Clarification of Test Methods for Active Devices in Pedestrian Protection
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1. Current Statement

- ECE/TRANS/180/Add.9 (26 January 2009) – GTR 9

6.2.2. All devices designed to protect vulnerable road users when impacted by the vehicle shall be correctly activated before and/or be active during the relevant test. It shall be the responsibility of the manufacturer to show that any devices will act as intended in a pedestrian impact.
Clarification of Test Methods for Active Devices in Pedestrian Protection

Justification:

1. Recently, the active deployable devices for pedestrian protection are available in the market.
2. Republic of Korea, both 1958 and 1998 agreement member country, implements the vehicle self-certification system. The system requires the precise test procedure. Therefore, clarification of test procedures for the active devices (such as active hood, pedestrian airbag) is needed.
3. For the active devices, there are the detailed test procedures being practiced in EuroNCAP and KNCAP
4. EuroNCAP or KNCAP procedures can be considered as a reference materials to amend GTR No.9.
2. Proposed Test Procedures

Verification(1) : Effectiveness
- Test at Minimum Speed
- Test at Maximum Speed
- Find Maximum Deformation

Verification(2) : Detection Performance
- PDI Test
- Active Hood Works?
- HIT( Vs TRT Comparison
  - HIT > TR
    - Yes
    - Static Test
    - End
  - No
    - Dynamic Test

Verification(3) : Deployment Time
- HIT( Vs TRT Comparison
  - HIT > TR
    - Yes
    - Static Test
    - End
  - No
    - Dynamic Test

Test under Un-deployed condition

PDI: Pedestrian Detection Impactor
HIT: Head Impact Time
TRT: Total Response Time (Sensing Time + Deploy Time)
Thank you for your attention.