

Task Force 2 – Receptacles
Proposal for June 2021 IWG Meeting

Recommendation for Part I: Statement of technical rationale and justification

E. Rationale for paragraph 5

2. Vehicle fuel system requirements and safety needs

(a) In-use requirements

<Proposal>

(i) The fuelling receptacle rationale for paragraphs 5.2.1.1

76. The fuelling receptacle shall be designed to ensure that the fuelling pressure is appropriate for the vehicle storage system. Examples of receptacle designs can be found in ISO 17268:2020 and SAE J2600 (2021), or subsequent revisions. ~~Alternatively, another design can be chosen if the receptacle geometry design provides, at a minimum, the same level of safety and interoperability as the design shown in ISO 17268.~~ A label shall be affixed close to the fuelling receptacle to inform the fueller/driver/owner of the type of fuel (liquid or gaseous hydrogen), NWP, and date for removal of the storage containers from service. Contracting parties may specify additional labelling requirements.

Specifying the fuelling receptacle profile ensures that vehicles of lower NWP are not fuelled at hydrogen dispensers operating at a higher NWP, and that vehicles fuelled by hydrogen are not fuelled by other gaseous fuel dispensers.

<GTR13 Original>

(i) Fuelling receptacle rationale for paragraphs 5.2.1.1

76. The vehicle fuelling receptacle should be designed to ensure that the fuelling pressure is appropriate for the vehicle storage system. Examples of receptacle designs can be found in ISO 17268, SAE J2600 and SAE J2799. A label shall be affixed close to the fuelling receptacle to inform the fueller/driver/owner of the type of fuel (liquid or gaseous hydrogen), NWP, and date for removal of storage containers from service. Contracting parties may specify additional labelling requirements.

Recommendation for Part II: Text of the regulation

5. Performance requirements

5.2 Vehicle fuel system

5.2.1.1 Fuelling receptacle requirements

<Proposal>

5.2.1.1.1 A compressed hydrogen fuelling receptacle shall prevent reverse flow to the atmosphere. Test Procedure is ~~visual inspection in accordance with the leak test in 6.2.6.2.2.~~

5.2.1.1.2 ~~Fuelling receptacle label~~ A label shall be affixed close to the fuelling receptacle; for instance inside a refilling hatch, showing the following information: fuel type, NWP, date of removal from service of containers.

5.2.1.1.3 The fuelling receptacle shall be mounted on the vehicle to ensure positive locking of the fuelling nozzle. The receptacle shall be protected from tampering and the ingress of dirt and water (e.g. installed in a compartment which can be locked). Test procedure is by visual inspection.

5.2.1.1.4 The fuelling receptacle shall not be mounted within the external energy absorbing elements of the vehicle (e.g. bumper) and shall not be installed in the passenger compartment, luggage compartment and other places where hydrogen gas could accumulate and where ventilation is not sufficient. Test procedure is by visual inspection.

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