

Proposal for amendments to UN Regulation No. 67 (LPG vehicles)

The text reproduced below was prepared by the experts from Germany. It proposes a new series of amendments to UN Regulation No. 67 to improve the specifications for installation and inspection of LPG-containers and their accessories. The modifications to the current text of UN Regulation No. 67 are marked in bold for new characters and strikethrough for deleted characters.

I. Proposal

Insert new paragraph 17.1.6.1, to read:

"17.1.6.1. Notwithstanding the provisions of paragraph 17.1.6., sufficient access to the LPG-container and its accessories shall be ensured for visual (periodical) inspection, without the necessity of disassembling any components or part of protective housing."

II. Justification

With this Informal Document the expert from Germany wants to address the necessity to improve the requirements of the regulation and to invite other contracting parties to share their experience, aiming at preparing a working document for the next GRSG session.

From 2012 various incidents happened where type-1 cylinders of CNG-vehicles (OEM-vehicles) bursted during refilling.

Investigations resulted in corrosion effects as reason for the burst. Another OEM addressed similar problems with type-1 cylinders and as a result of the incidents, recall-activities and exchange of cylinders was initiated.

It appears that corrosion (and other damage) effects are not unlikely to happen in normal operation, also for LPG-applications, similar to CNG. This is why modifications are also deemed to be included in UN-R67.

Acc. to 17.1.6. of UN-R67, *"The LPG-system shall be installed such that it has the best possible protection against damage, such as damage due to moving vehicle components, collision, grit or due to the loading or unloading of the vehicle or the shifting of those loads."*

This normally results in housing or other sorts of covering of especially the cylinders/tanks, conditions stimulating corrosion.

Even though in UN-R67 there is no explicit requirement for periodic re-qualification of containers as in UN-R110, the corrosion effects in the market are similar compared to those of CNG-cylinders.

Also 17.8.7. *"Any joints shall be made in locations where access is possible for inspection."* is in potential conflict with the above mentioned solutions.

The proposal aims in meeting both the requirement of adequate protection, but also in guaranteeing sufficient access to the cylinder and its accessories to allow regular visual inspection. The access can be realized e.g. by a inspection hatch in the housing.