the attachment hardware and the test platform is prevented. The gap between the front of the seat and rear of the toe board shall be no more than 100 mm. Instrument the platform with an accelerometer and data processing system. Position the accelerometer sensitive axis parallel to the***	Amended by ***EC/JAPAN: GRSP/2009/7***
		4.2.	***Seat Adjustment***	
		4.2.1.	***For each seat to be tested, if the seat back is adjustable, it shall be set to its design angle.***	Amended by ***EC/JAPAN: GRSP/2009/7***
		4.2.2.	***Using any control that primarily moves the entire seat vertically, place the seat in the mid height position. Using any control that primarily moves the entire seat in the fore and aft directions, place the seat midway between the most forward and most rearward position. If an adjustment position does not exist midway between those positions, the closest adjustment position to the rear of the***	Amended by **EC: GRSP-44-02** and then by ***EC/JAPAN: GRSP/2009/7***
		4.2.3.	***If the seat cushion adjusts independently of the seat back, position the seat cushion such that the highest H-point position is achieved with respect to the seat back, measured by three-dimensional H-point machine as specified in Annex 13. If the specified position of the H-point can be achieved with a range of seat cushion inclination angles, adjust the seat inclination such that the most forward part of the seat cushion is at its lowest position with respect to the most rearward part. Side bolsters shall be set to the widest position. Arm rests shall***	Amended by ***EC/JAPAN: GRSP/2009/7***
		4.2.4.	***If the head restraint is adjustable, adjust the top of the head restraint to a position midway between the lowest position of adjustment and the highest position of adjustment. If an adjustment position midway between the lowest and the highest position does not exist, adjust the head restraint to the position determined by the next process. If a hard locking position exists within 10mm vertically upwards from the geometric mid-position, this shall be the test position. If no hard locking position exists within 10 mm vertically upwards from the geometric mid-position then the next hard locking position down shall be the test position. When the head restraint has a locking fore-aft adjustment, it shall be in the midpoint. If non-locking, the head***	Amended by **EC: GRSP-44-02** and then by ***EC/JAPAN: GRSP/2009/7***
		4.2.5.	***Adjustable lumbar supports shall be positioned so that the lumbar support is in its lowest retracted or deflated position.***	
		4.3.	***Seat Belt Adjustment***	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
			When using the seat belt, prior to placing the seat belt around the test dummy, fully extend the webbing from the seat belt retractor(s) and release it three times to remove slack. If an upper adjustable seat belt turning loop (adjustable seat belt D-ring anchorage) exists, place it in the adjustment position closest to the mid-position. If an adjustment position does not exist midway between the highest and lowest position, the closest adjustment position above the midpoint shall be	Amended by *EC/JAPAN: GRSP/2009/7*
		4.4.	*BioRID II Test dummy positioning procedure.*	
		4.4.1	*According to paragraph 2 of Annex 4, t he seat shall have already been set to give the design torso angle ± 1 degree measured on the H-Point machine fitted with HRMD (see Annex 5).*	To be amended by **JAPAN: GRSP-45-XX**
			Place the test dummy in the seating position equipped with a head restraint after allowing the seat to recover for 15 minutes with nothing in it.	Amended by *EC/JAPAN: GRSP/2009/7*
		4.4.2.	*Place the seat belt across the dummy and lock as normal.*	Revised by *EC/JAPAN: GRSP/2009/7*
		4.4.3.	*Align the test dummy's midsagittal plane with the centerline of the*	
		4.4.4.	*Adjust the test dummy's midsagittal plane to be vertical; the instrumentation platform in the head shall be laterally level.*	
		4.4.5.	*Adjust the pelvis angle to ~~26.5 degrees from horizontal (± 2.5 degrees)~~ the actual torso angle recorded by the procedure specified in paragraph 4.4.1 plus 1.5 ± 2.5 degrees.*	To be amended by **JAPAN: GRSP-45-XX**
		4.4.6.	*Position the test dummy's H-Point 20 ± 10 mm forward and 0 ± 10 mm vertically of the H-Point location measured under the condition specified in paragraph 2.12 of Annex 4, while keeping the pelvis angle ~~at 26.5 ± 2.5 degrees~~ within the range specified in paragraph*	To be amended by **JAPAN: GRSP-45-XX**
		4.4.7.	*Adjust the spacing of the legs so that the centreline of the knees and ankles is 200 mm(±10 mm) apart and ensure that the knees are level.*	
		4.4.8.	*Adjust the test dummy's feet and/or the horizontal position of the adjustable toe board so that the heel of the test dummy's shoe is resting on the heel surface. The tip of the shoe shall rest on the toe pan between 230mm and 270mm from the intersection of the heel surface and toe board, as measured along the surface of the toe board*	
			Figure 9-2 Proper positioning of the test dummy's feet.	
		4.4.9.	*Position the test dummy's arms so that the upper arms are as close to the torso sides as possible. The rear of the upper arms shall contact the seatback, and the elbows shall be bent so that the small fingers of both hands are in contact with the top of the vehicle seat cushion with the palms facing the dummy's thighs.*	
		4.4.10.	*Level the instrumentation plane of the head (front/rear and left/right directions) to within ± 1 degree.*	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		4.4.11.	*Measure the test dummy reference backset, which is the horizontal distance between the rearmost point on the head and the same identifiable location on the head restraint. Compare the test dummy reference backset with the HRMD backset obtained by the procedure specified in paragraph 2.12 of Annex 4.*	
		4.4.11.1.	*If the test dummy reference backset is different more than ±2mm from the HRMD backset obtained by the procedure specified in paragraph 2.12 of Annex 4, plus 15mm , then do the following:*	Amended by *EC/JAPAN: GRSP/2009/7* , to be amended by **JAPAN: GRSP-45-XX**
		4.4.11.1.1.	*Tip the head **fore** /aft no more than ± 1 degree from level in order to meet the backset requirement.*	Amended by **EC: GRSP-44-02**
		4.4.11.1.2.	*If the backset cannot be brought closer to the test dummy reference backset plus 15±2mm by paragraph 4.4.11.1.1 of this Annex, adjust the pelvis angle and H-point position within their respective tolerance bands giving priority to use the pelvis angle tolerance. In this case begin at paragraph 4.4.5 of this Annex and adjust the test dummy position accordingly.*	Amended by *EC/JAPAN: GRSP/2009/7*
		4.4.12.	*Remove the slack from the lap section of the webbing until it is resting gently around the pelvis of the dummy. Only minimal force shall be applied to the webbing when removing the slack. The route of the lap belt shall be as natural as possible and shall be above the*	
		4.5.	*BioRID II dummy.*	
			The following checks shall be made before putting the dummy in the seat for testing. The tests shall be conducted with a BioRID II level G dummy built with mould 2 jacket. The dummy shall comply with both spine stature and dynamic response specifications before the	To be amended by **JAPAN: GRSP-45-XX**
		4.5.1.	*Spine Curvature Check.*	
			With the pelvis adapter plate placed on a level surface, the spine stature shall meet the specifications defined in Table 9-2 and Figure 9-3. The curvature check shall be performed after every 15 tests and all measurements shall be recorded and fully documented.	Amended by *EC/JAPAN: GRSP/2009/7*
				
			Table 9-2 BioRID IIg Spine Curvature Specifications	Added by *EC/JAPAN: GRSP/2009/7*

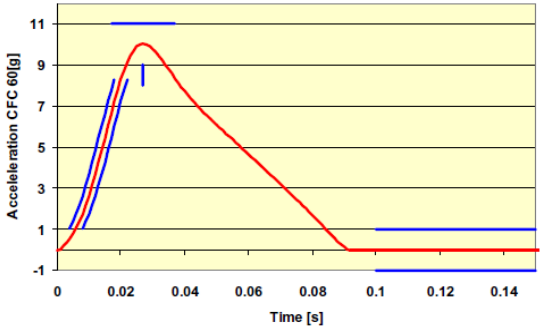
R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)			Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**		**(Relevant proposal)**
			Measurement	***Specification***	
			Angle of occipital interface plate relative to horizontal	***29.5 ±0.5 degrees***	
			Angle of T2 vertebra relative to	***37.0 ±0.5 degrees***	
			Angle of neck plate (lateral)	***0 ±0.5 degrees***	
			H-point indicator to occipital condyle pin (horizontal)	***156 ±5mm***	
			H-point indicator to occipital condyle pin (vertical)	***609 ±5mm***	
					
			Figure 9-3 Spine curvature check		Figure revised (***EC/JAPAN: GRSP/2009/7***)
		4.5.2.	***Calibration***		
			The dynamic response of BioRID is checked by attaching the spine, torso, and head to a mini sled that is impacted through foam by a 33.4 kg probe at a velocity of 4.76 ± 0.1 m/s. The specified response of the dummy and detailed test specifications are described in Test Procedure: Calibration of BioRID II, available from Denton ATD, Inc. Generally, if the dummy's spine curvature changes so that it does not meet the dimensional specifications described in section 4.5.1, then likely it will no longer meet the dynamic response		Added by ***EC/JAPAN: GRSP/2009/7***
		4.5.3.	***Adjustment of the dummy extremities***		
		4.5.3.1.	***Arms***		
		4.5.3.1.1.	***Extend the complete arm laterally outward to a horizontal position. Twist the arm so the elbow cannot rotate downward. Tighten the shoulder yoke clevis bolt so the arm is suspended at 1g.***		
		4.5.3.1.2.	***Rotate the complete arm assembly so it points forward and is horizontal. Twist the arm so the elbow cannot rotate downward. Adjust the shoulder yoke rotation ~~hexagonal nut~~ bolt so the arm is***		To be amended by **JAPAN: GRSP-45-XX**

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		4.5.3.1.3.	***Bend the elbow by 90 degrees so the hand moves toward the chest. Adjust the elbow rotation bolt through access in the upper arm to hold the lower arm horizontally suspended at 1g.***	
		4.5.3.1.4.	***Reposition the arm so it points forward and is horizontal. Twist the lower arm at the elbow, so the lower arm can pivot downward to vertical. Adjust the elbow pivot bolt through access holes in the lower arm flesh at the elbow to hold the lower arm suspended at 1g.***	
		4.5.3.1.5.	***Extend the arm and twist the palm so it faces down. Adjust the wrist pivot bolt at the base of the hand so it is suspended at 1g.***	
		4.5.3.1.6.	***Adjust the wrist rotation bolt through access in the wrist flesh to hold it suspended at 1g.***	
		4.5.3.1.7.	***Repeat the procedure for the other hand and arm.***	
		4.5.3.2.	***Legs***	
		4.5.3.2.1.	***Remove the jacket from the dummy.***	
		4.5.3.2.2.	***With the lower leg at 90 degrees to the upper leg, and the dummy in seated position, lift the upper leg assembly above horizontal. Adjust the femur back set screw so the upper leg is held suspended at 1g.***	
		4.5.3.2.3.	***Rotate the lower leg assembly so it is horizontal. Adjust the knee clevis bolt so the lower leg is held suspended at 1g.***	
		4.5.3.2.4.	***Adjust the ankle ball joint screw so the foot is held suspended at 1g. The ankle adjustment is not critical and is determined by individual***	
		4.5.3.2.5.	***Repeat the procedure on the other leg and foot.***	
		4.6.	***Dress and adjust each test dummy as follows:***	
			The dummy shall be dressed with two pairs of close-fitting, knee-length, spandex/lycra pants and two close-fitting, short-sleeved spandex shirts. The under layer of clothes shall be worn with the shiny/smooth side of the fabric facing out and the over-clothes with the shiny/smooth side against the underclothes (i.e. dull side facing out). The dummies feet shall be fitted with size 11 (45 European or 279mm) Oxford-style, hard-soled, work shoes (e.g. MIL-S-13192P).	
		4.7.	***All tests specified in this Annex shall be conducted at an ambient temperature of 22 ± 3 °C*** ***and a relative humidity of between 10 per cent and 70 per cent. The dummy and seat being tested shall be soaked at this temperature at least three hours prior to the test.***	Amended by **EC: GRSP-44-02**
		4.8.	***Active elements (e.g. Active head restraint, Seat belt pretensioner) which operate in a rear impact situation shall be in an armed condition. For each element that requires a trigger, time to fire (TTF) should be specified by the vehicle manufacturer.***	Added by **EC: GRSP-44-02**
		5	***TEST PROCEDURE.***	
		5.1.	***The corridors for the pulse are illustrated in Figure 9-4. The sled acceleration shall be adjusted within the corridors in Table 9-3 for the complete time interval from 0 to 0.15s. The sled pulse shall fulfil the requirements as specified in Table 9-4.***	Amended by ***EC/JAPAN: GRSP/2009/7***

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		5.1.1.	***Data processing and definitions***	
		5.1.1.1.	***Filter with CFC 60***	
			To ensure that low level noise does not influence the results, the acceleration signal shall be filtered with a CFC60 filter. The CFC60 filter shall be used according to SAE J211, for sled acceleration	
		5.1.1.2.	***T_0 definition***	
			The T_0 (T_{zero}) shall be defined as the time 5.8ms before the CFC60 filtered sled acceleration reaches a 1.0g level.	Amended by **EC: GRSP-44-02** and then by ***EC/JAPAN: GRSP/2009/7***
		5.1.1.3.	***T_{end} definition***	
			The time when the CFC60 filtered sled acceleration for the first time is < 0g shall be called T_{end}.	
		5.1.1.4.	***Time span definition***	
			The time span for sled pulse corridor shall be defined as $dT = T_{end} -$	Amended by **EC: GRSP-44-02**
		5.2.	***In order to track the trajectories of the test dummy and seat with reference to the sled, the following dimensions shall be recorded on the test dummy and seat at the side to be tested. All measurements shall be taken from the camera film plane to the reference targets***	Amended by ***EC/JAPAN: GRSP/2009/7***
			All target points used for analysis shall be depth scaled to compensate for any differences in the Y-coordinates. Compensation shall be included in the film analysis to taken account of parallax effects due to sled motion relative to the camera.	
			Using a suitable "target tracking" film analysis technique, generates traces as follows and filter these traces at [CFC30].	Amended by ***EC/JAPAN: GRSP/2009/7***
			(a) T11 target displacement (absolute laboratory reference)	Added by ***EC/JAPAN: GRSP/2009/7***
			(b) T12 target displacement (absolute laboratory reference)	Added by ***EC/JAPAN: GRSP/2009/7***
			(c) TT1 target displacement (absolute laboratory reference)	Added by ***EC/JAPAN: GRSP/2009/7***
			(d) TT2 target displacement (absolute laboratory reference)	Added by ***EC/JAPAN: GRSP/2009/7***
			(e) SBU target displacement (absolute laboratory reference)	
			(f) SBL target displacement (absolute laboratory reference)	
			OC trace shall be produced from head target T11 and T12 traces. OC trace shall be calculated as following routine.	Added by ***EC/JAPAN: GRSP/2009/7***
			Record the vertical distance (OCx) and horizontal distance (OCz) from T11 to OC.	Added by ***EC/JAPAN: GRSP/2009/7***
			The head angle at each time step($\theta_{head}(t)$)shall be produced from T11 and T12 .	Added by ***EC/JAPAN: GRSP/2009/7***
			$\theta_{head}(t)=\tan^{-1}\frac{T11(Z(t))-T12(Z(t))}{T11(X(t))-T12(X(t))}$	
			Where:	Added by ***EC/JAPAN: GRSP/2009/7***

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	Text	Paragraph	Text	(Relevant proposal)
			T11(X(t)) = InstantaneousT11 X position.	Added by *EC/JAPAN: GRSP/2009/7*
			T11(Z(t)) = InstantaneousT11 Z position.	Added by *EC/JAPAN: GRSP/2009/7*
			T12(X(t)) = InstantaneousT12 X position.	Added by *EC/JAPAN: GRSP/2009/7*
			T12(Z(t)) = InstantaneousT12 Z position.	Added by *EC/JAPAN: GRSP/2009/7*
			$\theta'_{head}(t)$ shall be generated by subtracting the initial head angle($\theta_{head\ initial}$) from the head angle($\theta_{head}(t)$).	Added by *EC/JAPAN: GRSP/2009/7*
			$\theta'_{head}(t) = \theta_{head}(t) - \theta_{head\ initial}$	Added by *EC/JAPAN: GRSP/2009/7*
			OC trace is calculated.	Added by *EC/JAPAN: GRSP/2009/7*
			$OC(X(t)) = T11(X(t)) - OC_X \cos \theta'_{head}(t) + OC_Z \sin \theta'_{head}(t)$	Added by *EC/JAPAN: GRSP/2009/7*
			$OC(Z(t)) = T11(Z(t)) - OC_X \sin \theta'_{head}(t) + OC_Z \cos \theta'_{head}(t)$	Added by *EC/JAPAN: GRSP/2009/7*
			Where:	Added by *EC/JAPAN: GRSP/2009/7*
			OC(X(t)) = Instantaneous OC X position.	Added by *EC/JAPAN: GRSP/2009/7*
			OC(Z(t)) = Instantaneous OC Z position.	Added by *EC/JAPAN: GRSP/2009/7*
			T1 trace shall be produced from neck bracket target TT1 and TT2 traces. T1 trace shall be calculated as following routine.	Added by *EC/JAPAN: GRSP/2009/7*
			Record the vertical distance (T1x) and horizontal distance (T1z) from TT1 to T1.	Added by *EC/JAPAN: GRSP/2009/7*
			The neck bracket angle at each time step($\theta_{neck}(t)$)shall be produced from T11 and T12 .	Added by *EC/JAPAN: GRSP/2009/7*
			$\theta_{neck}(t)=\tan^{-1}\frac{TT1(Z(t))-TT2(Z(t))}{TT2(X(t))-TT2(X(t))}$	Added by *EC/JAPAN: GRSP/2009/7*
			Where:	Added by *EC/JAPAN: GRSP/2009/7*
			TT1(X(t)) = Instantaneous TT1 X position.	Added by *EC/JAPAN: GRSP/2009/7*
			TT1(Z(t)) = Instantaneous TT1 Z position.	Added by *EC/JAPAN: GRSP/2009/7*
			TT2(X(t)) = Instantaneous TT2 X position.	Added by *EC/JAPAN: GRSP/2009/7*
			TT2(Z(t)) = Instantaneous TT2 Z position.	Added by *EC/JAPAN: GRSP/2009/7*

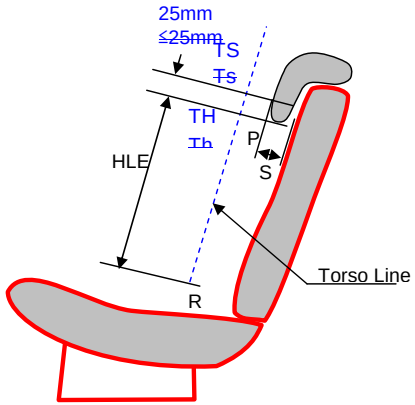
R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
			$\theta'_{neck}(t)$ shall be generated by subtracting the initial neck bracket angle ($\theta_{head\ initial}$) from the neck bracket angle($\theta_{head}(t)$).	Added by EC/JAPAN: GRSP/2009/7
			$\theta'_{neck}(t) = \theta_{neck}(t) - \theta_{neck\ initial}$	Added by EC/JAPAN: GRSP/2009/7
			T1 trace is calculated.	Added by EC/JAPAN: GRSP/2009/7
			$T1(X(t)) = T11(X(t)) - T1_Z \sin\theta'_{head}(t) + T1_X \cos\theta'_{head}(t)$	Added by EC/JAPAN: GRSP/2009/7
			$T1(Z(t)) = T11(Z(t)) - T1_X \cos\theta'_{head}(t) + T1_Z \sin\theta'_{head}(t)$	Added by EC/JAPAN: GRSP/2009/7
			Where:	Added by EC/JAPAN: GRSP/2009/7
			T1(X(t)) = Instantaneous ~~OC~~ T1 X position.	Added by EC/JAPAN: GRSP/2009/7 , to be amended by JAPAN: GRSP-45-XX
			T1(Z(t)) = Instantaneous ~~OC~~ T1 Z position.	Added by EC/JAPAN: GRSP/2009/7 , to be amended by JAPAN: GRSP-45-XX
			OC-T1 relative displacements shall be then defined as the difference between the OC displacement and the T1 displacement in the seat back coordinate system. OC-T1 relative displacement shall be calculated as following routine, for which measurement data shall be considered for evaluation until the point in time at which the head rebounds from the head restraint or at 300 ms after T-zero, whichever	Amended by EC/JAPAN: GRSP/2009/7
			The seat back angle at each time step ($\theta_{SB}(t)$) shall be produced from SBU and SBL target.	Amended by EC/JAPAN: GRSP/2009/7
			$\theta_{SB}(t) = \tan^{-1}\frac{SBU(Z(t)) - SBL(Z(t))}{SBU(X(t)) - SBL(X(t))}$	
			Where:	
			SBU(X(t)) = Instantaneous SBU X position.	
			SBU(Z(t)) = Instantaneous SBU Z position.	
			SBL(X(t)) = Instantaneous SBL X position.	
			SBL(Z(t)) = Instantaneous SBL Z position.	
			In order to make SBL the origin of the coordinate system, parallel translation of the coordinate system shall be conducted.	
			$OC_{SBL}(X(t), Z(t)) = OC(X(t), Z(t)) - SBL(X(t), Z(t))$	
			$T1_{SBL}(X(t), Z(t)) = T1(X(t), Z(t)) - SBL(X(t), Z(t))$	
			Where:	
			$OC_{SBL}(X(t),Z(t))$ = Instantaneous OC X,Z position from SBL.	
			$T1_{SBL}(X(t),Z(t))$ = Instantaneous T1 X,Z position from SBL.	
			$\theta'_{SB}(t)$ shall be generated by subtracting the initial seat back angle($\theta_{SB\ initial}$) from the seat back angle($\theta_{SB}(t)$).	Amended by EC/JAPAN: GRSP/2009/7
			$\theta'_{SB}(t) = \theta_{SB}(t) - \theta_{SB\ initial}$	Amended by EC/JAPAN: GRSP/2009/7

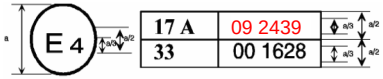
<table>
<tr><th colspan="2">R17-08 (including amendment adopted at the 146th WP29(Nov., 08)</th><th colspan="2">R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)</th><th>Description of Revision</th></tr>
<tr><th>Paragraph</th><th>Text</th><th>Paragraph</th><th>Text</th><th>(Relevant proposal)</th></tr>
<tr><td></td><td></td><td></td><td>The coordinate transformation shall be conducted according to change of a seat back angle.</td><td></td></tr>
<tr><td></td><td></td><td></td><td>OC_{SBL} X'(t) = OC_{SBL} Xcos θ'_{SB} (t) + OC_{SBL} Zsin θ'_{SB} (t)</td><td>Amended by EC/JAPAN: GRSP/2009/7</td></tr>
<tr><td></td><td></td><td></td><td>$T1_{SBL}$ X'(t) = $T1_{SBL}$ Xcos θ'_{SB} (t) + $T1_{SBL}$ Zsin θ'_{SB} (t)</td><td>Amended by EC/JAPAN: GRSP/2009/7</td></tr>
<tr><td></td><td></td><td></td><td>Where:</td><td></td></tr>
<tr><td></td><td></td><td></td><td>OC_{SBL} X'(t) = Instantaneous OC X position in the seat back coordinate system.</td><td></td></tr>
<tr><td></td><td></td><td></td><td>$T1_{SBL}$ X'(t) = Instantaneous T1 X position in the seat back coordinate system.</td><td></td></tr>
<tr><td></td><td></td><td></td><td>The relative displacement between OC and T1 in the seat back coordinate system ($D_{OC\text{-}T1}$ (t)) shall be derived from the difference between the OC displacement and the T1 displacement.</td><td></td></tr>
<tr><td></td><td></td><td></td><td>$D_{OC\text{-}T1}$ (t) = OC_{SBL} X'(t) – $T1_{SBL}$ X'(t)</td><td></td></tr>
<tr><td></td><td></td><td></td><td>OC-T1 relative displacement at each time step ($D'_{OC\text{-}T1}$ (t)) shall be generated by subtracting initial $D_{OC\text{-}T1}$ (0) from $D_{OC\text{-}T1}$ (t).</td><td></td></tr>
<tr><td></td><td></td><td></td><td>$D'_{OC\text{-}T1}$ (t) = $D_{OC\text{-}T1}$ (t) – $D_{OC\text{-}T1}$ (0)</td><td></td></tr>
<tr><td></td><td></td><td></td><td>Dynamic backset shall be calculated as the maximum absolute value of $D'_{OC\text{-}T1}$ (t).</td><td>Amended by EC/JAPAN: GRSP/2009/7</td></tr>
<tr><td></td><td></td><td></td><td> 
</td><td></td></tr>
<tr><td></td><td></td><td></td><td>Figure 9-4 Sled pulse</td><td></td></tr>
<tr><td></td><td></td><td></td><td>Table 9-3 Sled pulse acceleration corridor.</td><td>Table renumbered (EC/JAPAN: GRSP/2009/7), to be amended by JAPAN: GRSP-45-XX (correct the unit "ms" to read</td></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>slope A</td><td></td><td>slope B</td><td></td></tr>
<tr><td>time (s)</td><td>acceleration (m/s^2)</td><td>time (s)</td><td>acceleration (m/s^2)</td></tr>
<tr><td>0.004</td><td>1.053183</td><td>0.008</td><td>1.053183</td></tr>
<tr><td>0.005</td><td>1.375127</td><td>0.009</td><td>1.375127</td></tr>
</table>
</td><td></td></tr>
</table>

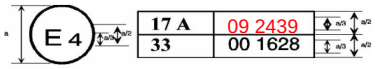
R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
			0.006 *1.74433* *0.01* *1.74433* *0.007* *2.160836* *0.011* *2.160836* *0.008* *2.62308* *0.012* *2.62308* *0.009* *3.127628* *0.013* *3.127628* *0.01* *3.669156* *0.014* *3.669156* *0.011* *4.240642* *0.015* *4.240642* *0.012* *4.833609* *0.016* *4.833609* *0.013* *5.438418* *0.017* *5.438418* *0.014* *6.044617* *0.018* *6.044617* *0.015* *6.641417* *0.019* *6.641417* *0.016* *7.218166* *0.02* *7.218166* *0.017* *7.764556* *0.021* *7.764556* *0.018* *8.270567* *0.022* *8.270567*	
			max C / *max D* *time (s)* / *acceleration (m/s²)* / *time (s)* / *acceleration (m/s²)* *0.017* *11* *0.027* *8* *0.037* *11* *0.027* *9*	
			1g level E *time (s)* / *acceleration (m/s²)* *0.1* *1* *0.14* *1*	
			Table 9-4 Sled pulse corridor reference point locations.	Table renumbered (*EC/JAPAN: GRSP/2009/7*), to be amended by **JAPAN: GRSP-45-XX** (correct the unit "ms" to read
			Parameter / *Requirement* / *Limits +/-* / *Unit* *Velocity change* *dV* *15.65* *0.8* *km/h* *Time span* *dT* *91* *3* *ms* *Mean acceleration* *A mean* *47.85* *4* *m/s²* *Acceleration at T0* *A T0* *0* *2.5* *m/s²*	
		Annex 10	**Non-use position Test Procedure**	Added to align with gtr, (**EC: GRSP/2008/11**) with some later amendment
		1	**PURPOSE**	
			Procedures for folding or retracting head restraints in all designated seating positions equipped with head restraints, except the driver's designated seating position.	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		2	**Procedures to test automatic return head restraints *and demonstrate compliance with paragraph 5.8.4.1.***	Reference amended (***EC/JAPAN: GRSP/2009/7***)
			The procedure is completed **with the ignition *switched* "on", and**	
		2.1.	***Use of*** **5th percentile Hybrid III Dummy.**	
		2.1.1.	**Position the test dummy in the seat such that the dummy's midsagittal plane is aligned within the 15 mm of the seating position**	Typological correction by ***EC/JAPAN: GRSP/2009/7***.
		2.1.2.	**Hold the dummy's thighs down and push rearward on the upper torso to maximize the dummy's pelvic angle.**	
		2.1.3.	**Place the legs as close as possible to 90 degrees to the thighs. Push**	
		2.1.4.	**Note the position of the head restraint. Remove the dummy from the seat. If the head restraint returns to a retracted position upon**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2.2.	**Human surrogate.**	
			A human being who weighs between 47 and 51 kg, and who is between 140 and 150 cm tall may be used. The human surrogate shall be dressed in a cotton T-shirt, full length cotton trousers, and sneakers. Specified weights and heights include clothing.	
		2.2.1.	**Position the human in the centre of the seat with the pelvis touching the seat back and the back against the seat back;**	
		2.2.2.	**Verify the human's midsagittal plane is vertical and within ± 15 mm of the seating position centreline;**	
		2.2.3.	**Verify the transverse distance between the centres of the front of the knees is 160 to 170 mm. Centre the knee separation with respect to the seat centreline;**	
		2.2.4.	**If needed, extend the legs until the feet do not contact the floor pan. The thighs are resting on the seat cushion;**	
		2.2.5.	**If the human contacts the *roof* interior move the seat rearward until a maximum clearance of 5 mm is achieved or the seat is in the closest detent position which does not cause human contact.**	
		2.2.6.	**Passenger foot positioning.**	
		2.2.6.1.	**Place feet flat on the toe board, or**	
		2.2.6.2.	**If the feet cannot be placed flat on the toe board, the feet are perpendicular to the lower leg, and the heel is as far forward as possible and resting on the floor pan, or**	
		2.2.6.3.	**If the heels do not touch the floor pan, the legs are vertical and the feet parallel to the floor pan.**	
		2.2.7.	**Passenger arm/hand positioning.**	
		2.2.7.1.	**Place the human's upper arms adjacent to the torso with the arm centrelines as close to a vertical longitudinal plane as possible;**	
		2.2.7.2.	**Place the palms of the human in contact with the outer part of the thighs;**	
		2.2.7.3.	**Place the little fingers in contact with the seat cushion.**	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
		2.3.	**Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Note the position of the head restraint. Remove the human from the seat. If the head restraint returns to a retracted position upon removal of the human, manually place it in the noted position. Determine compliance with the height requirements of paragraph 5.6.2. by using the test procedures of Annex 1.**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		2.4.	**Return the ignition switch to the "off" position.**	
		3	**60° ROTATION EVALUATION**	
			Procedures for the rear and front centre designated seating positions to demonstrate compliance with paragraph 5.8.4.2.	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		3.1.	**Place the head restraint in any position meeting the requirements of paragraph 5.6.2.2. or paragraph 5.6.2.4. or paragraph 5.6.2.6;**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		3.1.1.	**Mark a line on the head restraint with one end at the point of**	
		3.1.2.	**Fold or retract the head restraint to a position in which its minimum height is less than that specified in paragraph 5.6.2.2. or**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		3.1.3.	**Determine the minimum change in the head restraint reference line angle as projected onto a vertical longitudinal vehicle plane from the angle or range of angles measured in paragraph 3.1.1. of this annex.**	
		4	**DISCOMFORT METRIC**	
			Procedures for the rear and front centre designated seating positions to demonstrate compliance with paragraph 5.8.4.3. of this	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		4.1.	**The HLE and S dimensions are defined in Figure 10-1 *which shows* a vertical fore-aft plane passing through the R-point (i.e. at the mid point of the designated seating position) intersecting the seat cushion, seat back and the head restraint.**	
		4.2.	**Adjust the head restraint to the non-use position.**	
		4.2.1.	**HLE is the distance from the R-point to the lower edge of the head restraint measured along the torso line.**	
		4.2.2.	**S is the maximum thickness of *the lower edge of* the head restraint (within 25 mm of the head restraint lower edge) measured perpendicular to the torso line between TH and TS from line P.**	
		4.2.3.	**P is a line parallel to the torso line which intersects the head restraint at TS.**	
		4.2.4.	**TH is the line perpendicular to the torso line and tangent to the lower edge of the head restraint.**	
		4.2.5.	**TS is the line parallel to and 25 mm from TH.**	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
				To be amended by **JAPAN: GRSP-45-XX**. (Correct the symbol "Ts" to read "TS", "Th" to read "TH", and "£25mm" to read "25mm".)
			Figure 10-1.	
		5	**10° TORSO *REFERENCE* LINE CHANGE**	
			Procedures for the rear and front centre designated seating positions to demonstrate compliance with paragraph 5.8.4.4.	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		5.1.	**Place the head restraint into any position meeting the requirements of paragraph 5.6.1. of this Regulation;**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		5.2.	**Measure the torso *reference* line angle with the three-dimensional H point machine defined in Annex 13;**	
		5.3.	**Fold or retract the head restraint to any position in which its minimum height is less than that specified in paragraph 5.6.2. of this Regulation or in which its backset is more than that specified in paragraph 5.6.6. of this Regulation; and**	Reference amended (***EC/JAPAN: GRSP/2009/7***)
		5.4.	**Again measure the torso *reference* line angle.**"	
			Annex 1 (former), renumber as Annex 11 and amend to read:	
Annex 1	COMMUNICATION	"**Annex 11**		Renumbered (**EC: GRSP/2008/11**)
	Note: In the case of seats fitted with head restraints as defined in paragraphs 2.12.2. and 2.12.3. of this Regulation, the head restraint shall be shown on all drawings, diagrams and photographs.		*Note: ……..defined in paragraphs **2.12.** and **2.30.** of this Regulation…"*	Reference revised (**EC: GRSP/2008/11**)
			Annex 2 (former), renumber as Annex 12 and amend to read:	
Annex 2	ARRANGEMENTS OF APPROVAL MARKS	"**Annex 12**		Renumbered (**EC: GRSP/2008/11**)
	Model A			
	(see paragraphs 4.4., 4.4.1., 4.4.2. and 4.4.3. of this Regulation)			
	Vehicle with at least one seat fitted or capable of being fitted with a head restraint			

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
				
	a = 8 mm min		*a = 8 mm min*	
	The above approval mark when affixed to a vehicle shows that the vehicle type concerned, with regard to the strength of the seats fitted or capable of being fitted with head restraints and with regard to characteristics of the head restraints, has been approved in the Netherlands (E4) pursuant to Regulation No. 17, under the approval number 072439. The first two digits of the approval number indicate that the Regulation already contained the 08 series of amendments at the time of approval. The above approval mark also shows that the vehicle type was approved pursuant to Regulation No. 17 with regard to the strength of any seats on the vehicle which are not fitted or capable of being fitted with head restraints.		*…..number **092439** . …. Regulation already contained the **09** series of amendments …..*	Revised (**EC: GRSP/2008/11**), and amended by ***EC/JAPAN: GRSP/2009/7*** to reflect the latest (proposed) series.
	Model B			
	(see paragraphs 4.4.; 4.4.1. and 4.4.2. of this Regulation)			
	Vehicle with seats not fitted or not capable of being fitted with head restraints			
				
	a = 8 mm min		*a = 8 mm min*	
	The above approval mark when affixed to a vehicle shows that the vehicle type has seats not fitted or capable of being fitted with head restraints, and has, with regard to the strength of the seats and their anchorages, been approved in the Netherlands (E4) pursuant to Regulation No. 17 under the approval number 072439. The first two digits of the approval number indicate that the Regulation already contained the 07 series of amendments at the time of		*…number **092439** . …..Regulation already contained the **09** series of amendments.…..*	Revised (**EC: GRSP/2008/11**), and amended by ***EC/JAPAN: GRSP/2009/7*** to reflect the latest (proposed) series.
	Model C			
	(see paragraph 4.5. of this Regulation)			
	Vehicle with at least one seat fitted or capable of being fitted with a head restraint			
				
	a = 8 mm min		*a = 8 mm min.*	
	The above approval mark when affixed to a vehicle shows that the vehicle type has at least one seat fitted or capable of being fitted with a head restraint, and was approved in the Netherlands (E4) pursuant to Regulations Nos. 17 and 33. 1/			

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
	1/The second number is given merely as an example.			
	The approval numbers indicate that, on the dates when approval was granted, Regulation No. 17 included the 08 series of amendments but Regulation No. 33 was still in its original form. The above approval mark also shows that the vehicle type was approved pursuant to Regulation No. 17 with regard to the strength of any seats on the vehicle which are not fitted or capable of being fitted with head restraints.		*….. the **09** series of amendments but Regulation No. 33 was still in its original form.…..*	Revised (**EC: GRSP/2008/11**), and amended by ***EC/JAPAN: GRSP/2009/7*** to reflect the latest (proposed) series.
	Model D			
	(see paragraph 4.5. of this Regulation)			
	Vehicle with seats not fitted or not capable of being fitted with head restraints			
				
	a = 8 mm min		*a = 8 mm min.*	
	The above approval mark when affixed to a vehicle shows that the vehicle type has seats not fitted or capable of being fitted with head restraints, and was approved in the Netherlands (E4) pursuant to Regulations Nos. 17 and 33. 1/ The approval numbers indicate that, on the dates when approval was granted, Regulation No. 17 included the 08 series of amendments but Regulation No. 33 was still in its original form.		*….the **09** series of amendments but Regulation No. 33 was still in its original form."*	Revised (**EC: GRSP/2008/11**), and amended by ***EC/JAPAN: GRSP/2009/7*** to reflect the latest (proposed) series.
			Annex 3 (former), renumber as Annex 13, replace all references to "3-D H-machine" as "H-point machine" and amend to read:	
Annex 3	PROCEDURE FOR DETERMINING THE "H" POINT AND THE ACTUAL TORSO ANGLE FOR SEATING POSITIONS IN MOTOR VEHICLES	"**Annex 13**	PROCEDURE FOR *DETERMINING* THE "H" POINT AND *THE ACTUAL TORSO ANGLE* FOR SEATING POSITIONS IN MOTOR VEHICLES	Renumbered (**EC: GRSP/2008/11**)
1	PURPOSE	1	PURPOSE	
	The procedure described in this annex is used to establish the "H" point location and the actual torso angle for one or several seating positions in a motor vehicle and to verify the relationship of measured data to design specifications given by the vehicle		The procedure described in this annex is used to establish the "H" point location and the actual torso angle for one or several seating positions in a motor vehicle and to verify the relationship of measured data to design specifications given by the vehicle manufacturer. 1/	
	1/In any seating position other than front seats where the "H" point cannot be determined using the "three-dimensional 'H' point machine" or procedures, the "R"point indicated by the manufacturer may be taken as a reference at the discretion of the competent		1/ In any seating position other than front seats where the "H" point cannot be determined using the "three-dimensional 'H' point machine" or procedures, the "R" point indicated by the manufacturer may be taken as a reference at the discretion of the competent authority.	
2	DEFINITIONS		(Deleted)	Definitions are moved to the main text. (**EC: GRSP/2008/11**)
3	REQUIREMENTS	**2**	REQUIREMENTS	Renumbered ((**EC: GRSP/2008/11**).
3.1.	Data presentation	**2.1**.	Data presentation	Renumbered ((**EC: GRSP/2008/11**).

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
	For each seating position where reference data are required in order to demonstrate compliance with the provisions of the present Regulation, all or an appropriate selection of the following data shall be presented in the form indicated in appendix 3 to this annex:		For each seating position where reference data are required in order to demonstrate compliance with the provisions of the present Regulation, all or an appropriate selection of the following data shall be presented in the form indicated in **A**ppendix 3 to this annex:	
3.1.1.	the co-ordinates of the "R" point relative to the three-dimensional reference system;	**2.1.1.**	the co‑ordinates of the "R" point relative to the three‑dimensional reference system;	Renumbered ((**EC: GRSP/2008/11**).
3.1.2.	the design torso angle;	**2.1.2.**	the design torso angle;	Renumbered ((**EC: GRSP/2008/11**).
3.1.3.	all indications necessary to adjust the seat (if it is adjustable) to the measuring position set out in paragraph 4.3. below.	**2.1.3.**	all indications necessary to adjust the seat (if it is adjustable) to the measuring position set out in paragraph **3.3.** below.	Renumbered and reference revised (**EC: GRSP/2008/11**)
3.2.	Relationship between measured data and design specifications	**2.2.**	Relationship between measured data and design specifications	Renumbered (**EC: GRSP/2008/11**)
3.2.1.	The co-ordinates of the "H" point and the value of the actual torso angle obtained by the procedure set out in paragraph 4. below shall be compared, respectively, with the co-ordinates of the "R" point and the value of the design torso angle indicated by the vehicle	**2.2.1.**	The co‑ordinates of the "H" point and the value of the actual torso angle obtained by the procedure set out in paragraph **3**. below shall be compared, respectively, with the co‑ordinates of the "R" point and the value of the design torso angle indicated by the vehicle manufacturer.	Renumbered (**EC: GRSP/2008/11**)
3.2.2.	The relative positions of the "R" point and the "H" point and the relationship between the design torso angle and the actual torso angle shall be considered satisfactory for the seating position in question if the "H" point, as defined by its co-ordinates, lies within a square of 50 mm side length with horizontal and vertical sides whose diagonals intersect at the "R" point, and if the actual torso angle is within 5 degree of the design torso angle.	**2.2.2.**	The relative positions of the "R" point and the "H" point and the relationship between the design torso angle and the actual torso angle shall be considered satisfactory for the seating position in question if the "H" point, as defined by its co‑ordinates, lies within a square of 50 mm side length with horizontal and vertical sides whose diagonals intersect at the "R" point, and if the actual torso angle is within 5 degree of the design torso angle.	Renumbered (**EC: GRSP/2008/11**)
3.2.3.	If these conditions are met, the "R" point and the design torso angle, shall be used to demonstrate compliance with the provisions of this Regulation.	**2.2.3.**	If these conditions are met, the "R" point and the design torso angle, shall be used to demonstrate compliance with the provisions of this Regulation.	Renumbered (**EC: GRSP/2008/11**)
3.2.4.	If the "H" point or the actual torso angle does not satisfy the requirements of paragraph 3.2.2. above, the "H" point and the actual torso angle shall be determined twice more (three times in all). If the results of two of these three operations satisfy the requirements, the conditions of paragraph 3.2.3. above shall apply.	**2.2.4.**	If the "H" point or the actual torso angle does not satisfy the requirements of paragraph **2.2.2.** above, the "H" point and the actual torso angle shall be determined twice more (three times in all). If the results of two of these three operations satisfy the requirements, the conditions of paragraph **2.2.3.** above shall apply.	Renumbered and reference revised (**EC: GRSP/2008/11**)
3.2.5.	If the results of at least two of the three operations described in paragraph 3.2.4. above do not satisfy the requirements of paragraph 3.2.2. above, or if the verification cannot take place because the vehicle manufacturer has failed to supply information regarding the position of the "R" point or regarding the design torso angle, the centroid of the three measured points or the average of the three measured angles shall be used and be regarded as applicable in all cases where the "R" point or the design torso angle is referred to in this Regulation.	**2.2.5.**	If the results of at least two of the three operations described in paragraph **2.2.4.** above do not satisfy the requirements of paragraph **2.2.2.** above, or if the verification cannot take place because the vehicle manufacturer has failed to supply information regarding the position of the "R" point or regarding the design torso angle, the centroid of the three measured points or the average of the three measured angles shall be used and be regarded as applicable in all cases where the "R" point or the design torso angle is referred to in this Regulation.	Renumbered and reference revised (**EC: GRSP/2008/11**)
4	PROCEDURE FOR "H" POINT AND ACTUAL TORSO ANGLE DETERMINATION	**3**	PROCEDURE FOR "H" POINT AND ACTUAL TORSO ANGLE DETERMINATION	Renumbered (**EC: GRSP/2008/11**)

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
4.1.	The vehicle shall be preconditioned at the manufacturer's discretion, at a temperature of 20 +/- 10 degrees C to ensure that the seat material reaches room temperature. If the seat to be checked has never been sat upon, a 70 to 80 kg person or device shall sit on the seat twice for one minute to flex the cushion and back. At the manufacturer's request, all seat assemblies shall remain unloaded for a minimum period of 30 minutes prior to installation of the 3-D	**3.1.**	The vehicle shall be preconditioned *at the manufacturer's discretion* , at a temperature of 20 ± 10 °C to ensure that the seat material reaches room temperature. *If the seat to be checked has never been sat upon, a 70 to 80 kg person or device shall sit on the seat twice for one minute to flex the cushion and back. At the manufacturer's request, all seat assemblies shall remain unloaded for a minimum period of 30 minutes prior to installation of the* ***H-point*** *machine.*	Renumbered and term revised (3D-H to H-point) (**EC: GRSP/2008/11**). gtr does not specify the procedure to flex the cushion. Gtr does not specify the time unloaded before installing H point machine.
4.2.	The vehicle shall be at the measuring attitude defined in paragraph 2.11. above.	**3.2.**	The vehicle shall be at the measuring attitude ~~*defined in paragraph 2.11. above*~~ .	Renumbered and revised (**EC: GRSP/2008/11**)
4.3.	The seat, if it is adjustable, shall be adjusted first to the rearmost normal driving or riding position, as indicated by the vehicle manufacturer, taking into consideration only the longitudinal adjustment of the seat, excluding seat travel used for purposes other than normal driving or riding positions. Where other modes of seat adjustment exist (vertical, angular, seat-back, etc.) these will be	**3.3.**	The seat, if it is adjustable, shall be adjusted first to the rearmost normal driving *or riding* position, as indicated by the vehicle manufacturer, taking into consideration only the longitudinal adjustment of the seat, excluding seat travel used for purposes other than normal driving *or riding* positions. Where other modes of seat adjustment exist (vertical, angular, seat-back, etc.) these will be then adjusted to the position	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.4.	The area of the seating position contacted by the 3-D H machine shall be covered by a muslin cotton, of sufficient size and appropriate texture, described as a plain cotton fabric having 18.9 threads per cm2 and weighing 0.228 kg m2 or knitted or non-woven fabric having equivalent characteristics.	**3.4.**	The area of the seating position contacted by the ***H-point*** machine shall be covered by a muslin cotton, of sufficient size and appropriate texture, described as a plain cotton fabric having 18.9 threads per cm^2 and weighing 0.228 kg/m^2 or knitted or non-woven fabric having equivalent characteristics	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
	If the test is run on a seat outside the vehicle, the floor on which the seat is placed shall have the same essential characteristics 2/ as the floor of the vehicle in which the seat is intended to be used.		If the test is run on a seat outside the vehicle, the floor on which the seat is placed shall have the same essential characteristics *2/* as the floor of the vehicle in which the seat is intended to be used.	
	2/Tilt angle, height difference with a seat mounting, surface texture, etc.		2/ Tilt angle, height difference with a seat mounting, surface texture, etc.	
4.5.	Place the seat and back assembly of the 3-D H machine so that the centre plane of the occupant (C/LO) coincides with the centre plane of the 3-D H machine. At the manufacturer's request, the 3-D H machine may be moved inboard with respect to the C/LO if the 3-D H machine is located so far outboard that the seat edge will not permit levelling of the 3-D H machine.	**3.5.**	Place the seat and back assembly of the ***H-point*** machine so that the centre plane of the occupant (C/LO) coincides with the centre plane of the ***H-point*** machine. At the manufacturer's request, the ***H-point*** machine may be moved inboard with respect to the C/LO if the ***H-point*** machine is located so far outboard that the seat edge will not permit levelling of the ***H-point*** machine.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.6.	Attach the foot and lower leg assemblies to the seat pan assembly, either individually or by using the T-bar and lower leg assembly. A line through the "H" point sight buttons shall be parallel to the ground and perpendicular to the longitudinal centre plane of the	**3.6.**	Attach the foot and lower leg assemblies to the seat pan assembly, either individually or by using the T-bar and lower leg assembly. A line through the "H" point sight buttons shall be parallel to the ground and perpendicular to the longitudinal centre plane of the seat.	Renumbered (**EC: GRSP/2008/11**).
4.7.	Adjust the feet and leg positions of the 3-D H machine as follows:	**3.7.**	Adjust the feet and leg positions of the ***H-point*** machine as follows:	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.7.1.	Designated seating position: driver and outside front passenger.	**3.7.1.**	Designated seating position: driver and outside front passenger.	Renumbered (**EC: GRSP/2008/11**).

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
4.7.1.1.	Both feet and leg assemblies shall be moved forward in such a way that the feet take up natural positions on the floor, between the operating pedals if necessary. Where possible the left foot shall be located approximately the same distance to the left of the centre plane of the 3-D H machine as the right foot is to the right. The spirit level verifying the transverse orientation of the 3-D H machine is brought to the horizontal by readjustment of the seat pan if necessary, or by adjusting the leg and foot assemblies towards the rear. The line passing through the "H" point sight buttons shall be maintained perpendicular to the longitudinal centre plane of the	**3.7.1.1.**	Both feet and leg assemblies shall be moved forward in such a way that the feet take up natural positions on the floor, between the operating pedals if necessary. Where possible the left foot shall be located approximately the same distance to the left of the centre plane of the ***H-point*** machine as the right foot is to the right. The spirit level verifying the transverse orientation of the ***H-point*** machine is brought to the horizontal by readjustment of the seat pan if necessary, or by adjusting the leg and foot assemblies towards the rear. The line passing through the "H" point sight buttons shall be maintained perpendicular to the longitudinal centre plane of the seat.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.7.1.2.	If the left leg cannot be kept parallel to the right leg and the left foot cannot be supported by the structure, move the left foot until it is supported. The alignment of the sight buttons shall be maintained.	**3.7.1.2.**	If the left leg cannot be kept parallel to the right leg and the left foot cannot be supported by the structure, move the left foot until it is supported. The alignment of the sight buttons shall be maintained.	Renumbered (**EC: GRSP/2008/11**).
4.7.2.	Designated seating position: outboard rear	**3.7.2.**	*Designated seating position: outboard rear*	Renumbered (**EC: GRSP/2008/11**).
	For rear seats or auxiliary seats, the legs are located as specified by the manufacturer. If the feet then rest on parts of the floor which are at different levels, the foot which first comes into contact with the front seat shall serve as a reference and the other foot shall be so arranged that the spirit level giving the transverse orientation of the seat of the device indicates the horizontal.	**3.7.2.1.**	For rear seats or auxiliary seats, the legs are located as specified by the manufacturer. If the feet then rest on parts of the floor which are at different levels, the foot which first comes into contact with the front seat shall serve as a reference and the other foot shall be so arranged that the spirit level giving the transverse orientation of the seat of the device indicates the horizontal.	Renumbered (**EC: GRSP/2008/11**).
4.7.3.	Other designated seating positions:	**3.7.3.**	*Other designated seating positions:*	Renumbered and reference revised (**EC: GRSP/2008/11**).
	The general procedure indicated in paragraph 4.7.1. above shall be followed except that the feet shall be placed as specified by the vehicle manufacturer.		The general procedure indicated in paragraph **3.7.1.** above shall be followed except that the feet shall be placed as specified by the vehicle manufacturer.	Paragraph number revised. (**EC: GRSP/2008/11**).
4.8.	Apply lower leg and thigh weights and level the 3-D H machine.	**3.8.**	Apply lower leg and thigh weights and level the ***H-point*** machine.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.9.	Tilt the back pan forward against the forward stop and draw the 3-D H machine away from the seat-back using the T-bar. Reposition the 3-D H machine on the seat by one of the following methods:	**3.9.**	Tilt the back pan forward against the forward stop and draw the ***H-point*** machine away from the seat‑back using the T‑bar. Reposition the ***H-point*** machine on the seat by one of the following methods:	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.9.1.	If the 3-D H machine tends to slide rearward, use the following procedure. Allow the 3-D H machine to slide rearward until a forward horizontal restraining load on the T-bar is no longer required i.e. until the seat pan contacts the seat-back. If necessary, reposition the lower leg.	**3.9.1.**	If the ***H-point*** machine tends to slide rearward, use the following procedure. Allow the ***H-point*** machine to slide rearward until a forward horizontal restraining load on the T‑bar is no longer required i.e. until the seat pan contacts the seat‑back. If necessary, reposition the lower leg.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.9.2.	If the 3-D H machine does not tend to slide rearward, use the following procedure. Slide the 3-D H machine rearwards by applying a horizontal rearward load to the T-bar until the seat pan contacts the seat-back (see figure 2 of appendix 1 to this annex).	**3.9.2.**	If the ***H-point*** machine does not tend to slide rearward, use the following procedure. Slide the ***H-point*** machine rearwards by applying a horizontal rearward load to the T‑bar until the seat pan contacts the seat‑back (see figure 2 of appendix 1 to this annex).	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
4.10.	Apply a 100 +/- 10 N load to the back and pan assembly of the 3-D H machine at the intersection of the hip angle quadrant and the T-bar housing. The direction of load application shall be maintained along a line passing by the above intersection to a point just above the thigh bar housing (see figure 2 of appendix 1 to this annex). Then carefully return the back pan to the seat-back. Care must be exercised throughout the remainder of the procedure to prevent the 3-D H machine from sliding forward.	**3.10.**	Apply a 100 ± 10 N load to the back and pan assembly of the ***H-point*** machine at the intersection of the hip angle quadrant and the T‑bar housing. The direction of load application shall be maintained along a line passing by the above intersection to a point just above the thigh bar housing (see Figure 2 of **A**ppendix 1 to this annex). Then carefully return the back pan to the seat-back. Care must be exercised throughout the remainder of the procedure to prevent the H-point machine from sliding forward.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.11.	Install the right and left buttock weights and then, alternately, the eight torso weights. Maintain the 3-D H machine level.	**3.11.**	Install the right and left buttock weights and then, alternately, the eight torso weights. Maintain the ***H-point*** machine level.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.12.	Tilt the back pan forward to release the tension on the seat-back. Rock the 3-D H machine from side to side through 10 degrees arc (5 degrees to each side of the vertical centre plane) for three complete cycles to release any accumulated friction between the 3-D H machine and the seat.	**3.12.**	Tilt the back pan forward to release the tension on the seat-back. Rock the ***H-point*** machine from side to side through **a** 10 degrees arc (5 degrees to each side of the vertical centre plane) for three complete cycles to release any accumulated friction between the H-point machine and the seat.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
	During the rocking action, the T-bar of the 3-D H machine may tend to diverge from the specified horizontal and vertical alignment. The T-bar must therefore be restrained by applying an appropriate lateral load during the rocking motions. Care shall be exercised in holding the T-bar and rocking the 3-D H machine to ensure that no inadvertent exterior loads are applied in a vertical or fore and aft	**3.12.1.**	During the rocking action, the T-bar of the ***H-point*** machine may tend to diverge from the specified horizontal and vertical alignment. The T-bar must therefore be restrained by applying an appropriate lateral load during the rocking motions. Care shall be exercised in holding the T-bar and rocking the ***H-point*** machine to ensure that no inadvertent exterior loads are applied in a vertical or fore and aft direction.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
	The feet of the 3-D H machine are not to be restrained or held during this step. If the feet change position, they should be allowed to remain in that attitude for the moment.	**3.12.2.**	The feet of the ***H-point*** machine are not to be restrained or held during this step. If the feet change position, they should be allowed to remain in that attitude for the moment.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
	Carefully return the back pan to the seat-back and check the two spirit levels for zero position. If any movement of the feet has occurred during the rocking operation of the 3-D H machine, they must be repositioned as follows:	**3.12.3.**	Carefully return the back pan to the seat‑back and check the two spirit levels for zero position. If any movement of the feet has occurred during the rocking operation of the ***H-point*** machine**,** they must be repositioned as follows:	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
	Alternately, lift each foot off the floor the minimum necessary amount until no additional foot movement is obtained. During this lifting, the feet are to be free to rotate; and no forward or lateral loads are to be applied. When each foot is placed back in the down position, the heel is to be in contact with the structure designed for	**3.12.4.**	Alternately, lift each foot off the floor the minimum necessary amount until no additional foot movement is obtained. During this lifting, the feet are to be free to rotate; and no forward or lateral loads are to be applied. When each foot is placed back in the down position, the heel is to be in contact with the structure designed for this.	Renumbered (**EC: GRSP/2008/11**).
	Check the lateral spirit level for zero position; if necessary, apply a lateral load to the top of the back pan sufficient to level the 3-D H machine's seat pan on the seat.	**3.12.5.**	Check the lateral spirit level for zero position; if necessary, apply a lateral load to the top of the back pan sufficient to level the ***H-point*** machine's seat pan on the seat.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.13.	Holding the T-bar to prevent the 3-D H machine from sliding forward on the seat cushion, proceed as follows:	**3.13.**	Holding the T-bar to prevent the ***H-point*** machine from sliding forward on the seat cushion, proceed as follows:	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
(a)	return the back pan to the seat-back;	(a)	return the back pan to the seat‑back;	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
(b)	alternately apply and release a horizontal rearward load, not to exceed 25 N, to the back angle bar at a height approximately at the centre of the torso weights until the hip angle quadrant indicates that a stable position has been reached after load release. Care shall be exercised to ensure that no exterior downward or lateral loads are applied to the 3-D H machine. If another level adjustment of the 3-D H machine is necessary, rotate the back pan forward, re-level, and repeat the procedure from paragraph 4.12.	(b)	alternately apply and release a horizontal rearward load, not to exceed 25 N, to the back angle bar at a height approximately at the centre of the torso weights until the hip angle quadrant indicates that a stable position has been reached after load release. Care shall be exercised to ensure that no exterior downward or lateral loads are applied to the ***H-point*** machine. If another level adjustment of the ***H-point*** machine is necessary, rotate the back pan forward, re-level, and repeat the procedure from paragraph **3.12.**	
4.14.	Take all measurements:	**3.14.**	Take all measurements:	Renumbered (**EC: GRSP/2008/11**).
4.14.1.	The co-ordinates of the "H" point are measured with respect to the three-dimensional reference system.	**3.14.1.**	The co-ordinates of the "H" point are measured with respect to the three-dimensional reference system.	Renumbered (**EC: GRSP/2008/11**).
4.14.2.	The actual torso angle is read at the back angle quadrant of the 3-D H machine with the probe in its fully rearward position.	**3.14.2.**	The actual torso angle is read at the back angle quadrant of the ***H-point*** machine with the probe in its fully rearward position.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.15.	If a re-run of the installation of the 3-D H machine is desired, the seat assembly should remain unloaded for a minimum period of 30 minutes prior to the re-run. The 3-D H machine should not be left loaded on the seat assembly longer than the time required to	**3.15.**	If a re-run of the installation of the ***H-point*** machine is desired, the seat assembly should remain unloaded for a minimum period of 30 minutes prior to the re-run. The ***H-point*** machine should not be left loaded on the seat assembly longer than the time required to perform the test.	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.16.	If the seats in the same row can be regarded as similar (bench seat, identical seats, etc.) only one "H" point and one "actual torso angle" shall be determined for each row of seats, the 3-D H machine described in appendix 1 to this annex being seated in a place regarded as representative for the row. This place shall be:	**3.16.**	If the seats in the same row can be regarded as similar (bench seat, identical seats, etc.) only one "H" point and one "actual torso angle" shall be determined for each row of seats, the ***H-point*** machine described in **A**ppendix 1 to this annex being seated in a place regarded as representative for the row. This place shall be:	Renumbered and Term revised (3D-H to H-point) (**EC: GRSP/2008/11**).
4.16.1.	in the case of the front row, the driver's seat;	**3.16.1.**	in the case of the front row, the driver's seat;	Renumbered (**EC: GRSP/2008/11**).
4.16.2.	in the case of the rear row or rows, an outer seat.	**3.16.2.**	in the case of the rear row or rows, an outer seat."	Renumbered (**EC: GRSP/2008/11**).
			Annex 13 (new), Appendix 1, the footnote */, amend to read:	
Annex 3 - Appendix 1	DESCRIPTION OF THE THREE-DIMENSIONAL "H" POINT MACHINE */	Annex 13 - Appendix 1		
	*/For details of the construction of the 3-D H machine refer to Society of Automotive Engineers (SAE), 400 Commonwealth Drive, Warrendale, Pennsylvania 15096, United States of America. The machine corresponds to that described in ISO Standard 6549 : 1980.	"*/	For details of the construction of the ~~3-D~~ ***H-point*** machine refer to Society of Automotive Engineers (SAE), 400 Commonwealth Drive, Warrendale, Pennsylvania 15096, United States of America. **(SAE J826 1995 version)**. The machine corresponds to that described in ISO Standard 6549-1999."	Renumbered and Term revised (3D-H to H-point) and SAE version clarified (**EC: GRSP/2008/11**). To be amended by **JAPAN: GRSP-45-XX**. (Delete 3D)
1	Back and seat pans	1		
	The back and seat pans are constructed of reinforced plastic and metal; they stimulate the human torso and thigh and are mechanically hinged at the "H" point. A quadrant is fastened to the probe hinged at the "H" point to measure the actual torso angle. An adjustable thigh bar, attached to the seat pan, establishes the thigh centreline and serves as a baseline for the hip angle quadrant.			
2	Body and leg elements	2		

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
	Lower leg segments are connected to the seat pan assembly at the T-bar joining the knees, which is a lateral extension of the adjustable thigh bar. Quadrants are incorporated in the lower leg segments to measure knee angles. Shoe and foot assemblies are calibrated to measure the foot angle. Two spirit levels orient the device in space. Body element weights are placed at the corresponding centres of gravity to provide seat penetration equivalent to a 76 kg male. All joints of the 3-D H machine should be checked for free movement without encountering noticeable friction.		Lower leg segments are connected to the seat pan assembly at the T-bar joining the knees, which is a lateral extension of the adjustable thigh bar. Quadrants are incorporated in the lower leg segments to measure knee angles. Shoe and foot assemblies are calibrated to measure the foot angle. Two spirit levels orient the device in space. Body element weights are placed at the corresponding centres of gravity to provide seat penetration equivalent to a 76 kg male. All joints of the ~~3-D~~ ***H-point*** machine should be checked for free movement without encountering noticeable friction.	To be amended by **JAPAN: GRSP-45-XX**. (3D-H to H-point)
	(Figure)			
	Figure 1 - 3-D H machine elements designation		Figure 1 - ~~3-D~~ ***H-point*** machine elements designation	To be amended by **JAPAN: GRSP-45-XX**. (3D-H to H-point)
	(Figure)			
	Figure 2 - Dimensions of the 3-D H machine elements and load distribution		Figure 2 - Dimensions of the ~~3-D~~ ***H-point*** machine elements and load distribution	To be amended by **JAPAN: GRSP-45-XX**. (3D-H to H-point)
	(Dimensions in millimeters)			
Annex 3 - Appendix 2	THREE-DIMENSIONAL REFERENCE SYSTEM	Annex 13 - Appendix 2		
1	The three-dimensional reference system is defined by three orthogonal planes established by the vehicle manufacturer (see	1		
	*/The reference system corresponds to ISO standard 4130 : 1978.			
2	The vehicle measuring attitude is established by positioning the vehicle on the supporting surface such that the co-ordinates of the fiducial marks correspond to the values indicated by the	2		
3	The co-ordinates of the "R" point and the "H" point are established in relation to the fiducial marks defined by the vehicle	3		
	(Figure)			
	Figure - Three-dimensional reference system			
			Annexes 4, 5 and 6 (former), should be deleted.	
			Insert a new Annex 14, to read:	
Annex 6	**TEST PROCEDURE FOR CHECKING ENERGY DISSIPATION**	**"Annex 14**	**Test Procedure for Checking Energy Dissipation of Seat Back**	Added (**EC: GRSP/2008/11**) The requirement for seat back is same as Annex 6 (former)
1	Installation, test apparatus, recording instruments and procedure	**1**	**INSTALLATION, TEST APPARATUS, RECORDING**	
1.1.	Setting up The seat, as mounted in the vehicle, shall be firmly secured to the test bench with the attachment parts provided by the manufacturer, so as to remain stationary when the impact is applied.	**1.1.**	**Setting up** **The seat, as mounted in the vehicle, shall be firmly secured to the test bench with the attachment parts provided by the manufacturer, so as to remain stationary when the impact is applied.**	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
	The seat-back, if adjustable, shall be locked in the position specified in paragraph 6.1.1. of this Regulation. If the seat is fitted with a head restraint, the head restraint shall be mounted on the seat-back as in the vehicle. Where the head restraint is separate, it shall be secured to the part of the vehicle structure to which it is normally attached. If the head restraint is adjustable, it shall be placed in the most unfavourable position allowed by its adjusting systems.		**The seat-back, if adjustable, shall be locked in the position specified in paragraph 6.1.1. of this Regulation.** **If the seat is fitted with a head restraint, the head restraint shall be mounted on the seat-back as in the vehicle.**	
1.2.	Test apparatus	**1.2.**	**Test apparatus**	
1.2.1.	This apparatus consists of a pendulum whose pivot is supported by ball-bearings and whose reduced mass */ at its centre of percussion is 6.8 kg. The lower extremity of the pendulum consists of a rigid headform 165 mm in diameter whose centre is identical with the centre of percussion of the pendulum.	**1.2.1.**	**This apparatus consists of a pendulum whose pivot is supported by ball-bearings and whose reduced mass */ at its centre of percussion is 6.8 kg. The lower extremity of the pendulum consists of a rigid headform 165 mm in diameter whose centre is identical with the centre of percussion of the pendulum.**	
	*/ The relationship of the reduced mass "m_r" of the pendulum to the total mass "m" of the pendulum at a distance "a" between the centre of percussion and the axis of rotation and at a distance "l" between the centre of gravity and the axis of rotation is given by the formula:		*/ The relationship of the reduced mass "mr" of the pendulum to the total mass "m" of the pendulum at a distance "a" between the centre of percussion and the axis of rotation and at a distance "l" between the centre of gravity and the axis of rotation is given by the formula:	
	$m_r = m\frac{l}{a}$			
1.2.2.	The headform shall be fitted with two accelerometers and a speed-measuring device, all capable of measuring values in the direction of impact.	**1.2.2.**	**The headform shall be fitted with two accelerometers and a speed-measuring device, all capable of measuring values in the direction of impact.**	
1.3.	Recording instruments	**1.3.**	**Recording instruments**	
	The recording instruments used shall be such that measurements can be made with the following degrees of accuracy:		**The recording instruments used shall be such that measurements can be made with the following degrees of accuracy:**	
1.3.1.	Acceleration:	**1.3.1.**	**Acceleration:**	
	accuracy = +/- 5 % of the actual value;		**accuracy = ± 5 per cent of the actual value;**	
	frequency class of data channel: class 600 corresponding to ISO Standard 6487 (1980);		**frequency class of data channel: class 600 corresponding to ISO Standard 6487 (1980);**	
	cross-axis sensitivity = < 5 % of the lowest point on the scale.		**cross-axis sensitivity = < 5 per cent of the lowest point on the scale.**	
1.3.2.	Speed:	**1.3.2.**	**Speed:**	
	accuracy: +/- 2.5 % of the actual value;		**accuracy: ± 2.5 per cent of the actual value;**	
	sensitivity: 0.5 km/h.		**sensitivity: 0.5 km/h.**	
1.3.3.	Time recording:	**1.3.3.**	**Time recording:**	
	the instrumentation shall enable the action to be recorded throughout its duration and readings to be made to within one one-thousandth of a second; the beginning of the impact at the moment of first contact between the headform and the item being tested shall be detected on the recordings used for analysing the test.		**the instrumentation shall enable the action to be recorded throughout its duration and readings to be made to within one one-thousandth of a second; the beginning of the impact at the moment of first contact between the headform and the item being tested shall be detected on the recordings used for analysing the test.**	
1.4.	Test procedure	**1.4.**	**Test procedure**	
1.4.1.	Tests on the seat-back	**1.4.1.**	**Tests on the seat-back**	
	With the seat installed as indicated in paragraph 1.1. of this annex, the direction of impact from the rear towards the front shall be situated in a longitudinal plane at an angle of 45 degrees from the		**With the seat installed as indicated in paragraph 1.1. of this annex, the direction of impact from the rear towards the front shall be on a longitudinal plane at a downwards angle of 45° from the vertical.**	

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
	The impact points shall be selected by the test laboratory in area 1 as defined in paragraph 6.8.1.1. of this Regulation, or if necessary in area 2 as defined in paragraph 6.8.1.2. of this Regulation, on surfaces exhibiting radii of curvature less than 5 mm.		**The impact points shall be selected by the test laboratory in area 1 as defined in paragraph 6.8.1.1. of this Regulation, or if necessary in area 2 as defined in paragraph 6.8.1.2. of this Regulation, on surfaces exhibiting radii of curvature less than 5 mm.**	
1.4.2.	Tests on the head restraint		(Deleted)	
	The head restraint shall be fitted and adjusted as indicated in paragraph 1.1. of this annex. Impacts shall be performed on points selected by the test laboratory in area 1 as defined in paragraph 6.8.1.1. of this Regulation, and possibly in area 2 as defined in paragraph 6.8.1.2. of this Regulation, on surfaces exhibiting radii of curvature less than 5 mm.		(Deleted)	
1.4.2.1.	For the rear face, the direction of impact from the rear towards the front shall be in a longitudinal plane at an angle of 45 degrees from the vertical.		(Deleted)	
1.4.2.2.	For the front face, the direction of impact from the front towards the rear shall be horizontal in a longitudinal plane.		(Deleted)	
1.4.2.3.	The front and rear zones are respectively bounded by the horizontal plane tangential to the top of the head restraint as determined in paragraph 6.5. of this Regulation.		(Deleted)	
1.4.3.	The headform shall strike the test item at a speed of 24.1 km/h: this speed shall be achieved either by the mere energy of propulsion or by using an additional impelling device.	**1.4.2.**	**The headform shall strike the test point at a speed of 24.1 ± 0.5 km/h: this speed shall be achieved either by the mere energy of propulsion or by using an additional impelling device.**	
2	Results	**2**	**RESULTS**	
	The deceleration rate shall be taken as the average of the readings on the two accelerometers.		**The deceleration rate shall be taken as the average of the readings on the two decelerometers.**	
3	Equivalent procedures (see paragraph 6.9. of this Regulation).	**3**	**EQUIVALENT PROCEDURES (see paragraph 6.9. of this**	
			Annex 7 (former), renumber as Annex 15 and amend to read:	
Annex 7	METHOD FOR TESTING THE STRENGTH OF SEAT ANCHORAGES AND THEIR ADJUSTMENT, LOCKING AND DISPLACEMENT SYSTEMS	"**Annex 15**		Renumbered (**EC: GRSP/2008/11**)
1	Test of resistance to inertia effects			
1.1.	The seats to be tested shall be mounted on the vehicle body for which they are designed. This vehicle body shall be firmly anchored on a test trolley as prescribed in the following paragraphs.			
1.2.	The method used for anchoring the vehicle body on the test trolley shall not result in a reinforcement of the seat anchorages.			
1.3.	The seats and their parts shall be adjusted and locked as prescribed in paragraph 6.1.1. and in one of the positions described in paragraph 6.3.3. or 6.3.4. of this Regulation.			
1.4.	If the seats of a group do not present essential differences in the sense of paragraph 2.2. of this Regulation, the tests prescribed in paragraphs 6.3.1. and 6.3.2. of this Regulation may be carried out with one seat adjusted to its foremost position and the other seat adjusted to its rearmost position.	1.4.	…….essential differences in the sense of paragraph **2.37.** of this Regulation, the tests prescribed …….	Reference revised (**EC: GRSP/2008/11**)

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
1.5.	The trolley deceleration or acceleration is measured with data channels of frequency class (CFC) 60 corresponding to the characteristics of International Standard ISO 6487 (2002).			
2	Collision test of the complete vehicle against a rigid barrier			
2.1.	The barrier shall consist of a block of reinforced concrete of not less than 3 m width, not less than 1.5 m height and not less than 0.6 m thickness. The front face shall be perpendicular to the final part of the run-up track and shall be covered with plywood boards 19 +/- 1 mm thick. At least 90 t of earth shall be compressed behind the block of reinforced concrete. The barrier of reinforced concrete and earth may be replaced by obstacles having the same front surface, provided that they give equivalent results.	2.1.	……shall be covered with plywood boards 19 ± 1 mm thick. At least ….	Typological correction (**EC: GRSP/2008/11**)
2.2.	At the moment of impact the vehicle shall run free. It shall reach the obstacle on a course perpendicular to the collision wall; the maximum lateral misalignment allowed between the vertical median line of the front of the vehicle and the vertical median line of the collision wall shall be +/- 30 cm; at the moment of impact the vehicle shall no longer be subjected to the action of any additional steering or propelling device. The speed on impact shall be between 48.3 km/h and 53.1 km/h.	2.2.	…. of the collision wall shall be ± 30 cm; at the moment …."	Typological correction (**EC: GRSP/2008/11**)
2.3.	The fuel feed system shall be filled to at least 90 per cent of its capacity with fuel or an equivalent liquid.			
			Annex 8 (former), should be deleted.	
			Annex 9 (former), renumber as Annex 16 and amend to read:	
Annex 9	TEST PROCEDURE FOR DEVICES INTENDED TO PROTECT THE OCCUPANTS AGAINST DISPLACEMENT OF LUGGAGE	"**Annex 16**	…..	Renumbered (**EC: GRSP/2008/11**)
1	Test blocks	1		
	Rigid blocks, with the centre of inertia in the geometric centre.			
	Type 1			
	Dimensions:			
	300 mm x 300 mm x 300 mm			
	all edges and corners rounded to 20 mm			
	Mass:			
	18 kg			
	Type 2			
	Dimensions:			
	500 mm x 350 mm x 125 mm			
	all edges and corners rounded to 20 mm			
	Mass:			
	10 kg			
2	Test preparation	2		
2.1.	Test of seat-backs (see figure 1)	2.1.	Test of seat-backs (see figure **16-1**)	Figure number revised. (**EC: GRSP/2008/11**)
2.1.1.	General requirements	2.1.1.		

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
2.1.1.1.	At the option of the car manufacturer, parts whose hardness is lower than 50 Shore A can be removed from the tested seat and head restraint for the tests.	2.1.1.1.		
2.1.1.2.	Two type 1 test blocks shall be placed on the floor of the luggage compartment. In order to determine the location of the test blocks in the longitudinal direction, they shall first be positioned such that their front side contacts that part of the vehicle which constitutes the forward boundary of the luggage compartment and that their lower side rests on the floor of the luggage compartment. They shall then be moved backwards and parallel to the longitudinal median plane of the vehicle until their geometrical centre has traversed a horizontal distance of 200 mm. If the dimensions of the luggage compartment do not allow a distance of 200 mm and if the rear seats are horizontally adjustable, these seats shall be moved forward to the limit of the adjustment range intended for normal occupant use, or to the position resulting in a distance of 200 mm, whichever is less. In other cases, the test blocks shall be placed as far as possible behind the rear seats. The distance between the	2.1.1.2.		
2.1.1.3.	During the test, the seats must be adjusted to ensure that the locking system cannot be released by external factors. If applicable, the seats shall be adjusted as follows:	2.1.1.3.		
	The longitudinal adjustment shall be secured one notch or 10 mm in front of the rearmost possible position of use specified by the manufacturer (for seats with independent vertical adjustment, the cushion shall be placed to its lowest possible position). The test shall be carried out with the seat-backs in their normal position of			
2.1.1.4.	If the seat-back is fitted with a head restraint, the test must be carried out with the head restraint placed in the highest position, if	2.1.1.4.		
2.1.1.5.	If the back(s) of the rear seat(s) can be folded down, they shall be secured in their upright normal position by the standard locking mechanism.	2.1.1.5.		
2.1.1.6.	Seats behind which the type 1 blocks cannot be installed are exempted from this test	2.1.1.6.	Seats behind …..	
	Figure 1: Positions of test blocks before test of rear seat-backs		**Figure 16-1**: Positions of ……	Figure number revised. (**EC: GRSP/2008/11**)
2.1.2.	Vehicles with more than two rows of seats	2.1.2.		
2.1.2.1.	If the rearmost row of seats is removable and/or can be folded down by the user according to the manufacturer's instructions in order to increase the luggage compartment area, then the seat row immediately in front of this rearmost row shall also be tested.	2.1.2.1.		
2.1.2.2.	However, in this case, the Technical Service, after consultation with the manufacturer, may decide not to test one of the two rearmost rows of seats if the seats and their attachments are of similar design and if the test requirement of 200 mm is respected.	2.1.2.2.		

R17-08 (including amendment adopted at the 146th WP29(Nov., 08)		R17-09 (GRSP/2009/7 and Informal Document GRSP-45-XX)		Description of Revision
Paragraph	**Text**	**Paragraph**	**Text**	**(Relevant proposal)**
2.1.3.	When there is a gap, allowing sliding of one type 1 block past the seats, then the test loads (two type 1 blocks) shall be installed behind the seats after agreement between the Technical Service and the manufacturer.	2.1.3.		
2.1.4.	The exact test configuration shall be noted in the test report.	2.1.4.		
2.2.	Test of partitioning systems	2.2.		
	For the test of the partitioning systems above the seat-backs, the vehicle shall be fitted with a fixed raised test floor having a load surface that locates the centre of gravity of the test block centrally between the top edge of the bordering seat-back (without taking into account the head restraints) and the bottom edge of the roof lining. A type 2 test block is placed on the raised test floor with its largest surface 500 x 350 mm, centrally in relation to the longitudinal axis of the vehicle and with its surface 500 x 125 mm to the front. Partitioning systems behind which the type 2 test block cannot be installed are exempted from this test. The test block is placed directly in contact with the partitioning system. In addition, two type 1 test blocks are positioned in accordance with paragraph 2.1. in order to perform a simultaneous test on the seat-backs (see		……test on the seat-backs (see figure **16-2**)	Figure number revised. (**EC: GRSP/2008/11**)
	Figure 2: Testing of a partitioning system above the backrest		**Figure 16-2**: Testing of a……	Figure number revised. (**EC: GRSP/2008/11**)
2.2.1.	If the seat-back is fitted with a head restraint, the test must be carried out with the head restraint placed in the highest position, if	2.2.1.		
3	Dynamic testing of seat-backs and partitioning systems used as luggage restraint systems	3		
3.1.	The body of the passenger car shall be anchored securely to a test sled, and this anchorage shall not act as reinforcement for seat-backs and the partitioning system. After the installation of the test blocks as described in paragraph 2.1. or 2.2., the passenger car body shall be decelerated or, at the choice of the applicant, accelerated such that the curve remains within the area of the graph in Annex 9, Appendix, and the total velocity change delta V is 50 +0/-2 km/h. With the agreement of the manufacturer, the above described test pulse corridor can be used alternatively to fulfil the test of the seat strength according to paragraph 6.3.1.	3.1.	…..shall be decelerated or, …..within the area of the graph **as shown in the Appendix,** and the total velocity change……"	Reference revised. (**EC: GRSP/2008/11**)
	_____			
	Annex 9 - Appendix			
	CORRIDOR OF SLED'S DECELERATION OR ACCELERATION AS A FUNCTION OF TIME			