

Meeting of UN/ECE GRSP IWG DPPS Subgroup „Prerequisites / Items“

Date: 14/06/2018

Place: BASt

Participants

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Main items to be discussed:

#1 - Pedestrian detection

#2 - Protection at lower deployment threshold

#3 - High speed protection

#4 - System timing

#5 - Bonnet deflection due to body loading (actual protection level)

| Item | Agreement in SG | Open Points |
|---|---|---|
| <p>#1 Pedestrian detection</p> | <p>A minimum of 3 tests at lower deployment threshold</p> <p>1 test per third</p> <p>Minimum distance between tests: 50mm</p> <p>Impact positions tbd by technical service</p> <p>Test area limited by CoB</p> <p>In terms of minimum requirements, compliance test method should indicate that this particular vehicle will presumably detect any pedestrian where deployment of bonnet/airbag is required (within the corresponding test area and speed window). No higher sensitivity should be required than reflected by real pedestrian!</p> <p>PDI2 is not necessarily required</p> <p>PDI2 sometimes with significantly lower signals than entire human body pedestrian family</p> <p>Sensing verification required only for pedestrian statures where deployment of bonnet is required</p> <p>Contrary to the legal crash testing a separate test for activation of the bonnet is required</p> | <ul style="list-style-type: none"> • Pedestrian surrogate needs to cover lowest signals of entire pedestrian family (e.g. PDI2) or: • Pedestrian surrogate needs to represent typical pedestrian (e.g. FlexPLI) |

| Item | Agreement in SG | Open Points |
|--|--|---|
| #2 Protection at lower deployment threshold | Principal agreement during Berlin Meeting of TF (December 2017): 0,9 * lower deployment threshold 3 tests, one to each third | |
| #3 High speed protection | The benefit of an initiated deployment of the active bonnet without any further requirement is unclear. Any requirement must not be counterproductive, increasing the loading on the head. | |
| #4 System timing | HIT > TRT for static tests Determination of TRT by film analysis (reference point close to hinge). Oscillation of the bonnet above intended deployment height should not be considered for determination of TRT. Determination of HIT based on either of the following tools: <ul style="list-style-type: none"> • HBM simulation • Physical dummy tests • Generic values from e.g. vehicle categorization | Specification of details regarding <ul style="list-style-type: none"> • HBM models • Physical dummies • Generic values |

| Item | Agreement in SG | Open Points |
|--|----------------------------|--|
| <p>#5 Bonnet deflection due to body loading (actual protection level)</p> | <p>No agreement</p> | <p>Different positions:</p> <ul style="list-style-type: none"> a) Ensure clearance that is provided in actual accident scenario or: b) Tests against Passive bonnets do not foresee actual protection level and a requirement for active bonnets would increase stringency <p>Baseline study: Tests with TIPT (Thorax Injury Prediction Tool) on deployed bonnet</p> <ul style="list-style-type: none"> • Determination of elastic bonnet deformation at head impact point and head impact time • Taking into account actual deployment height at time of upper body (thorax) contact |