

23ExpH11601001-53188-1

Report relating to ECE R129/03 - Report relating to ECE R129/03 - Uniform provisions concerning the approval of: Enhanced Child Restraint Systems for occupants of power-driven vehicles. Including supplement 8 to the 03 version of the Regulation.

Type: Kidsflex
Sort: Specific vehicle
Report type: Experimental

Date 08 November 2023
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1	08 November 2023	Initial report	Pieter Lepelaars	Tim Janssen

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1 General

1.1 Purpose

The activities have been performed to check whether the provided samples and information folder meet the requirements of ECE R129/03 - Report relating to ECE R129/03 - Uniform provisions concerning the approval of: Enhanced Child Restraint Systems for occupants of power-driven vehicles. Including supplement 8 to the 03 version of the Regulation.

For the statement of conformity provided in this report, the binary decision rule has been employed

1.2 Sampling

Sample	Date of receipt	Sample supplied by
H11601001001	10 October 2023	Hernik GmbH
H11601001002	10 October 2023	Hernik GmbH
H11601001003	10 October 2023	Hernik GmbH
H11601001004	10 October 2023	Hernik GmbH

The test house has had no influence on the selection of the samples. For a more detailed description of the samples is referred to Appendix A. The samples that have been handed in, were test worthy.

1.3 Statement of Conformity

Not applicable

1.4 Disclaimer

All test results presented in this report relate only to the items tested.

TASS International B.V. is not responsible for the information in this report that has been provided by the customer. The information concerned is marked as such.

2 Test results

2.1 Dynamic test - frontal impact

(Test: Frontal Impact - Forward facing - Q3, Q6)

Par	Requirement	Limit	Sample	
			H11601001 001	H11601001 002
7.1.3	The applicant shall choose to use deceleration test device or acceleration test device, used test device for this test:		Decel.	Decel.
7.1.3.5	Manikin used		Q6	Q6
	Dynamic test reference number		H2341011	H2344032
7.1.3.4	The trolley speed immediately before impact	48 - 50 [km/h]	49.5	49.5
7.1.3.4	Stopping distance of trolley	600 - 700 [mm]	652	654
6.6.4.3	The resultant head acceleration 3ms	< 80 [g]	63.6	61.5
6.6.4.3	Head Performance Criterion (HPC 15)		417.3	408.5
6.6.4.3	Upper neck tension Force Fz	[N]	1888.8	2022.5
6.6.4.3	Upper neck flexion moment My	[Nm]	54.5	63.8
6.6.4.3	Chest acceleration 3ms	< 55 [g]	49.9	42.6

			H11601001 001	H11601001 002
6.6.4.4.1	Horizontal head excursion of the manikin	< 500 [mm]	380	355
8.1	The time when the head of the Manikin reaches it's maximum horizontal head excursion	[ms]	91.0	87.0
6.6.4.4.1	Vertical head excursion of the manikin	< 800 [mm]	770	780
8.1	The time when the head of the Manikin reaches it's maximum vertical head excursion	[ms]	285.0	254.0
6.6.4.3	Maximum abdomen pressure left	< 1.0 [Bar]	0.5	0.2
8.1	Time maximum abdomen pressure left	[ms]	72.1	113.7
6.6.4.3	Maximum abdomen pressure right	< 1.0 [Bar]	0.5	0.4
8.1	Time maximum abdomen pressure right	[ms]	86.1	111.5
6.6.4.3	Maximum chest deflection	[mm]	-25.2	-25.2
8.1	Time maximum chest deflection	[ms]	105.6	99.0

			H11601001 001	H11601001 002
6.6.4.4.1	No part of the head of the manikin shall pass beyond the plane DE.	Pass	Pass	Pass
6.6.4.2	During the dynamic test, no part of the ECRS affecting the restraint of the occupant shall fully or partially fracture.	Pass, Fail	Pass	Pass
6.6.4.2	This part or system is indentified by the manufacturer as having a load limiting function in the manufacturer's technical description and performed as predicted.	Pass	Pass	Pass
6.6.4.2	No buckles or locking system or displacement system shall release or unlock.	Pass	Pass	Pass
6.6.4.4.3	No part of the child restraint actually helping to keep the child in position shall break.	Pass	Pass	Pass
6.2.1.6.	The standard safety-belt did not become disengaged from any guide or locking device.	Pass	Pass	Pass
7.1.3.5.2.2.	The load tension on lap portion of the standard safety-belt when in use shall be between 45 & 55N	[N]	53.0	54.0
7.1.3.5.2.2.	The load tension on shoulder portion of the standard safety-belt when in use shall be between 45 & 55N	[N]	50.0	52.0

2.2 Dynamic test - lateral impact
(Test: Lateral Impact - Q3, Q6)

Par	Requirement	Limit	Sample	
			H11601001 003	H11601001 004
7.1.3	The applicant shall choose to use deceleration test device or acceleration test device, used test device for this test:	Pass	Decel.	Decel.
7.1.3.5	Manikin used		Q6	Q6
	Dynamic test reference number		H2344035	H2344036
7.1.3.4	The trolley speed immediately before impact	[km/h]	24.1	24.2
7.1.3.4.	The curve of relative velocity between trolley and door panel as function of time is between the corridor.	Pass	Pass	Pass
7.1.3.4	Stopping distance of trolley	200 - 300 [mm]	245	245
6.6.4.5	The resultant head acceleration 3ms	< 80 [g]	49.2	66.0
6.6.4.5	Head Performance Criterion (HPC 15)	< 800	192.9	296.3
6.6.4.5	Upper neck tension Force Fz	[N]	1208.3	1206.4
6.6.4.5	Upper neck flexion moment Mx	[Nm]	23.1	19.9

Appendix A: Sample details

	H11601001001	H11601001002	H11601001003	H11601001004
Type	Kidsflex2	Kidsflex	Kidsflex2	Kidsflex
Manufacturer	Hernik GmbH	Hernik GmbH	Hernik GmbH	Hernik GmbH
Sort	Specific vehicle	Specific vehicle	Specific vehicle	Specific vehicle
Retention system	Non-integral	Non-integral	Non-integral	Non-integral
Object	Child restraint system	Child restraint system	Child restraint system	Child restraint system
Usage of object	Test	Test	Test	Test
Orientation CRS	Forward facing	Forward facing	Forward facing	Forward facing
Inclination CRS	tbd	tbd	Upright	Upright
CRS attachment type	belt+FIX	belt+FIX	Belt	Belt
Restraint system	belt	belt	belt	belt
Dummy type / size	Q6	Q6	Q6	Q6