

**Informal Group on gtr No 9 – Phase 2 (IG GTR9-PH2)
8th meeting, Paris/France, 9 – 10 September 2013**

FlexPLI Version GTR Testing of Vehicles with Different Bumper Systems



Presented by the pedestrian safety experts of the
International Organization of Motor Vehicle Manufacturers (OICA)

Remarks

- With document GTR9-6-19 Shape presented their experiences from testing of two different vehicles with, in each case, two different bumper systems
- Bumper systems were designed to comply with legal and/or consumer requirements in the EU and the US (or NA respectively) in both cases
- Shape's presentation compares the test results for these different bumper systems
- While OEM's clearly appreciate Shape supporting the activities for the IG GTR9-PH2, OEM's feel nevertheless a need to clarify some details

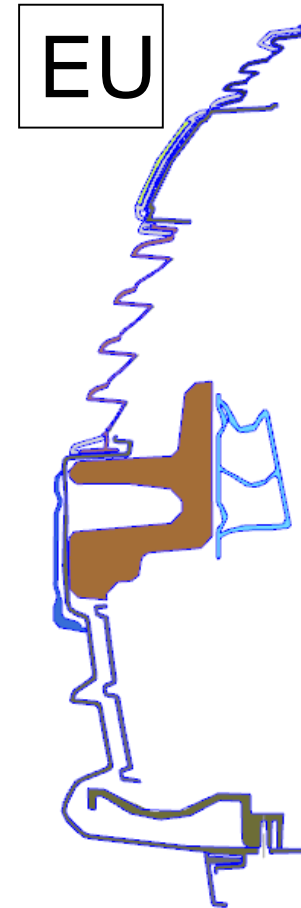
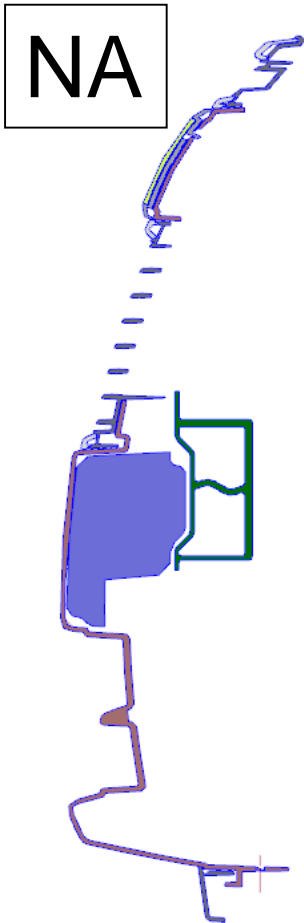
OEM's Concerns

- Shape explains that the EU bumper system was attached to the NA vehicle for the testing
- While this is physically possible, OEM's confirm that EU vs. NA vehicles have – despite of their similar appearance – also significant differences in the front end styling and structure
- These differences are applied to assure that vehicles meet the different requirements in their target markets: for pedestrian safety in the EU on one hand and for the NA bumper requirements on the other hand
- Testing the vehicles just with a modified bumper system creates test results that may be completely misleading regarding the actual performance of these vehicles
- Furthermore, OEM's still strongly believe that there are significant target conflicts in the design directions for the two requirements (pedestrian safety vs. bumper requirements)

Differences in Vehicle Front End Execution

- Differences between the EU and the NA vehicles affect:
 - The bumper system (such as the energy compensating foam, the presence of a lower support, etc.);
 - Grille parts (such as size, contour, shape, etc.);
 - Structural parts (such as geometry, position, etc.)
- According to the OEM's experiences, these front end changes influence the performance significantly
- To ensure coherent test results, complete front ends of the vehicles from both markets shall be tested

Differences in Vehicle Front End Execution (Continued)



BL0 Section view

Drawings refer to one of the vehicles shown by Shape in their document GTR9-6-19. The authors would like to thank the respective OEM for providing the drawings!



THANKS

For detailed questions please refer to the authors, Mr. Thomas Kinsky and Mr. Benjamin Buenger / General Motors Europe Engineering and Mr. Winfried Schmitt / BMW, as representatives of the Task Force Pedestrians of the European Automobile Manufacturers' Association ACEA
