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**ECONOMIC COMMISSION FOR EUROPE**

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations

Working Party on General Safety Provisions

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Item 12 of the provisional agenda

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

Revised 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 simplify the test procedures. It is based on a document ECE/TRANS/WP.29/GRSG/2008/4/Rev.1. Modifications to the existing text of the Regulation are marked in bold or strikethrough characters.

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\*/ 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

Paragraph 4.10., amend to read:

"4.10.

.....

Where a VAS and/or immobilizer manufacturer supplies an approved unmarked VAS and/or immobilizer to a vehicle manufacturer, for fitment by that manufacturer as original equipment for a vehicle model or range of vehicle models, the VAS and/or immobilizer manufacturer shall supply a number of copies of the certificate of conformity to the vehicle manufacturer, sufficient for that manufacturer to obtain the vehicle approval to ~~Parts II, IV III~~ and/or ~~Part IV~~ **Part IV**, as appropriate, of this Regulation.

..... "

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.

**If the VAS is designed to activate the alarm under the conditions of the 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 a VAS, which is type approved as a separate technical unit, and which is to be installed in a part of the vehicle where foreign bodies and water cannot access the VAS in normal use. In this case, the manufacturer of the VAS shall:**

- (a) prove it by submitting related documents,**
- (b) mention in paragraph 4.5. of the information document (Annex 1, Part 2), that the requirement of this paragraph does not apply to the VAS,**
- (c) mention in paragraph 4.1. of the information document the list of vehicles to which the VAS is intended to be fitted,**
- (d) and mention the place where the VAS is installed in the vehicle(s) in the Addendum to the Communication form (Annex 2- Part 2). "**

Paragraph 6.4.2.6., amend to read:

"6.4.2.6. .... with fuses changed if necessary.

**This requirement does not apply to a VAS which is type approved as a separate technical unit, and which is to be installed in a vehicle designed to be free of short circuits in normal use. In this case, the manufacturer of the VAS shall:**

- (a) prove it by submitting related documents,**
- (b) mention in paragraph 4.5. of the information document (Annex 1, Part 2), that the requirement of this paragraph does not apply to the VAS,**
- (c) mention in paragraph 4.1. of the information document the list of vehicles to which the VAS is intended to be fitted,**
- (d) and mention in the Addendum to the Communication form (Annex 2- Part 2) the place where the VAS is installed in the vehicle(s). "**

Paragraph 6.4.2.7., amend to read:

"6.4.2.7. .... alarm system including status display.

**This requirement does not apply to a VAS which is type approved as a separate technical unit. In this case, the manufacturer of the VAS shall:**

- (a) mention in paragraph 4.5. of the information document (Annex 1, Part 2), that the requirement of this paragraph does not apply to the VAS,**
- (b) and mention in paragraph 4.1. of the information document, the list of vehicles to which the VAS is intended to be fitted."**

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 1, Part 2, insert a new paragraph 4.5., to read:

"4.5. Description of the Paragraphs in this regulation in which the requirements do not apply to the VAS of separate technical units which are to be installed in specified places in specified vehicles: "

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 which is type approved as a separate technical unit and which is to be installed in (a) vehicle(s) without any alternators. In this case, the manufacturer of the VAS shall:**

- (a) **prove it by submitting related documents,**
- (b) **mention in paragraph 4.5. of the information document (Annex 1, Part 2), that the requirement of this paragraph does not apply to the VAS,**
- (c) **and mention in paragraph 4.1. of the information document the list of vehicles to which the VAS is intended to be fitted.**

~~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
<b>2a</b>	<b>III</b>	<b>B</b>
<b>2b</b>	<b>III</b>	<b>C</b>
3a	III	<b>A</b>
3b	III	A
4	III	B
4	I	A
<b>5a / 5b</b>	III	A

Immunity against disturbance coupled on signal lines

.....

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 which is type approved as a separate technical unit and 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:**

- (a) **prove it by submitting related documents,**
- (b) **mention in paragraph 4.5. of the information document (Annex 1, Part 2), that the requirement of this paragraph does not apply to the VAS,**
- (c) **mention in paragraph 4.1. of the information document the list of vehicles to which the VAS is intended to be fitted,**
- (d) **and mention in the Addendum to the Communication (Annex 2- Part2) the place where the VAS is installed in the vehicle(s).**

Radiated emissions....."

## **B. JUSTIFICATION**

### Paragraph 4.10.

Correction of typographical errors

### 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. In this case, to clarify the fitment procedure of the VAS, it is necessary to describe the exception of the application of the requirement to the VAS and the vehicles and the places in which the VAS is to be installed in the information documents.

#### 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. In this case, to clarify the fitment procedure of the VAS, it is necessary to describe the exception of the application of the requirement to the VAS and the vehicles and the places in which the VAS is to be installed in the information documents.

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 to prevent the battery from running out. In this case, to clarify the fitment procedure of the VAS, it is necessary to describe the exception of the application of the requirement to the VAS and the vehicles in which the VAS is to be installed in the information documents.

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.

Annex 1, Part 2 , Paragraph 4.5.

This proposal is to add the place to describe the items of the exception of the requirements according to this proposal especially for the VAS of a separate technical unit.

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. In this case, to clarify the fitment procedure of the VAS, it is necessary to describe the exception of the application of the requirement to the VAS and the vehicles in which the VAS is to be installed in the information documents.
- (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. In this case, to clarify the fitment procedure of the VAS, it is necessary to describe the exception of the application of the requirement to the VAS and the vehicles and the places in which the VAS is to be installed in the information documents.

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