

Proposal for amendments to Regulation No. 13 (Heavy vehicle braking)

The text reproduced below was prepared by the experts from the European Association of Automotive Suppliers (CLEPA) to amend the provisions of Regulation No. 13.

The modifications to the existing text of the Regulation are marked in bold characters or as strikethrough.

I. Proposal

Annex 9 amend to read:

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Annex 9

PROVISIONS RELATING TO PARKING BRAKING SYSTEMS EQUIPPED WITH A MECHANICAL BRAKE-CYLINDER LOCKING DEVICE

(Lock actuators)

Deleted

~~1. DEFINITION~~

~~"Mechanical brake cylinder locking device" means a device which ensures braking operation of the parking braking system by mechanically locking the brake piston rod. Mechanical locking is effected by exhausting the compressed fluid held in the locking chamber; it is so designed that unlocking can be effected by restoring pressure in the locking chamber.~~

~~2. SPECIAL REQUIREMENTS~~

~~2.1. When the pressure in the locking chamber approaches the level at which mechanical locking occurs, an optical or audible warning device shall come into action. Provided this requirement is met, the warning device may comprise the red warning signal specified in Paragraph 5.2.1.29.1.1. of this Regulation. This provision shall not apply to trailers.~~

~~In the case of trailers, the pressure corresponding to mechanical locking must not exceed 400 kPa (4 bar). It must be possible to achieve parking braking performance after any single failure of the trailer service braking system. In addition, it must be possible to release the brakes at least three times after the trailer has been uncoupled, the pressure in the supply line being 650 kPa (6.5 bar) before the uncoupling. These conditions must be satisfied when the brakes are adjusted as closely as possible. It must also be possible to apply and release the parking braking system as specified in~~

~~Paragraph 5.2.2.10. of this Regulation when the trailer is coupled to the towing vehicle.~~

- ~~2.2. In cylinders equipped with a mechanical locking device, movement of the brake piston shall be ensured by energy from either of two independent energy storage devices.~~
- ~~2.3. It shall not be possible to release the locked brake cylinder unless it is certain that after such release the brake can be applied again.~~
- ~~2.4. In the event of a failure of the energy source feeding the locking chamber, an auxiliary release device (e.g. mechanical, or pneumatic which may use the air contained in one of the vehicle's tyres) shall be available.~~
- ~~2.5. The control must be such that, when actuated, it performs the following operations in sequence: it applies the brakes so as to provide the degree of efficiency required for parking braking, locks the brakes in that position and then cancels out the brake application force."~~

II. Justification

1. In the mid 1960's, lock actuators and spring brakes were competing designs in providing a mechanical application of the parking brake.
 2. The requirements for each design approach were specified in Annex 8 (Spring Brakes) and Annex 9 (Lock Actuators).
 3. Over time, Annex 8 has been amended. However, the lock actuator design that was in production was withdrawn from the market in the mid 1970's due to in-service problems; and, as a result Annex 9 has never been amended in-line with the amendments to Annex 8.
 4. Therefore, the requirements of Annex 9 "PROVISIONS RELATING TO PARKING BRAKING SYSTEMS EQUIPPED WITH A MECHANICAL BRAKE-CYLINDER LOCKING DEVICE" (Lock Actuators) are over 40 years old.
 5. It is proposed to delete the content of this Annex in order to avoid a potential bypassing of the more stringent Annex 8 requirements, by means of meeting the requirements of Annex 9.
 6. By just deleting the content and not the whole Annex9, it is not necessary to re-number the subsequent annexes. Moreover appropriate technical requirements could, in the future, be re-introduced if such designs appeared on to the market. If such a design appeared on the market, the Annex 8 requirements could, pending the development of specific requirement, be applied.
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