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Working Party on Road Traffic Safety
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**AMENDMENTS TO AND IMPLEMENTATION OF THE 1968 CONVENTIONS
ON ROAD TRAFFIC AND ON ROAD SIGNS AND SIGNALS AND THE
1971 EUROPEAN AGREEMENTS SUPPLEMENTING THEM**

Note by the secretariat

Members of WP.1 will find below a request from WP.29 for an opinion on the compatibility of two drafts being studied by this Working Party concerning provisions of the Vienna Convention on Road Traffic and the European Agreement supplementing it.

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The World Forum for Harmonization of Vehicle Regulations (WP.29) has officially requested the opinion of WP.1 (report TRANS/WP.29/1037, paras. 41 and 49) on the following two drafts and in particular their compatibility or the conditions for ensuring their compatibility with the existing provisions of the Vienna Convention on Road Traffic and, if necessary, the European Agreement supplementing it:

1. Automatic activation of a hazard warning signal and indication of emergency braking (see TRANS/WP.29/GRE/2005/2)

1.1 Presentation of the problem

In order to improve road safety, an amendment is being made to Regulation No. 48 (Installation of lighting and light-signalling devices) with a view to incorporating new provisions for the automatic activation of a hazard warning signal and indication of emergency braking by using existing lamps, namely, the hazard warning lamps and, if necessary, the amber side-marker lamps in the former case and the stop lamps in the latter. In this system, flashing is required; this includes the stop lamps during emergency braking under clearly-defined conditions.

The automatic activation of a hazard warning signal and indication of emergency braking **can in no circumstances** take place simultaneously and their purpose is to indicate quite different traffic situations.

1.2 Emergency stop signal

The emergency stop signal¹ may be useful for emergency braking at high speed. The emergency stop signal shall be given by the simultaneous operation of all the stop lamps, which shall be activated and deactivated automatically and shall flash in phase at a frequency of $[4 \pm 1.5]$ Hz. The signal shall operate independently of the other lamps. The signal **shall only activate** under one or more of the following conditions:

- the vehicle speed is higher than [50] km/h and the deceleration of the vehicle exceeds [7] m/s². The speed of 50 km/h has been selected to ensure that the ESS should not be activated in urban, low speed environments, where high decelerations may be readily achieved;
- [the physical limit of tyre adhesion to the road surface has been achieved.]. This is the case when the ABS is activated. No speed criterion is included in this instance, as the conditions which might usefully warn following road users would include low speeds and deceleration occasions when there is a low coefficient of friction between the road and tyre (e.g. icy conditions).

¹ Definition: “Emergency stop signal” means the flashing of the vehicle’s stop lamps to indicate to other road users to the rear of the vehicle that a high retardation force has been applied to the vehicle relative to the prevailing road conditions.

The signal shall **automatically deactivate** under any of the following conditions, whichever happens first:

- [the deceleration of the vehicle is less than [4] m/s²,
- the service brake is released, or]
- the hazard warning signal is activated. In particular, it is anticipated that the ESS would not remain operating when the hazard warning signal is activated (either automatically or manually).

1.3 Hazard warning signal

According to the proposal, the signal may be activated automatically under one or more of the following conditions:

- the vehicle speed is less than [30] km/h and the conditions for the activation of the emergency stop signal have been achieved;
- following a vehicle crash.

When activated automatically, the hazard warning signal shall remain activated until it is manually or automatically deactivated. The automatic deactivation shall occur when the vehicle accelerates. The hazard warning signal shall not activate automatically at the same time as the emergency stop signal is operating.

2. **Vehicle Degradation Systems (VDS) during unauthorized use** (see TRANS/WP.29/GRSG/2003/26)

The vehicle degradation system (VDS) is a device which, after previous activation following detection of unauthorized use, is intended to prevent or to restrict a vehicle being driven away powered by its own engine after standstill of the vehicle by acting on the vehicle components required for the purpose.

The VDS can be activated from the outside (e.g. by a radio signal, induction loops) or by means of devices fitted in the vehicle. The VDS can also be activated by means of a combination of these measures.

Provided the VDS is activated, the engine cannot be restarted:

- (a) When the vehicle stands still and the ignition is switched off and the vehicle's doors are locked; or
- (b) When the vehicle stands still and the ignition is switched off for more than [10] minutes.

Deactivation by an unauthorized vehicle user shall not be possible.

When the VDS is in its activated state and the standstill of the vehicle occurs for the first time, the vehicle shall be degraded. The degraded vehicle may then be operated at a maximum speed of between [15] and [20] km/h. In this degraded state, a visual warning signal consisting of simultaneous flashing of all turn signal lamps shall be provided until deactivation.

It is particularly with regard to this use of the vehicle at a reduced speed that the problem arises of the compatibility of the VDS with article 8 of the Vienna Convention on Road Traffic which stipulates in article 5 that “every driver shall at all times be able to control his vehicle”.

It should also be mentioned that the sole purpose of the Regulation in the process of amendment (No. 97) is to determine the technical criteria to be met by the VDS. It will then be the responsibility of domestic legislation to determine the authorities empowered to activate the device and the circumstances in which it will be activated.
