



Economic and Social Council

Distr.: General
31 January 2011

Original: English
English and French only

Economic Commission for Europe

Inland Transport Committee

World Forum for Harmonization of Vehicle Regulations

Working Party on General Safety Provisions

100th session

Geneva, 11-15 April 2011

Item 11 of the provisional agenda

Regulation No. 122 (Heating systems)

Proposal for amendments to Regulation No. 122 (Heating systems)

Submitted by the expert from the European Association of Automobile Suppliers *

The text reproduced below was prepared by the expert from the European Association of Automobile Suppliers (CLEPA) to allow the use of the heating system of a trailer (mostly caravans) while the latter is in motion. It is a revision of ECE/TRANS/WP.29/GRSG/2010/25. It takes into account the comments made at the ninety-ninth session of the Working Party on General Safety Provisions (GRSG). The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted characters. The modifications to ECE/TRANS/WP.29/GRSG/2010/25 are shown with underlined characters.

*In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Proposal

Annex 8, amend to read:

"Safety requirements for LPG combustion heaters and LPG heating systems

1. LPG heating systems for road use in motor vehicles **and their trailers**
- 1.1. If an LPG heating system in a motor vehicle **or trailer** can also be used when the vehicle is in motion, the LPG combustion heater and its supply system shall comply with the following requirements:
 - 1.1.1. The LPG combustion heater shall comply with the requirements of the harmonized standard EN 624:2010 (Specifications for dedicated LPG appliances. Room sealed LPG space heating equipment for installation in vehicles and boats).
 - 1.1.2. In cases of a permanently installed LPG container all components of the system that are in contact with LPG in the liquid phase (all components from the filling unit to the vaporiser/pressure regulator) and the associated liquid phase installation shall comply with the technical requirements of Regulation No. 67, Parts I and II and Annexes 3 to 10, 13 and 15 to 17. **However, the installation of a LPG container in vehicles of category O shall comply with the technical requirements of the harmonized standard EN 1949:2010.**
 - 1.1.3. The gaseous phase installation of the LPG heating system in a vehicle shall comply with the requirements of the harmonized standard EN 1949: 2010. 1/ (Specifications for the installation of LPG systems for habitation purposes in leisure accommodation vehicles and **accommodation purposes in ~~road~~ other vehicles**).
 - 1.1.4. The LPG supply system shall be so designed that the LPG is supplied with the required pressure and in the correct phase for the installed LPG combustion heater. It is permitted to withdraw LPG from the permanently installed LPG container **simultaneously** in either gaseous or liquid phase. **There shall be no connection of the gas installation between motor vehicle and trailer.**
 - 1.1.5. The liquid outlet of the permanently installed LPG container to supply LPG to the heater shall be provided with a remotely controlled service valve with excess flow valve as required in paragraph 17.6.1.1. of Regulation No. 67. The remotely controlled service valve with excess flow valve shall be controlled such that it is automatically closed within five seconds of the vehicle engine stopping, irrespective of the position of the ignition switch. If within these five seconds the on-switch of the heater or LPG supply system is activated, the heating system may stay in operation. The heating can always be restarted. **This paragraph does not apply to trailers. Trailers shall have a label in the vicinity of the filling point which states to switch off the heater while refilling the permanently installed LPG container.**

- 1.1.6. If the LPG is supplied in the gaseous phase from the permanently installed LPG container or separate portable LPG cylinder(s), appropriate provisions shall be taken to ensure that:
- 1.1.6.1. no liquid LPG can enter the pressure regulator or LPG combustion heater. A separator may be used, and
- 1.1.6.2. no uncontrolled release due to an accidental disconnection can occur. Means shall be provided to stop the flow of LPG by installing a device directly after or in a cylinder or container mounted regulator ~~or~~. **If the regulator is mounted remote from the cylinder or container, a device shall be installed directly before the hose or pipe from the cylinder or container (high pressure protection) and an additional device shall be installed in, or after the regulator- if needed for protecting the low pressure part of the installation (low pressure protection).**
- 1.1.7. If the LPG is supplied in liquid phase, the vaporiser and pressure-regulator unit shall be heated as appropriate by a suitable heat source.
- 1.1.8. In motor vehicles that use LPG in their propulsion system, the LPG combustion heater may be connected to the same permanently installed LPG container that supplies LPG to the engine, provided that the safety requirements of the propulsion system are met. If a separate LPG container is used for heating, this container shall be provided with its own filling unit.
2. LPG heating systems for stationary use only in motor vehicles and their trailers
- 2.1. The LPG-combustion heater and its supply system of an LPG heating system that is intended to be used only when the vehicle is not in motion, shall comply with the following requirements:
- 2.1.1. Permanent labels shall be attached on the compartment where the portable LPG cylinders are stored and in close proximity to the control device for the heating system, giving instructions that the LPG heater shall not be in operation and that the valve of the portable LPG cylinder shall be closed when the vehicle is in motion.
- 2.1.2. The LPG combustion heater shall comply with the requirements of paragraph 1.1.1. above.
- 2.1.3. The gaseous phase installation of the LPG heating system shall comply with the requirements of paragraph 1.1.3. above."

II. Justification

1. Some type approval bodies had some doubts on the possibility to type approve trailers (mostly caravans) with a heating system functioning while the trailer is in motion.
2. It was assumed when writing the Regulation, that since there was no passenger in the caravan while in motion, there was no need for requirement on the heating system for the road use of trailers. This was not an incorrect assumption because there is a need for heating in the caravan, for instance in colder countries, to avoid the freezing of liquids (water, waste water) and to ensure a warm home when reaching the final destination after a long drive. Also for truck-trailer carrying goods which have to be kept at a special temperature (e.g. flowers) there is a strong need for heating while in motion.

3. Therefore there should be a possibility to type approve also trailers (caravan or trailer for temperature sensitive goods) with a heating system functioning while the trailer in motion.
 4. This proposal includes requirements for trailers regarding heating while in motion and updates normative references to EN 624:2010 and EN 1949:2010.
-