

# DPPS - detection area

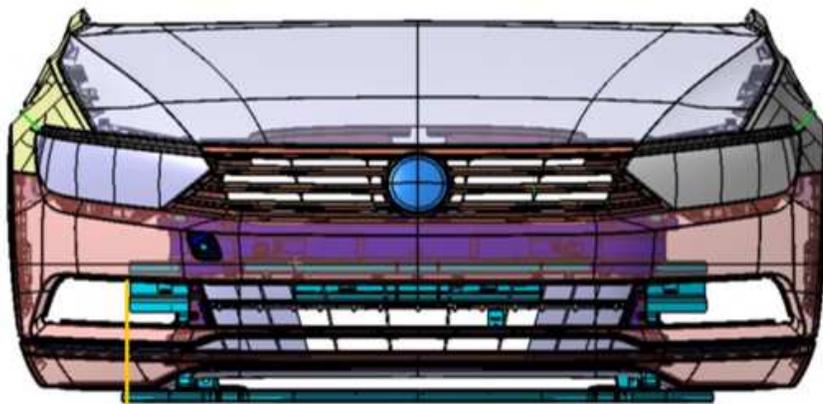
IWG-DPPS-11-06  
(OICA / ACEA draft)

Detection area	Leg test area Bumper test area (BTA)
75% of the width of the vehicle.	<b>BTA</b> (UN-R127-02) with the corner gauge or bumper beam.
	<i>means either the front vehicle fascia between the left and right corner of bumper as defined in paragraph 2.17., minus the areas covered by the distance of 42 mm inboard of each corner of bumper as measured horizontally and perpendicular to the longitudinal median plane of the vehicle, or between the outermost ends of the bumper beam as defined in paragraph 2.12. (see Figure 5D), minus the areas covered by the distance of 42 mm inboard of each end of the bumper beam, as measured horizontally and perpendicular to the longitudinal median plane of the vehicle, <b>whichever area is wider.</b></i>
Justification: we still have the same technical limitations for sensing. The same bonnet is triggered by the detection area. The sensors for the pedestrian detection don't need the stiffness of bumper beams.	

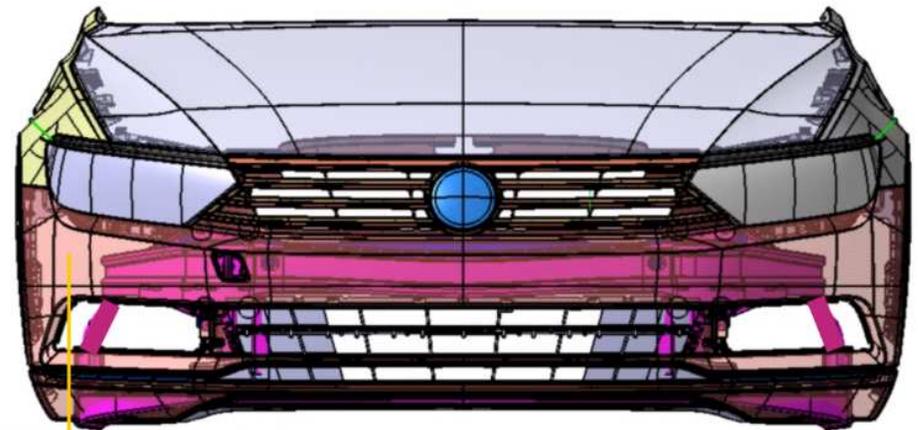
# Same vehicle with same shape (front face):

Version 1

Version 2



BTA



BTA

Why should the sensing width change when the exterior stays the same?

# Conclusion:

- The scope of the BTA is to ensure a pedestrian's leg to be protected from hard underlying structure, tested by a normalized lower Leg impactor.
- The scope of the Detection area is to ensure a minimum width of the vehicle to enable a deployment of the DPPS.
- The two scopes have no correlation in meaning nor pedestrian protection mechanism and should therefore be separated in the DPPS requirements.

## Proposal:

### Germany proposal : IWG-DPPS-9-04

3. "Detection area" is the area designated to detect a pedestrian in order to initiate the activation of the deployable system. The width of the detection area shall be the relevant vehicle width, minus a distance from each side of max of 12,5% of the relevant vehicle width, but not more than 250mm. ~~The detection area must not be smaller than the bumper test area (BTA).~~

26/04/2021

### Japan's proposal : IWG-DPPS-9-09

## **Proposal for Condition of Activation of DPPS**

DPPS can be activated in whole of headform test area on the bonnet in case the sensing width is wider than the width defined by the outer most of following three definition;

- ~~1) Outer most of bumper test area~~
- 2) Vehicle width at front wheel center minus 12.5% of the width
- 3) Vehicle width at front wheel center minus 250mm

In case the sensing width is narrower than aforementioned width, DPPS can only be activated within the sensing width.