

Status report GRSP IWG FI

53rd GRSP
Geneva May 2013

Meetings

- 18th Meeting – 24 January 2013 – OICA Paris
- 19th Meeting – 27 February 2013 – EC Brussels
- 20th Meeting – 09 April 2013 – OICA Paris
- 21st Meeting – 11 June 2013 – CLEPA Brussels
- 22nd MEETING – 19 September – BAST Bergish Gladbach

Target

- The Chair of the informal working group on Frontal Collision introduced the last progress report of his group (GRSP-51-26). He informed GRSP that the informal working group would consider existing tools and make use of results from ongoing research programs on this matter at the international level. He informed that, as a first step and as a follow-up of these results, the group would propose an amendment to UN Regulation No. 94 by the May 2014 session of GRSP.

Issues to be solved

- Chest deflection criteria
- FWDB versus FWRB
- Impact assessment
- Geometric alignment
- Test configuration

Chest deflection criteria

Output of expert group to validate the use of thorax injury prediction tools

	RAW			Weight	Weighted		
	Rodpot	DeqLIN	Multi-deflection		Rodpot	DeqLIN	Multi-deflection
Usability							
Measurement available	5,0	3,9	3,4	3,0	15,0	11,6	10,3
Measurement available for all cars	4,4	2,2	4,4	2,7	11,9	5,9	11,9
Cost	5,0	4,5	1,4	1,8	9,2	8,3	2,6
Criterion available	5,0	4,3	1,3	2,7	13,3	11,5	3,4
Effort to apply	5,0	3,9	2,4	2,0	10,0	7,8	4,7
calibration of the measurement system	4,7	3,0	2,4	2,2	10,1	6,6	5,1
	29,1	21,8	15,3		69,5	51,5	38,1
Efficiency							
Predictability of the risk	2,9	3,0	2,8	2,8	8,2	8,6	7,9
Quality of the injury risk curve	3,1	3,0	2,2	2,0	6,2	6,1	4,4
Protect elderly	3,5	4,0	2,6	2,2	7,5	8,7	5,7
	9,5	10,1	7,6		21,9	23,3	18,0
Sensitivity							
Discriminate Belt/airbag	0,9	3,3	2,8	1,8	1,7	6,0	5,1
Discriminate pelvis restraint	3,3	3,1	3,3	2,2	7,1	6,7	7,1
Side effects	2,0	1,3	3,0	2,2	4,4	2,8	6,5
Applicable to restraints types	3,2	1,4	4,2	2,3	7,5	3,4	9,7
Dependent on the belt path	1,6	2,4	3,7	1,7	2,7	3,9	6,1
	11,1	11,4	16,9		23,4	22,8	34,6

FWDB versus FWRB

- Sweden was not able in due time:
 - to confirm the validity of FIMCAR conclusions at 50km/h.
 - to realise supplementary tests to validate reproducibility and repeatability.
- The IWG decide to go for a rigid barrier at least in this first phase.

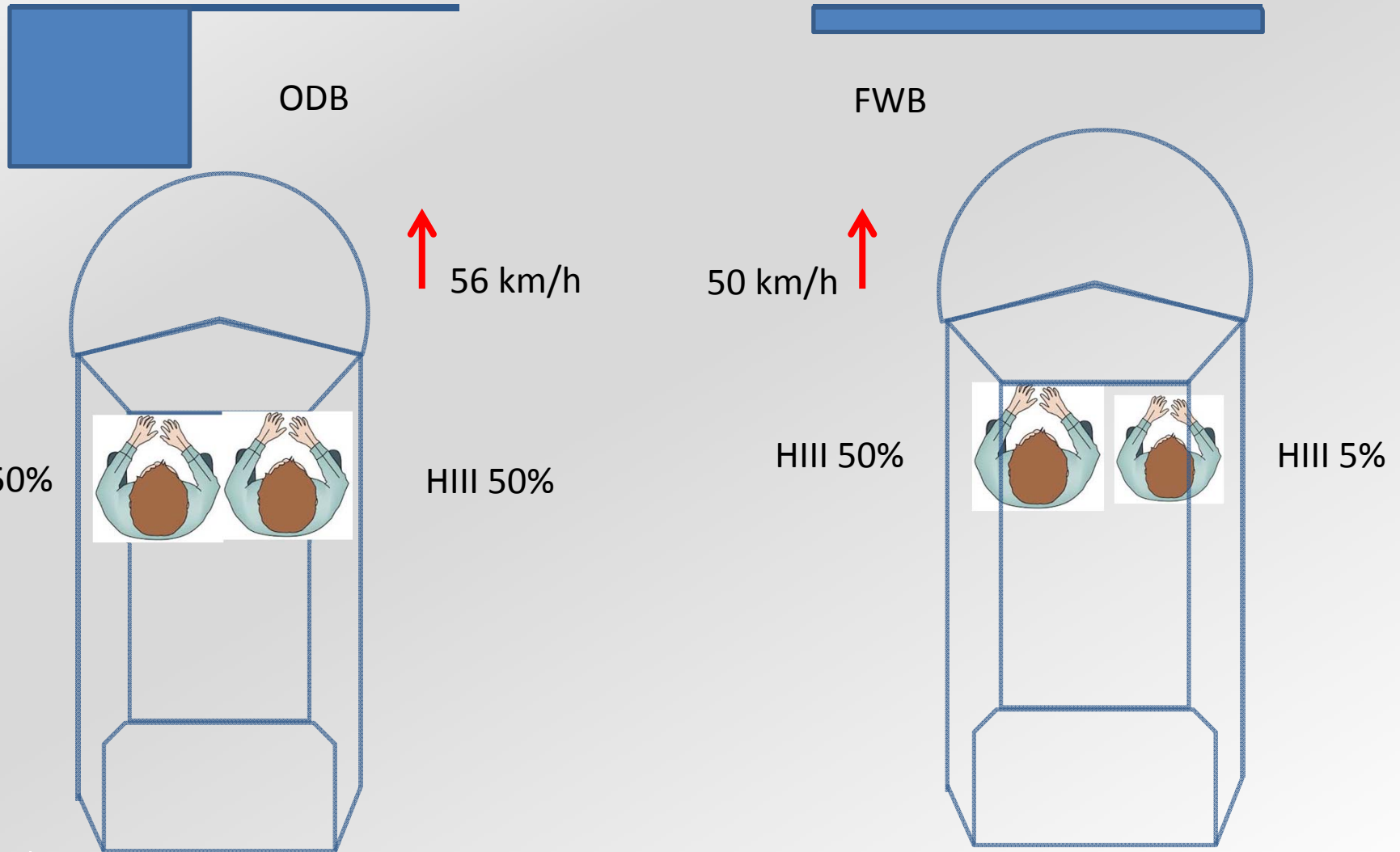
Geometric alignment

- Proposal for R42 based geometric assessment (Germany, R. Damm)

Impact assessment

- A first report was made in April 2013. The final document is supposed to be available in the end of 2013 (12/2013).
- People involved: Claus Pastor (BAST, Germany) as leader of this group, Jim Hand (UK), Cyril Chauvel (FR) and Jörg Rossow (OICA).

Proposed Tests configurations




Configurations			Structural Integrity		Restraint Test		Status		
			Fuel leakage/ HV						
			Overlap	40% Offset,		100% fullwidth			
			Test Type Ages	ODB, 56km/h 65YO		FWRB, 50km/h 45 YO		See ECE R12 definition of wall	
			Seating Position	Driver	Passenger	Driver	Passenger	✓	
			Seat position	Middle	Middle	Middle	[Middle]	Tbc	
Dummy	50% HIII	50% HIII	[50% HIII]	[5% HIII]	Tbc				
Criteria	A	Occupant	1	HPC	1000	1000	1000	1000	✓
			2	aHead 3ms	80g	80g	80g	80g	✓
			3	Neck tension	1,1 kN (60ms) 2,9 kN (35ms) 3,3 kN (0ms)	1,1 kN (60ms) 2,9 kN (35ms) 3,3 kN (0ms)	3,3 kN (0ms)	2.9 kN	✓
			4	Neck shear	1,1 kN (>45ms) 1,5 kN (25-35ms) 3,1 kN (0ms)	1,1 kN (>45ms) 1,5 kN (25-35ms) 3,1 kN (0ms)	3,1 kN (0ms)	2.7 kN	✓
			5	Neck Moment- ext.	57 Nm	57 Nm	57 Nm	57 Nm	✓
			6	[ThCC]	42 mm	42 mm	50mm	45 mm	Rod Pot
			6a	aTh 3ms	-	-	588m/s ² (60g)		
			7	V°C	1,0 m/s	1,0 m/s	1,0 m/s	1,0 m/s	
			8	FCC	7,58 kN (10ms) [8 kN] (0ms)	7,58 kN (10ms) [8 kN] (0ms)	[9 kN] (0ms)	[7 kN] (0ms)	Tbc
			9	TCFC	8kN	8kN			✓
	10	Kneeslider	15 mm	15 mm			✓		
	B	Structural Integrity	11	TI	1,3	1,3			✓
			11	Steering wheel displacement	Z < 80 mm; x < 100 mm		no measurement		✓
			12	Door locking/ opening	+New NL amendment		Check force opening after crash No check of automatic door locking in Japan		✓
			13	Dummy removal	opening force buckle 60N		opening force buckle 60N		✓
			14	Fuel leakage	30g/min		[To be assess as in offset]		Tbc
			15	EVS requirements	to be inserted		To be assess as in offset		to be decided Look during drafting new R94
	C	Compatibility							
			21	Geometry alignment	R42 Based géométric assessment			to be decided	




Open issues

- Availability of dummies definition and parts:
 - 5th percentile harmonised jacket
- The vehicle which, in agreement with the technical service, is considered as having the worst case for each test configuration
- Double assessment of requirements.
(ie: Fuel Leakage, EVS requirements, ...)
- Transitional provisions

Proposed Time Schedule

- 
- 53rd GRSP May 2013 draft working document
 - 20 September 2013 First draft amendment

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- 54th GRSP Dec. 2013 Amended first draft
 - 20th February 2014 Final draft amendment

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- 55th GRSP May 2014 Agreement by GRSP
 - November 2014 WP29 agreement