Joint Coordinating Group of Experts
(Video conference, 7 and 8 September 2021)

Agenda item 3: Review of and report on the list of priority items agreed at the previous meeting

2 a – Vehicle Authorisation process: responsibilities for conformity assessment (Notified Body for vehicles)

ITEM 4: 7.1.1 (NOTE)

Transmitted by European Union Agency for Railways
TWG ‘Freight’
Derailment Prevention/Detection (DDD)

Working Party meeting
7 September 2021 - Teams teleconference

TWG Freight – Derailment detection/prevention

- Proposal to amend TSI LOC&PAS and TSI WAG already finished and available in the Extranet space of the WP
- Derailment detection and prevention function are composed of the following three voluntary functions:
  - DPF (Derailment Prevention Function)
  - DDF (Derailment Detection Function)
  - DDAF (Derailment Detection and Actuation Function)
- Main characteristics of these functions can be summarized in the table below:

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
<th>Impacted TSIs</th>
<th>Risk scenario defined</th>
<th>Additional information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPF</td>
<td>Detects precursors to a derailment and sends a signal to driver’s cab. The requirements for the driver cab once such signal is detected is described in TSI LOC&amp;PAS</td>
<td>TSI WAG, TSI LOC&amp;PAS</td>
<td>None</td>
<td>Function shared between wagons and locomotive or fully contained in the locomotive</td>
</tr>
<tr>
<td>DDF</td>
<td>Detects derailment once it has started and sends a signal to driver’s cab. The requirements for the driver cab once such signal is detected is described in TSI LOC&amp;PAS</td>
<td>TSI WAG, TSI LOC&amp;PAS</td>
<td>None</td>
<td>Function shared between wagons and locomotive or fully contained in the locomotive</td>
</tr>
<tr>
<td>DDAF</td>
<td>Detects derailment once it has started and automatically activates a brake application without possibility of overriding.</td>
<td>TSI WAG</td>
<td>Yes: false derailment detections may lead to excessive compressive forces having the typical credible potential to cause a derailment</td>
<td>Function fully contained in the freight wagon</td>
</tr>
</tbody>
</table>
TWG Freight – Derailment detection/prevention

- Derailment detection/prevention are defined as basic design characteristics in both TSI LOC&PAS and TSI WAG. Its fitting or removal will trigger a version in ERATV.
- No changes brought to the OPE TSI
- Impact Assessment – Positive assessment of recommendation

Next steps:
- Recommendation to be discussed in detail on WP meeting of 26.10.2021

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