


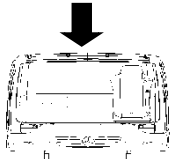
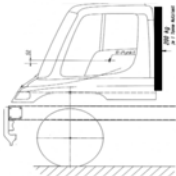



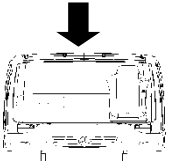
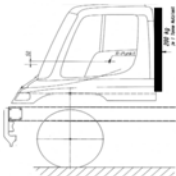

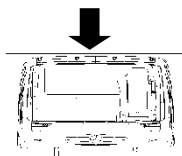


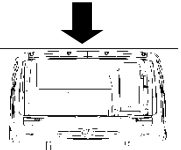
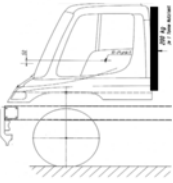



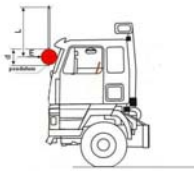




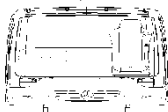
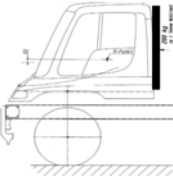

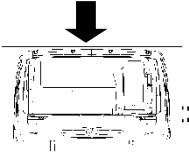
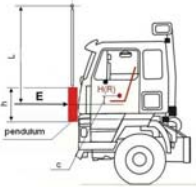
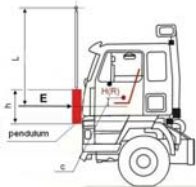
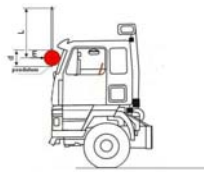
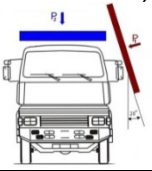
## **Contribution to the discussions to amend UN Regulation No. 29 (Cabs of Commercial Vehicles)**



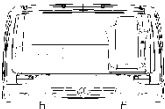
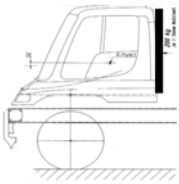
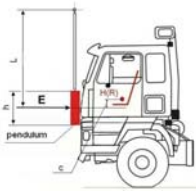

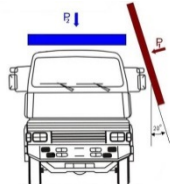


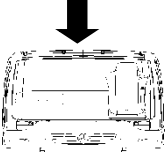
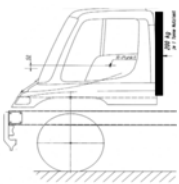
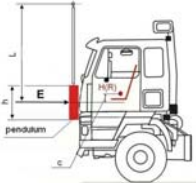
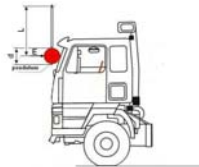

1. During the 52nd session of GRSP in December 2012, discussion took place on proposals submitted by the Russian Federation and by Sweden.
2. These proposals aimed at expanding the scope of the 03 series of amendments to UN Regulation No. 29, taking into account that the scope of the 02 series of amendments was broader.
3. During these discussions, Sweden stressed that the new tests introduced by the 03 series of amendments were typically developed for heavy commercial vehicles and that this should be taken into account. OICA supported these statements and undertook to review the situation and to possibly submit ideas at the May 2013 GRSP session.
4. The following paper is an OICA contribution with the aim to find an acceptable solution, taking into account the desire to expand the scope of UN Regulation No. 29 as much as possible, while taking into consideration the very large differences between commercial vehicles, ranging from less than 3.5 tonnes up to 40 tonnes and more.
5. In the following pages, OICA has listed the scope of UN Regulation No. 29, 02 series of amendments and UN Regulation No. 29, 03 series of amendments, describing the various tests as applicable to the various vehicle categories ( $N_1$ ,  $N_2 \leq 7.5t$ ,  $N_2 > 7.5t$ ,  $N_3$ ) as well as their design in terms of "with separate cab" or "without separate cab".
6. OICA has included several remarks and suggestions in red, indicating in each case whether one or more tests of Regulation 29 could be applied for the various vehicle categories and designs.
7. Once GRSP has reached a principle decision on the proposed concept, OICA volunteers to prepare draft regulatory text to amend UN Regulation No. 29, taking into account that this effort will most likely imply more than simply amending the scope of the Regulation.

OICA comments in red

		<b>R29.02</b>			<b>R29.03</b>		
		<p>Note: scope addresses all N, but all tests repeatedly specify "cab", implying that vehicles without cab are not addressed</p>			<p>Note: scope specifically restricted to "separate cab"</p>		
		<b>Front Test A</b>	<b>Roof Test B</b>	<b>Rear wall Test C (optional)</b>	<b>Front Test A</b>	<b>A pillar Test B</b>	<b>Roof Test C</b>
		Cab Over Engine only. Exemption for R94 approvals			Cab Over Engine only. Exemption for R94 approvals		
<b>N1</b> (≤ 3.5 t)	 <p>OICA proposes to exclude N1 derived from M1 from R29.03</p>  <p>No separate cab</p>	Pendulum 1500 kg Energy 29.4 KJ 	Static load (max mass front axle)  <p>Note: test procedure specifically mentions loading of the cab, implying that vehicles without cab are not included!</p>	Static load 1.96 kN per tonne of useful load Note: not feasible if no separate cab! 	<p>These vehicles are currently exempted, but OICA agrees to add Test A:            Pendulum 1500 kg            Energy 29.4 KJ</p> 	<p><del>R29.03 today exempts vehicles below 7.5t and this should remain.</del></p> <p><del>The A-pillar test clearly does not apply to light or medium trucks.</del></p>	<p><del>No separate cab: R29.03 today exempts vehicles without cab and this should remain. Statistics show low rollover for light vehicles, even further reduced by ESP. In addition, the current roof test would create serious test difficulties for the labs (how to apply the plate?)</del></p>
	 <p>Separate cab</p>	Pendulum 1500 kg Energy 29.4 kJ 	Static load (max mass front axle) 	Static load 1.96 kN per tonne of useful load 	Pendulum ≥ 1500 kg Energy 29.4 kJ 		<p><b>Separate cab:</b>            Static load (max mass front axle)</p> 

		R29.02			R29.03		
		Front Test A	Roof Test B	Rear wall Test C (Optional)	Front Test A	A-pillar Test B	Roof Test C
<b>N2</b> (> 3.5 t, ≤ 12 t)	 No separate cab	<b>N2 ≤ 7 t</b> Pendulum 1500 kg Energy: 29.4 kJ 	Static load (max mass front axle, ≤ 98 kN) 	Static load 1.96 kN per tonne of useful load Note: not feasible if no separate cab! 	<b>N2 ≤ 7.5 t</b> These vehicles are currently exempted, but OICA agrees to add Test A: Pendulum 1500 kg Energy 29.4 KJ 	<del> <b>N2 ≤ 7.5 t</b>            R29.03 today exempts vehicles below 7.5t and this should remain.            The A-pillar test clearly does not apply to light or medium trucks         </del>	<del>           R29.03 today exempts vehicles without cab and this should remain.            The current roof test would create serious test difficulties for the labs (how to apply the plate?)         </del>
		<b>N2 &gt; 7 t</b> Pendulum 1500 kg Energy: 44.1 kJ 	<b>Note: test procedure specifically mentions loading of the cab, implying that vehicles without cab are not included!</b>		<b>N2 &gt; 7.5 t</b> These vehicles are currently exempted, but OICA agrees to add Test A: Pendulum 1500 kg Energy: 55 kJ 	<b>N2 &gt; 7.5t:</b> These vehicles are currently exempted, but OICA agrees to add Test B: Energy 29.4 kJ 	

		R29.02			R29.03		
		Front Test A	Roof Test B	Rear wall Test C (Optional)	Front Test A	A-pillar Test B	Roof Test C
<b>N2</b> (> 3.5 t, ≤ 12 t)	 Separate cab	<b>N2 ≤ 7 t</b> Pendulum 1500 kg Energy: 29.4 kJ 	Static load (max mass front axle, ≤ 98 kN) 	Static load 1.96 kN per tonne of useful load 	<b>N2 ≤ 7.5 t</b> Pendulum ≥ 1500 kg Energy: 29.4 kJ 	<b>N2 ≤ 7.5 t            exempted</b>	<b>N2 ≤ 7.5 t</b> Static load (max mass front axle) 
		<b>N2 &gt; 7 t</b> Energy: 44.1 kJ 			<b>N2 &gt; 7.5 t</b> Energy 55 kJ 	<b>N2 &gt; 7.5t:</b> Energy 29.4 kJ 	<b>N2 &gt; 7.5 t</b> P1 ≥ 17.6 kJ P2 Static load (max mass front axle, ≤ 98 kN) 

		R29.02			R29.03		
		Front Test A	Roof Test B	Rear wall Test C	Front Test A	A pillar Test B	Roof Test C
N3 (> 12 t)	 No separate cab	Pendulum 1500 kg Energy: 44.1 kJ 	Static load (max mass front axle, $\leq 98$ kN) 	Static load 1.96 kN per tonne of useful load 	These vehicles are currently exempted, but OICA agrees to add Test A: Pendulum $\geq 1500$ kg Energy: 55 kJ 	These vehicles are currently exempted, but OICA agrees to add Test B Energy 29.4 kJ 	These vehicles are currently exempted, but OICA agrees to add Test C  However, no test needed if corresponding chassis cab version (N3 with separate cab) meets the test without the rear wall fitted
	 Separate cab	Pendulum 1500 kg Energy: 44.1 kJ 	Static load (max mass front axle, $\leq 98$ kN) 	Static load 1.96 kN per tonne of useful load 	Pendulum $\geq 1500$ kg Energy 55 kJ 	Energy 29.4 kJ 	P1 $\geq 17.6$ kJ P2 Static load (max mass front axle, $\leq 98$ kN) 

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