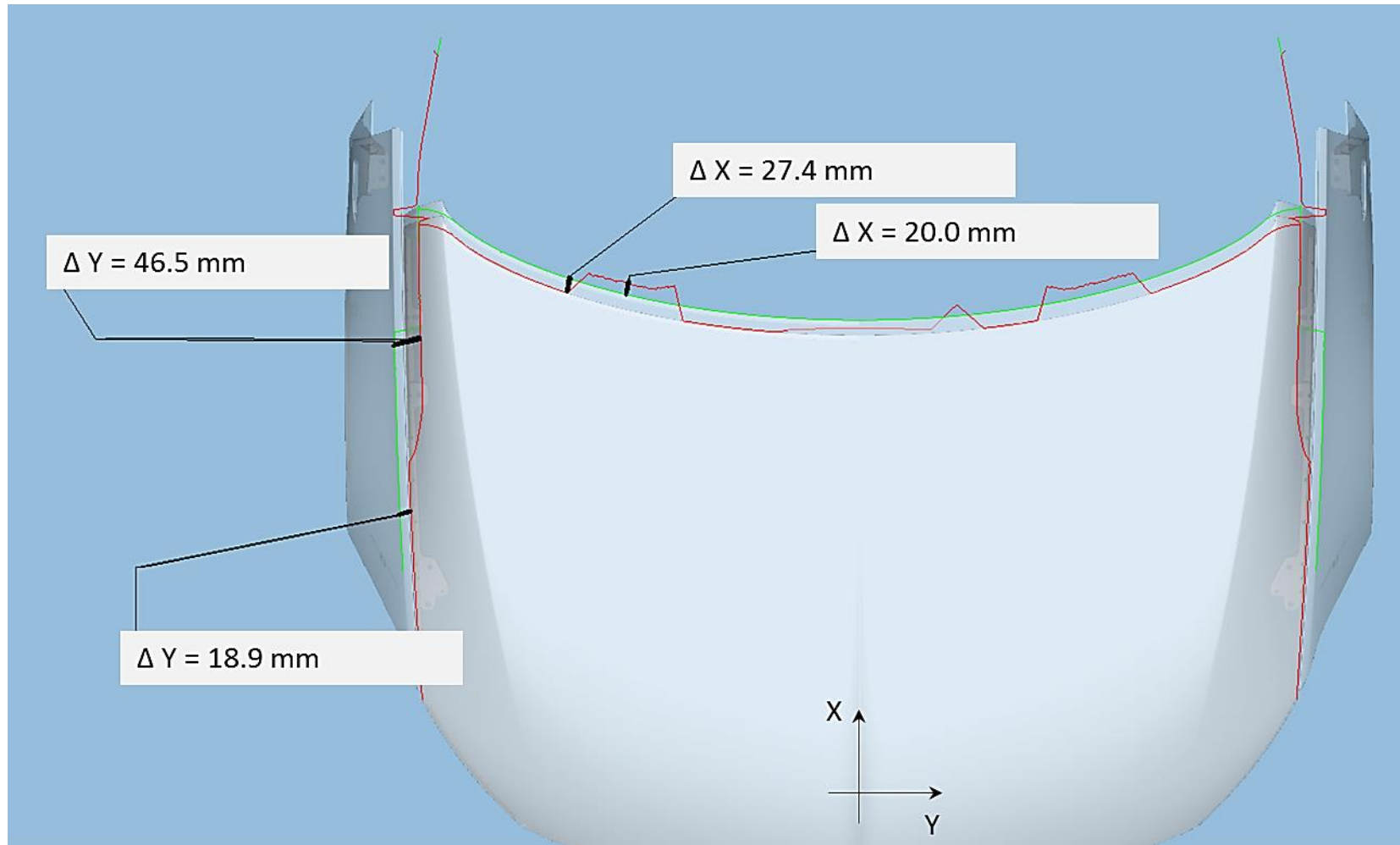


TF-DPPS

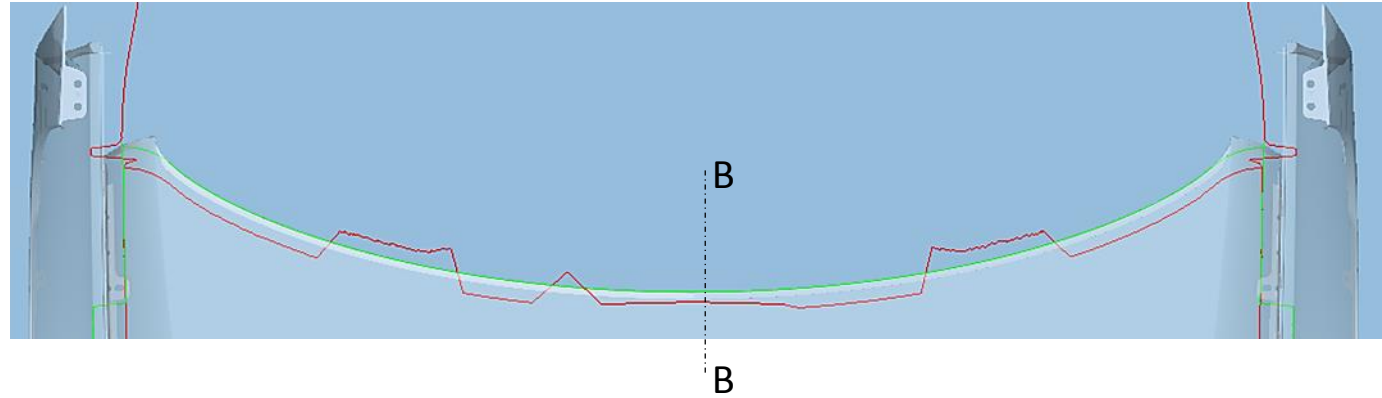
Marking of Deployable Bonnets
Differences of Bonnet Marking Positions
and Challenges in Performance Assessment

GTR No.9
Euro NCAP

A lateral reference line offset between the two methods can be observed.
Yet the deployed geometry resembles the impact condition.

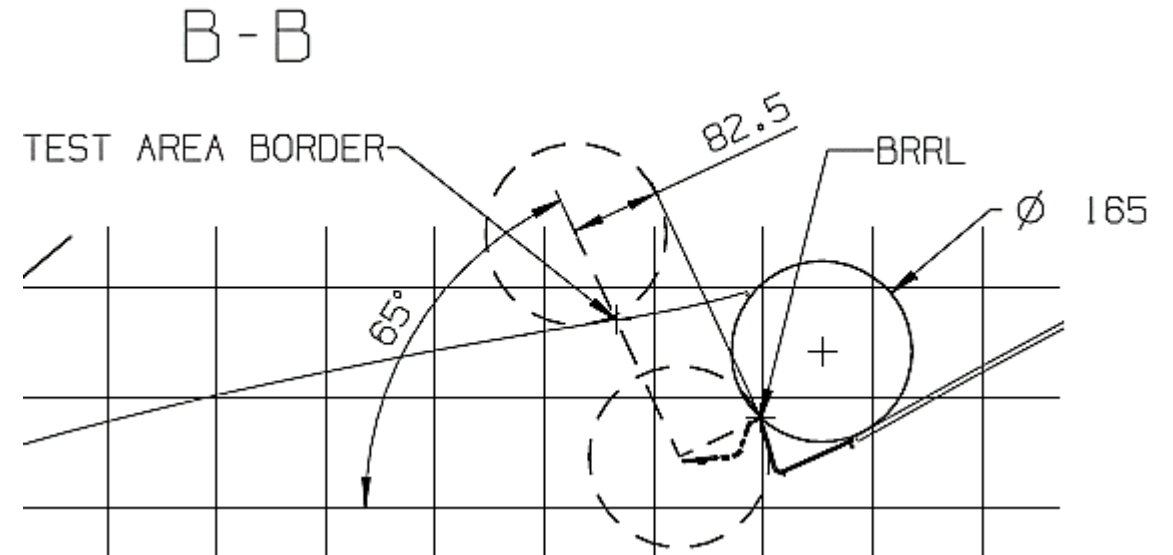
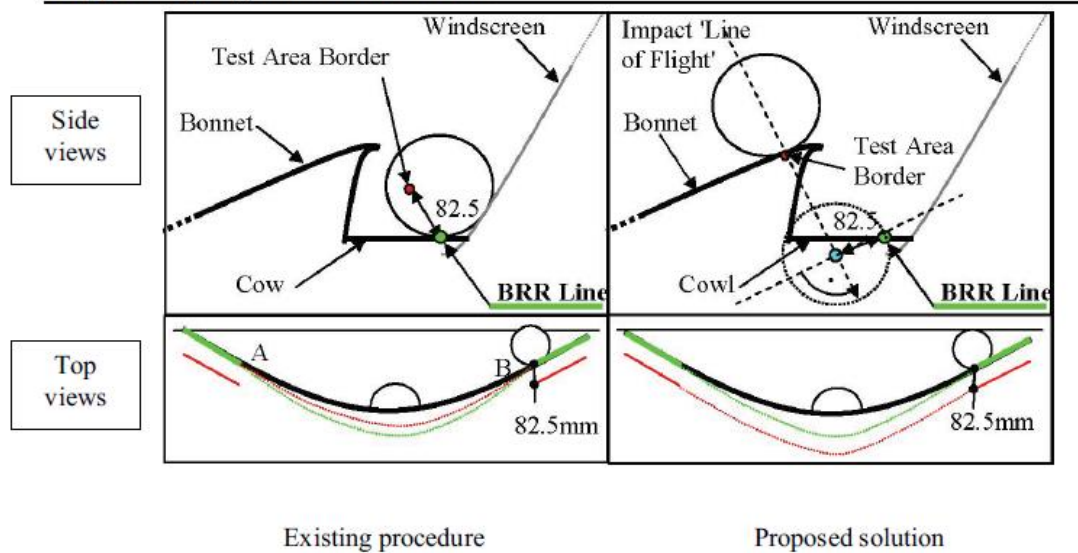
Challenges in testing when marking in deployed position

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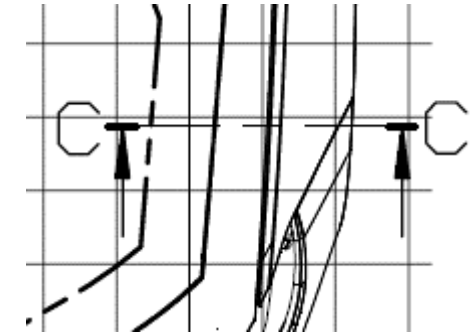
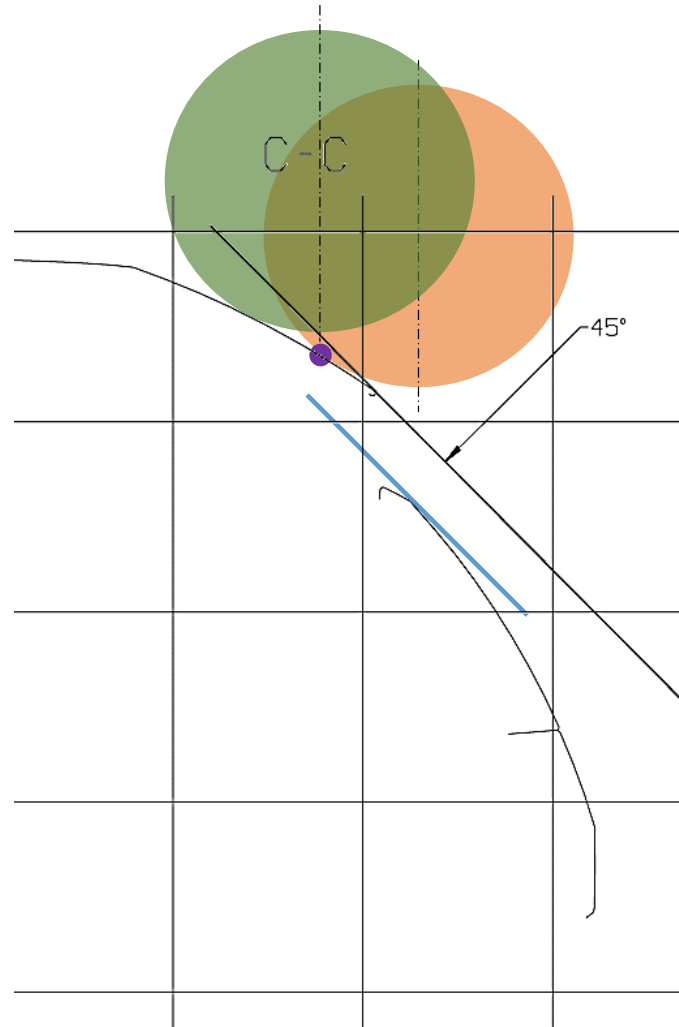
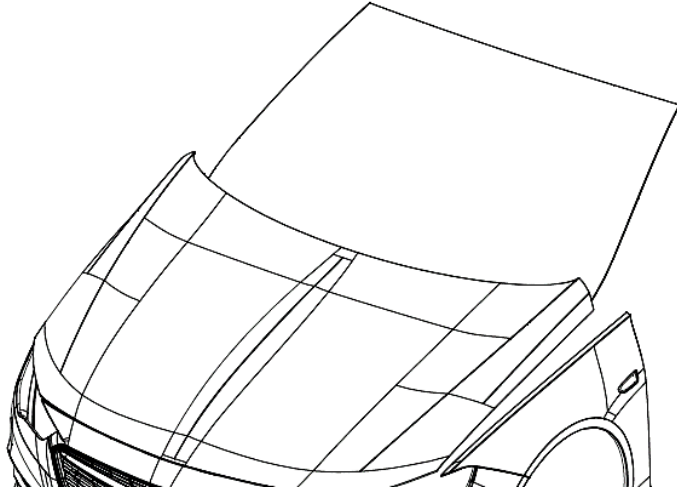
T-03 Rev. 3

Supporting Figures / Illustrations



In this design, the Bonnet Rear Reference Line jumps down to the surface of Air Inlet Panel and underneath outer surface. ACEA interpretation needs to be applied. This can be addressed by minor modifications of the outer surface.

Challenges in testing when marking in closed position



Side Reference Line in closed position
 Test Line Offset from closed position SRL
 Impactor lateral position per UN R127
 Impactor lateral position per touchpoint GTR No.9

If gap Bonnet to Fender is inboard (V-Shaped Bonnets), areas not reachable by impactor or glancing blow conditions occur when marking and testing positions differ. The vehicle shown features a Fender/Bonnet gap far outboards, difference is small.

Marking in Deployed Position (DP):

- Difference between static and dynamic testing with this method
- Side Reference Line is clearly to be identified
- Bonnet Rear Reference Line ambiguities can result and need to be solved by i.e. ACEA interpretations
- Resembles real world impact condition
- Testing accuracy is easy to prove

Marking in Closed Position (CP):

- Test area on fenders with V-shaped bonnets or expressive fenders can occur
- Glancing blow conditions result
- Impactor needs to be aimed at CP test line not at test line resulting from deploy (i.e. if bonnets move in longitudinal direction by actuation: test area shall not be extended)
- Impactor lateral test position alignment per UN R127 is a pre-requisite for comparable test results
- How to prove impact accuracy when aim and hit condition differ?

OICA position: Keep current gtr language, Deployed Position for static testing and Closed Position for dynamic testing