

Proposal for indication of LDWS status

A. PROPOSAL

5. SPECIFICATIONS

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5.3. If a vehicle is equipped with a means to disable the LDWS function, the following conditions shall apply as appropriate:

5.3.1. The LDWS function shall be automatically reinstated at the initiation of each new ignition "on" (run) cycle.

5.3.2. A constant optical warning signal shall inform the driver that the LDWS function has been disabled. [The yellow warning signal specified in paragraph 5.4.2 below may be used for this purpose.]

5.4. Warning indication

5.4.1. The lane departure warning referred to in paragraph 6.x. shall be provided by means of at least one easily perceivable warning signal among acoustic and haptic.

5.4.2. The failure warning signal referred to in paragraph 6.6. shall be by means of a yellow optical warning signal.

5.4.3. Any LDWS optical warning signal shall be activated either when the ignition (start) switch is turned to the "on" (run) position or when the ignition (start) switch is in a position between the "on" (run) and "start" that is designated by the manufacturer as a check position (bulb check). The warning signal(s) shall be automatically deactivated when the ignition (start) switch is moved to the "on" (run) position or after a period of time as identified by the vehicle manufacturer in the case where the signal activation occurs in the "on" (run) position. This requirement does not apply to warning signals shown in a common space.

5.4.4. The optical warning signals shall be visible even by daylight; the satisfactory condition of the signal must be easily verifiable by the driver from the driver's seat

6. TEST PROCEDURE

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6.5.1. With the vehicle stationary and the ignition locking system in the "Lock" or "Off" position, activate the ignition locking system to the "On" or "Run" position. The LDWS shall perform a check of lamp function as specified in paragraph 5.4.3. of this Regulation. This requirement does not apply to tell-tales shown in a common space.

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6.7. Failure detection

6.7.1. Simulate a LDWS failure, for example by disconnecting the power source to any LDWS component or disconnecting any electrical connection between LDWS components. When simulating an LDWS failure, neither the electrical connections for the failure warning signal of paragraph 5.4.2 nor the LDWS disable control of paragraph 5.3. shall be disconnected.

6.7.2. The failure warning signal shall be activated and remain activated while the vehicle is being driven and is reactivated after a subsequent ignition "off" ignition "on" cycle as long as the simulated failure exists.

6.8. Deactivation Test

6.8.1 If the vehicle is equipped with means to deactivate the LDWS, activate the ignition locking system to the "On" or "Run" position and deactivate LDWS. The warning signal mentioned in paragraph 5.3.2. shall be activated."

B. JUSTIFICATION:

It is sensible that "lane departure warning systems" (LDWS) comprise optical signals that indicate to the driver the present status of the system. The following cases have been considered in the GRRF informal group on AEBS and LDWS and corresponding Task Force in January / February 2010:

- Warning in case of lane departure
- System switched off by the driver (disabled)
- System has a failure
- System on and available / system on and temporarily not available

To achieve a systematic and clear situation with regard to the warnings and to avoid confusion the following is proposed:

- At least 1 warning among acoustic or haptic shall be foreseen for a warning in case of lane departure since an optical warning seems to be an inappropriate warning for a situation of drowsiness or inattention. This also allows to unambiguously use optical tell-tales for the indication of system availability and failures.
- A constant optical warning signal shall inform the driver that the LDWS function has been disabled (conscious switching off by the driver).
- A yellow optical warning signal shall indicate a system failure.
- If and how to indicate system availability should be left to the manufacturer. An appropriate solution could be the use of a e. g. green lamp illuminated only in the case of availability.