

Status Report of the Task Force of Deployable Pedestrian Protection Systems (TF-DPPS)

**62nd GRSP Session
12 – 15 DEC 2017**

Chair: Jin Seop Park, Republic of Korea
Secretary: Thomas Kinsky, OICA

Background & Objective

- **Background**

- Republic of Korea suggested the clarification of the test procedure for deployable pedestrian protection systems (56th session of GRSP, 2014.12)
- WP.29 AC.3 endorsed the request for authorization to develop an amendment to GTR No.9 (170th session of WP.29, 2016.11)

- **Objective**

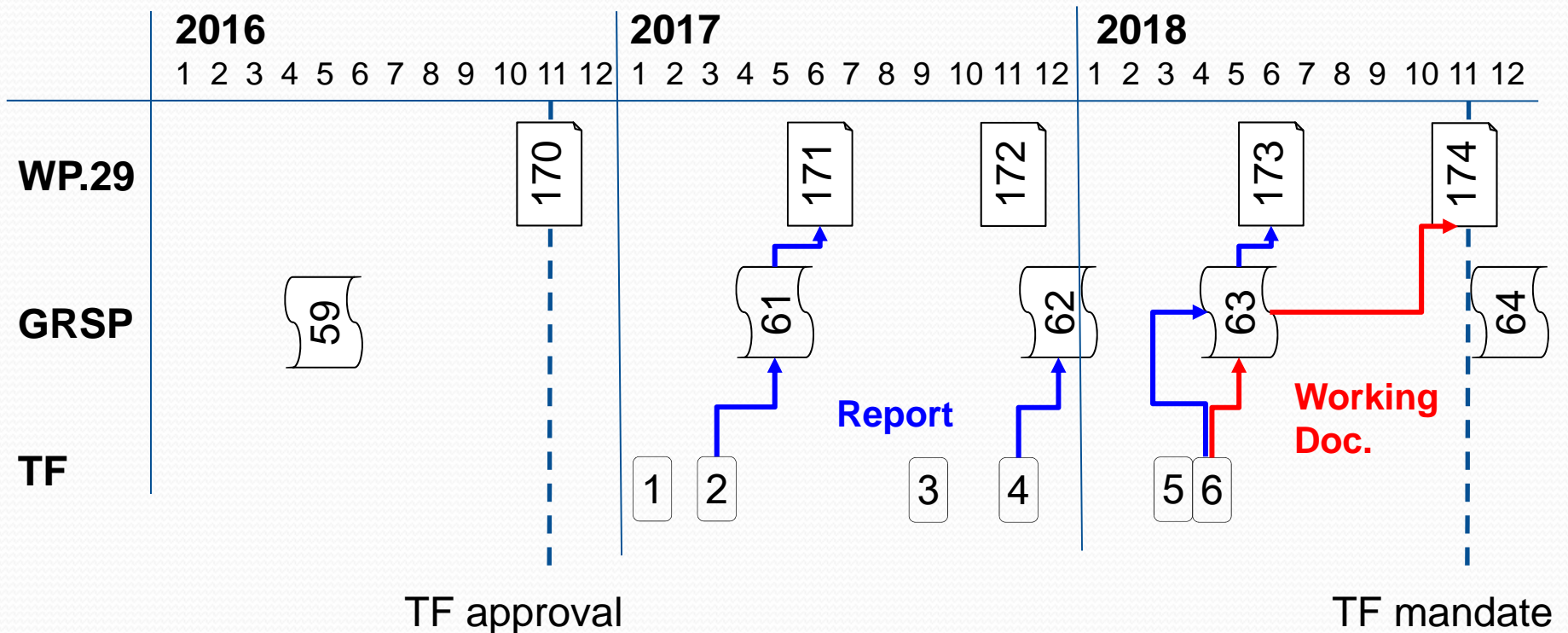
- To develop an amendment to GTR No.9 to adapt the regulation to technical progress by providing a test procedure for deployable systems, ensuring an adequate protection performance for pedestrians and other VRUs

Subject of Amendment

- To develop the amendment to GTR No.9 (and the corresponding UN R127) on a test procedure for deployable systems for pedestrian safety
- Subjects
 - Part A
 - Part B
 - Amendment of paragraphs
 - Addition of procedure-specific paragraphs
 - New Annex: Test procedure for deployable systems
 - Other refinements or corrections, if needed

TF Timeline

- **Current Plan (based on the approved proposal)**



- Aim by 5th meeting: Close most open issues
- Aim by 6th meeting: Prepare a draft amendment
- If open issues cannot be closed before the 63rd session of GRSP, the extension of TF mandate will be requested

Status of TF Meetings

- **1st Meeting**
 - Paris, France, 7th ~ 8th February 2017
 - Introduction of TF and discussion on the direction of work
 - Sharing existing DPPS test procedures
- **2nd Meeting**
 - Paris, France, 28th ~ 29th March 2017
 - Summary of the discussion items for the amendment
 - Discussion on specific items of prerequisites/test methods

TF web page under GRSP's Informal Working Groups' section:

<https://www2.unece.org/wiki/pages/viewpage.action?pageId=45383713>

Status of TF Meetings

- **3rd Meeting**

- Web meeting, 7th September 2017
- Reminding of the past discussions
- Discussion on requirement of human body model and pedestrian protection below lower threshold speed

- **4th Meeting**

- Berlin, Germany, 21st ~ 23rd November 2017
- Decision of 25 items to be discussed in detail
- Discussion specific items of prerequisites/test procedure
- Agreement on some non-arguable issues

Status of Amendment Discussion

- The amendment will include 3 sections
 - Pre-requisites for DPPS
 - Verification procedure
 - Static or dynamic headform test with DPPS
- TF is making progress based on the agreed 25 discussion items for the amendment

Prerequisite	Information to be submitted, HBM requirement, Simulation requirement, Protection requirement below lower deployment threshold, Protection requirement at higher speed, Bonnet deflection requirements due to body loading, etc.
Verification	Total response time test, Deployment test, Test for protection requirement below lower threshold, Test for protection requirement at higher speed
Headform Test	Static test at the undeployed position, Static test at the deployed position, Dynamic test, Partial dynamic test

Status of Amendment Discussion

TF agreed that the discussion on requirements for deployable pedestrian protection systems is necessary for the amendment to GTR 9 and UN R127

- There are essential prerequisites of DPPS and requirements for the test procedure for VRU safety
- TF must revise the requirement paragraph which is located at 6.2.2. of the current regulation (see next page)
- TF already agreed on the necessity and requirement of pedestrian protection below the lower threshold speed of deployable pedestrian protection systems
- The requirement does not affect the injury or area criteria of the current GTR No.9

Status of Amendment Discussion

Paragraph 6.2.2. of current GTR No. 9 (for reference)

6.2. Preparation of the vehicle

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.

Status of Amendment Discussion

TF agreed that the usage of numerical simulation and human body models are essentially to be included in the amendment to GTR No. 9 and UN R127

- The numerical simulation and HBM are widely accepted by many countries and manufacturers and also currently used for various consumer testing programs.
- TF will work on how the numerical simulation and human body models should be applied in the regulation
- However, the amendment will not limit to only simulation and will allow other alternatives like a physical dummy testing

Next TF Meeting and Attendance

- **5th Meeting**
 - In Europe, March/April 2018 (T.B.D.)
 - Close most discussion items
 - Draft the amendment
- **6th Meeting(T.B.D.)**
 - Geneva, Switzerland, during the 63rd GRSP (T.B.D.)

※ **For UNECE Contracting Parties, currently only Germany, Japan, the Republic of Korea attended in the 4th TF meeting physically. The chair of the TF encourages specifically the Contracting Parties to participate more actively!**

Thank you for your attention!