

Based on Informal Document: ACSF-08-03

**Annex 8**

Gelöscht: Z

**Text requirements for automatically commanded steering functions**

**1. General Provisions**

Vehicles fitted with systems of ACSF category B1 shall fulfill the tests requirements of this annex.

**2. Test conditions**

**2.1.** The test shall be performed on a flat, dry asphalt or concrete surface delivering good adhesion. The ambient temperature shall be between 0° C and 45° C.

**2.2. Lane markings**

The lane markings and the width of the lane used in the tests shall be those of one of the Contracting Parties **[See annex 3 of regulation UNECE 130]**, with the markings being in good condition and of a material conforming to the standard for visible lane markings of that Contracting Party. The lane marking layout used for the testing shall be recorded.

[The vehicle manufacturer shall demonstrate, through the use of documentation, compliance with all the other lane markings identified in Annex 3 of regulation UNECE 130. Any such documentation shall be appended to the test report.]

The test shall be performed under visibility conditions that allow safe driving at the required test speed.

*Justification: Annex 3 provides a table with sketches including the dimensions of the lane markings met in the Contracting Parties.*

*The additional requirement about the demonstration of the compliance with all the other lane markings comes from the regulation on LDWS.*

**2.3. Tolerances**

All vehicle speeds specified in the tests shall be met with a tolerance of  $\pm 2$  km/h.

**[2.4. Vehicle conditions**

**2.4.1. Test weight**

The vehicle shall be tested in a condition of load to be agreed between the manufacturer and the Technical Service. No alteration shall be made once the test procedure has begun. The vehicle manufacturer shall demonstrate

through the use of documentation that the system works at all conditions of load.

**2.4.2. The vehicle shall be tested at the tyre pressures recommended by the vehicle manufacturer.**

*Justification: Introduction of specific load conditions for the test if different from those defined in §6.1.2 of current regulation 79 (technically permissible maximum mass and its technically permissible maximum load on the steered axle(s)).*

**3. Tests**

**3.1. Functionality Test 0 (FU0, Test for lane keeping)**

**3.1.1. The vehicle speed shall remain in the range from  $v_{smin}$  up to  $v_{smax}$ .**

**if  $v_{smax}$  is  $> 60$  km/h:**

Drive the vehicle with activated ACSF with a vehicle test speed greater than 60 km/h holding the steering control on a track with curves with road markings at each side of the lane at least with 2 different lateral accelerations selected by the technical service below 90% of  $ay_{smax}$ .

and

**if  $v_{smax}$  is  $\leq 60$  km/h:**

Drive the vehicle with activated ACSF with at least two different vehicle test speeds equal or less than 60 km/h holding the steering control on a track with curves with road markings at each side.

**3.1.2. The requirements of the test are fulfilled if the vehicle does not cross any lane marking.**

**3.1.3. Data for the whole lateral acceleration and speed range: The Technical Service shall require the manufacturer to deliver data about fulfilling the test for lane keeping capabilities for the whole lateral acceleration and speed range.**

**3.2. Test for holding the steering control: Drive the vehicle with activated ACSF with  $v_{smin} + 10$  km/h on a curved track with road markings at each side of the lane. Release the steering control and continue to drive until the ACSF is deactivated by the system. The track shall be selected such that it contains at least one curve to the left and one to the right and that the lateral accelerations remain below  $[0.5 \text{ m/s}^2 \text{ or } ay_{smax} \text{ whatever is higher/} ay_{smax}]$  and that it allows driving with activated ACSF for at least [60 s] without any driver intervention.**

Gelöscht:  $v_{smin}$

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*Justification: Increase the range of the lateral accelerations offering more flexibility in the choice of the radius of the curves.*

*Question: If the track is a loop with curves turning only in the same direction, is it possible to perform one test once a way and another in the inverse way ([60s] + [60s])?*

Gelöscht:  $\eta$