EVSC05-39

Proposed amendments to ECE Regulation No. 13

11 Series of amendments

A. PROPOSAL (Provisions for vehicle stability control systems)

Add new paragraph 5.2.1.31., to read:

5.2.1.31. Power-driven vehicles, as specified below, shall be equipped with a vehicle stability function consisting of at least directional control in accordance with Annex 21 of this Regulation.

- Long distance touring coaches of Categories M_3 Class III
- Semi-trailer tractors of Category N_3 greater than 16 tonne, except vehicles with more than 3 axles and off-road vehicles of Category N_3G, subject to ADR certification.

Add new paragraph 5.2.2.23., to read:

5.2.2.23. Semi-trailers of Category O_4 with up to 3 axles that are subject to ADR certification shall be equipped with a vehicle stability function consisting of at least roll-over control in accordance with Annex 21 of this Regulation.

Add new paragraphs 12.1.2.8., 12.1.2.9. and 12.1.2.10., to read:

12.1.2.8. As from 24 months after the date of entry into force of the 11 series of amendments, Contracting Parties applying this Regulation shall grant approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by the 11 series of amendments.

12.1.2.9. Until 48 months after the date of entry into force of the 11 series of amendments to this Regulation, no Contracting Party applying this Regulation shall refuse national type approval of a vehicle type approved to the preceding series of amendments to this Regulation.

12.1.2.10. Starting 48 months after the entry into force of the 11 series of amendments to this Regulation, Contracting Parties applying this Regulation may refuse first national registration (first entry into service) of a vehicle which does not meet the requirements of the 11 series of amendments to this Regulation.

Annex 3

Models A, B and C, change the Series identifier from 10 to 11.

B. JUSTIFICATION

Electronically controlled stabilizing systems increase road safety to a high extent. They reduce the number of accidents by enabling the driver to keep control over the vehicle in critical situations. Especially roll-over accidents, which form a great part of all dangerous goods accidents, will be reduced by the roll-over control function.

Advances in the electronic control of braking systems resulting from the development and introduction into series production of the electronically controlled braking system (EBS) enables corrective actions to be taken in critical situations with regard to longitudinal and lateral vehicle dynamics – sliding, jack-knifing, rolling over – independent of the driver. The evaluation and response times of such systems are far in excess of those of the most skilled driver, such that corrective action can be taken before the driver is even aware that a critical situation is approaching. Additionally a driver can only operate all the wheel brakes collectively while the vehicle stability function can brake an individual wheel or any combination of wheels and thereby better control the total vehicle in critical situations. Therefore, while such systems can not overcome the basic physical laws that govern human life they can significantly improve vehicle safety and thereby reduce accidents.

In a step-by-step approach, advantage can be taken of this improvement in vehicle control by introducing the vehicle stability function for a reduction in risk for the most frequently used type of ADR vehicles – the tractor and semi-trailer combination – and to provide optimal active passenger protection on long distance touring coaches.

Combination Compatibility with Respect to Stability

Towing Vehicle		Semi-trailers				Centre-axle Trailers				Full (Drawbar) Trailers			
		Without ISO7638	With ABS	With ROC	With YC + ROC	Without ISO7638	With ABS	With ROC	With YC + ROC	Without ISO7638	With ABS	With ROC	With YC + ROC
Tractor	Without ISO7638	NC	NC	NC [1/]									
	With ISO7638	NC	NC	IMP									
	With DC	IMP	IMP	IMP									
	With DC + ROC	IMP	IMP	IMP									
Truck	Without ISO7638					NC	NC	NC [1/]	NC [1/]	NC	NC	NC [1/]	NC [1/]
	With ABS					NC	NC	IMP	IMP	NC	NC	IMP	IMP
	With DC					IMP [2/]	IMP [2/]	IMP	IMP [3/]	IMP [2/]	IMP [2/]	IMP [3/]	IMP [3/]
	With DC + ROC					IMP [2/]	IMP [2/]	IMP	IMP [3/]	IMP [2/]	IMP [2/]	IMP [3/]	IMP [3/]

DC: Means directional control
ROC: Means roll-over control
YC: Means a yaw control system installed on the trailer (directional control)
NC: Means that the stability of the combination remains unchanged
IMP: Means that the stability of the combination would or could be improved
1/: Stability function(s) not functional as the tractor has no ISO7638 power supply is available
2/: Identification problem between centre axle and full trailers as the trailer has no electric control line to identify the trailer type
3/: It is not clear how the respective truck and trailer systems will interact and how this will impact on combination stability therefore it may be necessary to define priorities to inhibit either the truck or trailer stability system.

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