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Item 10 of the provisional agenda

REGULATION No. 116
(Protection of motor vehicles against unauthorized use)

Proposal for draft amendments to Regulation No. 116

Submitted by the expert from Japan */

The text reproduced below was prepared by the expert from Japan, in order to harmonize the amendments to Regulation No. 116 with those proposed to Regulation No. 97. It is based on documents GRSG-93-12, ECE/TRANS/WP.29/GRSG/2008/4 and GRSG-94-22. Modifications to the current text of the Regulation are marked in bold or strikethrough characters.

*/ In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance performance of vehicles. The present document is submitted in conformity with that mandate.

A. PROPOSAL

Part II

Paragraph 6.3.1.2.1., amend to read:

"6.3.1.2.1.

(d) false alarm of the passenger compartment control: test specified in paragraph 6.4.2.15.

In this case, if the VAS is designed to activate the alarm under the conditions of (a) test(s) mentioned above and the alarm is thus activated during such test(s), the VAS will not be deemed to have caused the alarm signal to sound unnecessarily."

Paragraph 6.4.2.1., amend to read:

"6.4.2.1. Operation tests

For the operation tests required according to paragraphs 6.4.2.3., 6.4.2.4., 6.4.2.5., 6.4.2.6. and 6.4.2.8.4., if some of the tests required in each of these paragraphs prior to the operation tests are performed in series on a single VAS, the operation test may be carried out one time only after the chosen tests are completed instead of performing the operation tests required in the paragraphs after each of the chosen tests."

Paragraph 6.4.2.3., amend to read:

"6.4.2.3. shall be repeated.

This requirement does not apply to the VAS applied as a separate technical unit which is to be installed in a part of the vehicle(s) where foreign bodies and water cannot access the VAS in normal use. In this case, the manufacturer of the VAS shall prove it by submitting related documents."

[Paragraph 6.4.2.6., amend to read:

"6.4.2.6. with fuses changed if necessary.

This requirement does not apply to the VAS applied as a separate technical unit installed in (a) vehicle(s) which is designed to be free of short circuits in normal use. In this case, the manufacturer of the VAS shall prove it by submitting related documents. "]

Paragraph 6.4.2.7., amend to read:

"6.4.2.7. alarm system including status display.

This requirement does not apply to the VAS applied as a separate technical unit."

Part III

Paragraph 7., amend to read:

"7. PART III: APPROVAL OF A VEHICLE WITH REGARD TO ITS ALARM SYSTEM

When a VAS approved to Part ~~III~~ **II** of this Regulation is installed in a vehicle submitted for approval to Part ~~IV~~ **III** of this Regulation, tests required to be passed by a VAS in order to obtain approval to Part ~~III~~ **II** of this Regulation shall not be repeated."

Annex 9, paragraph 1., amend to read:

"1. METHOD ISO

Immunity against disturbances conducted along supply lines

Apply the test pulses 1, ~~2a~~, **2b**, 3a, 3b, 4 and ~~5a/5b~~ according to the International Standard ISO ~~7637-1:1990~~**7637-2:2004** to the supply lines as well as to other connections of VAS/AS which may be operationally connected to supply lines.

Test pulse 5a/5b is not applied to the VAS applied as a separate technical unit which is to be installed in (a) vehicle(s) without any alternators. In this case, the manufacturer of the VAS shall prove it by submitting related documents.

~~VAS/AS in unset state~~

~~The test pulses 1 through 5, shall be applied with a degree of severity III. The required functional status for all applied test pulses shall be A.~~

VAS/AS in **unset state and** set state

The test pulses 1 through 5 shall be applied. The required functional status for all applied test pulses are given in table 1.

Table 1 – Severity/functional status (for supply lines)

Test pulse number	Test level	Functional status
1	III	C
2 a	III	B
2 b	III	C
3a	III	A
3b	III	A
4	III	B
4	I	A
5a / 5b	III	A

Immunity against disturbance coupled on signal lines

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Immunity against radiated high frequency disturbances

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Electrical disturbance from electrostatic discharges

Immunity against electrical disturbances shall be tested in accordance with Technical Report ISO/TR 10605-1993.

This requirement does not apply to the VAS applied as a separate technical unit which is to be installed in a part of the vehicle(s) where the VAS cannot be accessed in normal use. In this case, the manufacturer of the VAS shall prove it by submitting related documents"

Radiated emissions

....."

B. JUSTIFICATION

This proposal is based on the existing test procedures for this Regulation granted by the United Kingdom's Vehicle Certification Agency (VCA) and the Netherlands Vehicle Approval Authority (RDW) except the amendment proposal in paragraph 6.4.2.6.

The experts from Japan agree with the reasons for these practical procedures and try to clarify them by amending the provisions in the regulation.

Ad Part II:

Paragraph 6.3.1.2.1.

This proposal is to clarify that, if the Vehicle Alarm System (VAS) is designed to activate the alarm under the conditions of (a) cited test(s) and the alarm is thus activated during such test(s), the VAS will not be deemed to have caused the alarm signal to sound "unnecessarily."

Paragraph 6.4.2.1.

This proposal is to add an optional procedure for this Regulation to streamline the operation tests repeatedly required according to paragraphs 6.4.2.3., 6.4.2.4., 6.4.2.5., 6.4.2.6. and 6.4.2.8.4. by taking more rigorous conditions.

Performing some of the tests required in these paragraphs prior to the operation tests in series for a sample is more rigorous than performing one of these tests before performing the operation test with regard to test conditions.

According to this amendment, manufacturers can choose this option to decrease their work for obtaining type approval, provided they have sufficient quality for a VAS to do so.

Paragraph 6.4.2.3.

The VAS applied as a separate technical unit is to be installed in (a) vehicle(s) and can be designed to be placed in the vehicle(s) where foreign bodies and water cannot access. Therefore, it is unnecessary to apply this requirement to the VAS if the VAS is designed to be placed where foreign bodies and water cannot access.

Paragraph 6.4.2.6.

The VAS applied as a separate technical unit is to be installed in (a) vehicle(s) and can be designed to be free of short circuits. Therefore, it is unnecessary to apply this requirement to the VAS applied as a separate technical unit installed in (a) vehicle(s) which is (are) designed to be free of short circuits in normal use.

Paragraph 6.4.2.7.

The purpose of this requirement is to prevent the battery in a vehicle from running out when the VAS of a component is installed in the vehicle by limiting the energy consumption of the VAS.

In the case of the VAS as a separate technical unit in a vehicle, it is unnecessary to apply this requirement because the total current value of the vehicle including the energy consumption by the VAS is designed to always be controlled.

Ad Part III, paragraph 7.

This proposal is to clarify that vehicles equipped with the VAS that is approved under Part II are not required to repeat the same tests when obtaining approval under Part III.

Ad Annex 9, paragraph 1.

Immunity against disturbances conducted along supply lines and Table 1

- (a) Update to the latest ISO standard version.
- (b) Since the test pulse 5a/5b is a simulated test for noise created by disruption of an alternator, the test should be conducted according to the state of alternators of vehicles in which the VAS is to be installed.
- (c) Modifications to Functional status in Table 1 are based on the European Union Directive 72/745/EEC, as last amended by 2006/28/EC.

Electrical disturbance from electrostatic discharges

The purpose of this requirement is to assure the resistance characteristics of the VAS on electrostatic discharge. Therefore, it is unnecessary to apply this requirement to the VAS as a separate technical unit that is to be put in a place in the vehicle(s) where the VAS cannot be accessed in normal use.

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