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INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations

Working Party on General Safety Provisions

Ninety-eighth session
Geneva, 3 - 7 May 2010
Item 8 of the provisional agenda

**REGULATION No. 97
(Vehicle alarm systems)**

Revised proposal for draft amendments to Regulation No. 97

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/2008/5/Rev.2. 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 I.

Insert new paragraphs 2.12. and 2.13., to read:

"2.12. **"component"** means a device subject to the requirements of this regulation and intended to be part of a vehicle, which may be type-approved independently of a vehicle where this regulation makes express provisions for so doing;

2.13. **"separate technical unit"** means a device subject to the requirements of this regulation and intended to be part of a vehicle, which may be type-approved separately, but only in relation to one or more specified types of vehicle where this regulation makes express provisions for so doing;"

Paragraph 3.2., amend to read:

"3.2. For each type of VAS, the application must be accompanied by **an information document established in accordance with the model shown in Annex 1A, Part 1, and giving a description of the technical characteristics of the VAS, the method of installation for each make and type of vehicle on which VAS is intended to be installed.**"

Paragraph 3.2.1 and 3.2.2., should be deleted

Paragraph 7.2.1., amend to read:

"7.2.1. Operation tests

For the operation tests required in paragraphs 7.2.3., 7.2.4., 7.2.5., 7.2.6. and 7.2.8.4., 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 these paragraphs after each of the chosen tests. Vehicle manufacturers and suppliers have to guarantee satisfactory results only on non accumulated procedures."

Paragraph 7.2.3., amend to read:

"7.2.3. shall be repeated.

With the agreement of the Technical Service this requirement need not apply in the following circumstances:

- (a) **Type Approval of a VAS which is to be type approved as a separate technical unit**

In this case, the manufacturer of the VAS shall:

- (i) **specify in paragraph 4.5. of the information document (Annex 1A, Part 1) that the requirement of this paragraph was not applied to the VAS (in accordance with PART I of this regulation) and,**
- (ii) **specify in paragraph 4.1. of the information document, the list of vehicles on which the VAS is intended to be fitted and the relevant installation conditions in paragraph 4.2.**

- (b) **Type approval of a vehicle in respect of an AS**

In this case, the manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the AS due to the nature of installation conditions and the vehicle manufacturer shall prove it by submitting related documents.

- (c) **Type approval of a vehicle in respect of the installation of a VAS which is type approved as a separate technical unit**

In this case, the vehicle manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the installation of the VAS where the relevant installation conditions are met.

This requirement does not apply in cases where the information required in paragraph 3.1.3.1.1. of Annex 1A, Part 2 has already been submitted for the approval of a separate technical unit."

Paragraph 7.2.7., amend to read:

"7.2.7. alarm system including status display.

With the agreement of the Technical Service this requirement need not apply in the following circumstances:

(a) **Type Approval of a VAS which is to be type approved as a separate technical unit**

In this case, the manufacturer of the VAS shall:

- (i) specify in paragraph 4.5. of the information document (Annex 1A, Part 1), that the requirement of this paragraph was not applied to the VAS (in accordance with Part I of this regulation), and
- (ii) specify in paragraph 4.1. of the information document, the list of vehicles to which the VAS is intended to be fitted and the relevant installation conditions in paragraph 4.2.

(b) **Type approval of a vehicle in respect of an AS**

In this case, the manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the AS due to the nature of installation conditions and the vehicle manufacturer shall prove it by submitting related documents.

(c) **Type approval of a vehicle in respect of the installation of a VAS which is type approved as a separate technical unit**

In this case, the vehicle manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the installation of the VAS where the relevant installation conditions are met.

This requirement does not apply to the case where the information required in paragraph 3.1.3.1.1. of Annex 1A, Part 2 is already submitted at the approval of a separate technical unit."

Paragraph 7.2.12., amend to read:

"7.2.12. submitted to the tests described in Annex 9.

In this case, a VAS which meets all the functional status of the tests in Annex 9 is deemed not to cause the alarm signal to sound unnecessarily in association with the requirements in paragraph 6.1.2.1.

With regard to the conformity to the functional status in each test, a VAS, which is designed to sound the alarm in the set state in some of the test conditions given in Annex 9 and sound the alarm signal in the tests, is deemed to function as designed in the tests and thus deemed to meet the functional status of the tests. In this case, the manufacturer of the VAS shall prove it by submitting related documents."

Paragraph 15.2., amend to read:

"15.2. It shall be accompanied by **an information document in accordance with the model shown in Annex 1A, Part 2.**"

Paragraphs 15.2.1. to 15.2.3., should be deleted

Paragraph 18.8., amend to read:

"18.8. Entry delay

If the device for unsetting the VAS AS is fitted within the protected area, a delay of 5 seconds minimum and 15 seconds maximum shall be allowed before the activation of the audible and optical signals. The delay period may be adjustable to suit individual operators' circumstances.

Paragraph 27.2.1., amend to read:

"27.2.1 **An information document established in accordance with the model shown in Annex 1A, Part 1. and giving a description of the technical characteristics of the immobilizer, the measures taken against inadvertent activation and the method of installation for each make and type of vehicle on which the immobilizer is intended to be installed "**

Paragraph 28.3., amend to read:

"28.3. It shall be accompanied by **an information document giving a description of the technical characteristics of the immobilizer and the method of installation for each make and type of vehicle on which the immobilizer is intended to be installed in accordance with the model shown in Annex 1A, Part 2 or 3, as appropriate.**"

Paragraphs 28.3.1. and 28.3.2., should be deleted

Insert a new Annex 1A, to read:

"Annex 1A - Part 1
(Maximum format: A4 (210 mm x 297 mm))
INFORMATION DOCUMENT

in accordance with Part I as appropriate of Regulation No. 97 relating to ECE component type or separate technical unit type approval with regard to vehicle alarm systems

- 1. GENERAL**
- 1.1. Make (trade name of manufacturer):**
- 1.2. Type:**

- 1.3. Means of identification of type, if marked on the device 2/ :**
- 1.3.1. Location of that marking:**
- 1.4. Name and address of manufacturer:**
- 1.5. Location of the ECE approval mark:**
- 1.6. Address(es) of assembly plant(s):**
- 2. DESCRIPTION OF THE DEVICE**
- 2.1. A detailed description of the alarm system and of the vehicle parts related to the alarm system installed:**
- 2.1.1. A list of the main components comprising the alarm system:**
- 2.1.2. The measures taken against false alarms:**
- 2.2. Range of protection offered by the device:**
- 2.3. Method of setting/unsetting the device:**
- 2.4. Number of effective interchangeable codes, if applicable:**
- 2.5. List of main components of the device and, if applicable, their reference marks:**
- 3. DRAWINGS**
- 3.1. Drawings of the main components of the device (the drawings must show the intended space for ECE type approval mark):**
- 4. INSTRUCTIONS**
- 4.1. List of vehicles to which the device is intended to be fitted:**
- 4.2. Description of the method of installation illustrated by photographs and/or drawings:**
- 4.3. Instructions for use:**
- 4.4. Instructions for maintenance, if any:**
- 4.5. For a VAS type approved as a separate technical unit, which is to be installed in specified places in specified vehicles by virtue of the installation conditions, the description of the paragraphs of this Regulation which do not apply:**

1/ Strike out what does not apply (there are cases where nothing needs to be deleted, when more than one entry is applicable).

2/ If the means of identification of type contains characters not relevant to describe the component or separate technical unit types covered in this information document, such characters shall be represented in the documentation by the symbol "?" (e.g. ABC??123??).

Annex 1A - Part 2**INFORMATION DOCUMENT**

**in accordance with Part II of Regulation No. 97 relating to ECE system type approval of vehicle type with regard to the alarm system and immobilizer system
(Maximum format: A4 (210 mm x 297 mm))**

without / including an alarm system 1/

without / including an immobilizer 1/

1. GENERAL

1.1. Make (trade name of manufacturer):

1.2. Type:

1.3. Means of identification of type, if marked on the device 2/:

1.3.1. Location of that marking:

1.4. Category of vehicle 3/:

1.5. Name and address of the manufacturer:

1.6. Location of the ECE approval mark:

1.7. Address(es) of assembly plant(s):

2. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE

2.1. Photographs and/or drawings of a representative vehicle:

2.2. Left hand drive / right hand drive 1/

3. MISCELLANEOUS

3.1 Devices to prevent unauthorized use of the vehicle

3.1.2. Vehicle immobilizer:

3.1.2.1. Type approval number, if available:

3.1.2.2. For immobilizers not yet approved

3.1.2.2.1. A detailed technical description of the vehicle immobilizer and of the measures taken against inadvertent activation:

3.1.2.2.2. The system(s) on which the vehicle immobilizer acts:

3.1.2.2.3. Number of effective interchangeable codes, if applicable:

3.1.3. Alarm system, if any:

3.1.3.1. Type approval number, if available:

3.1.3.1.1. A detailed description of the vehicle type with regard to the arrangement of the installed VAS illustrated by photographs and/or drawings (where the VAS is already type approved as a separate technical unit, reference may be made to the description in paragraph 4.2. of the VAS manufacturer's information document):

3.1.3.2. For alarm systems not yet approved

3.1.3.2.1. A detailed description of the alarm system and of the vehicle parts related to the alarm system installed:

3.1.3.2.2. A list of the main components comprising the alarm system:

1/ Strike out what does not apply (there are cases where nothing needs to be deleted, when more than one entry is applicable).

2/ If the means of identification of type contains characters not relevant to describe component or separate technical unit types covered in this information document, such characters shall be represented in the documentation by the symbol "?" (e.g. ABC??123??).

3/ As defined in Annex 7 to the Consolidated Resolution on the Construction of Vehicles (R.E.3) (document TRANS/WP.29/78/Rev.1, as amended).

Annex 1A - Part 3
(Maximum format: A4 (210 mm x 297 mm))
INFORMATION DOCUMENT

in accordance with PART III as appropriate of Regulation No. 97 relating to ECE component type or separate technical unit type approval with regard to the immobilizer system

- 1. GENERAL**
 - 1.1. Make (trade name of manufacturer):**
 - 1.2. Type:**
 - 1.3. Means of identification of type, if marked on the device 2/ :**
 - 1.3.1. Location of that marking:**
 - 1.4. Name and address of manufacturer:**
 - 1.5. Location of the ECE approval mark:**
 - 1.6. Address(es) of assembly plant(s):**
- 2. DESCRIPTION OF THE DEVICE**
 - 2.1. A detailed description of the alarm system and of the vehicle parts related to the alarm system installed:**
 - 2.1.1. A list of the main components comprising the alarm system:**
 - 2.1.2. The measures taken against false alarms:**
 - 2.2. Range of protection offered by the device:**
 - 2.3. Method of setting/unsetting the device:**
 - 2.4. Number of effective interchangeable codes, if applicable:**
 - 2.5. List of main components comprising the device and, if applicable, their reference marks:**
- 3. DRAWINGS**
 - 3.1. Drawings of the main components of the device (the drawings must show the intended space for ECE type approval mark or reference mark, as applicable):**
- 4. INSTRUCTIONS**
 - 4.1. List of vehicles to which the device is intended to be fitted:**
 - 4.2. Description of the method of installation illustrated by photographs and/or drawings:**
 - 4.3. Instructions for use:**
 - 4.4. Instructions for maintenance, if any:**

2/ If the means of identification of type contains characters not relevant to describe the component or separate technical unit types covered in this information document, such characters shall be represented in the documentation by the symbol "?" (e.g. ABC??123??)"

Annex 9, paragraph 1., amend to read:

"1. METHOD ISO

Immunity against disturbances conducted along supply lines

Apply test pulses 1, 2a/2b, 3a, 3b, 4 and 5a/5b according to 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.

Concerning pulse 5, pulse 5b shall be applied on vehicles which include an alternator with internal limitation diode and pulse 5a shall be applied in other cases.

Concerning pulse 2, pulse 2a shall always be applied and, pulse 2b may be performed with the agreement between the car manufacturer and the technical approval services.

With the agreement of the Technical Service, test pulse 5a/5b need not be applied in the following circumstances:

(a) Type approval of a VAS which is to be type approved as a separate technical unit and is intended for fitment to (a) vehicle(s) without alternators

In this case, the manufacturer of the VAS shall:

- (i) specify in paragraph 4.5. of the information document (Annex 1A, Part 1), that the requirement of this paragraph was not applied to the VAS (in accordance with Part I of this Regulation), and**
- (ii) specify in paragraph 4.1. of the information document, the list of vehicles to which the VAS is intended to be fitted and the relevant installation conditions in paragraph 4.2.**

(b) Type approval of a vehicle in respect of an AS intended for the fitment to vehicle(s) without alternators

In this case, the manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the AS due to the nature of installation conditions.

(c) Type approval of a vehicle in respect of the installation of a VAS which is type approved as a separate technical unit and is intended for fitment to (a) vehicle(s) without alternators

In this case, the vehicle manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the installation of the VAS where the relevant installation conditions are met.

This requirement does not apply in cases where the information required in paragraph 3.1.3.1.1. of Annex 1A, Part 2 has already been submitted for the approval of the separate technical unit.

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
2a	III	B
2b	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

.....

Electrical disturbance from electrostatic discharges

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

With the agreement of the Technical Service this requirement need not apply in the following circumstances:

- (a) **Type Approval of a VAS which is to be type approved as a separate technical unit**

In this case, the manufacturer of the VAS shall:

- (i) specify in paragraph 4.5. of the information document (Annex 1A, Part 2), that the requirement of this paragraph was not applied to the VAS (in accordance with Part I of this Regulation), and
- (ii) specify in paragraph 4.1. of the information document, the list of vehicles to which the VAS is intended to be fitted and the relevant installation conditions in paragraph 4.2.

- (b) **Type approval of a vehicle in respect of an AS**

In this case, the manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the AS due to the nature of installation conditions.

- (c) **Type approval of a vehicle in respect of the installation of a VAS which is type approved as a separate technical unit**

In this case, the vehicle manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the installation of the VAS where the relevant installation conditions are met.

This requirement does not apply in cases where the information required in paragraph 3.1.3.1.1. of Annex 1A, Part 2 has already been submitted for the approval of the separate technical unit.

Radiated emissions..."

B. JUSTIFICATION

Paragraphs 3.2., 5.2., 27.2.1., 28.3., and Annex 1A

This proposal is to align the regulation with the current text of Regulation No. 116, to add a model of the information document and accordingly to clarify the cases where this document is required.

Paragraph 7.2.1.

It is proposed to add an optional procedure to streamline the operation tests repeatedly required in paragraphs 7.2.3., 7.2.4., 7.2.5., 7.2.6. and 7.2.8.4. by adopting 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.

This amendment enables exemption of the tests for a VAS approved as separate technical unit or an AS to be installed in a vehicle which is type approved. It is possible to apply vehicle type approval of the immobilizers and alarm systems without the type approval for components/separate technical unit, while some devices to prevent unauthorized use are not subject to such component type approval.

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 7.2.3.

The VAS approved 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 penetrate.

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 penetrate.

In this case, to clarify the fitment procedure of the VAS, it is necessary to describe the exception to 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.

Regarding the last sentence, if the approved type is obtained for the type approval as a separate technical unit, the information specified in para. 3.1.3.1.1. has already been submitted at that time. The added sentence is necessary to avoid duplication of work to demand the same information again at the vehicle type approval. The same situation could be applied to paragraph 7.2.7. and Annex 9 (former), paragraph 1.

Paragraph 7.2.7.

The purpose of this requirement is to prevent the battery from running out by limiting the energy consumption of the VAS.

In the case of a VAS approved as a separate technical unit, 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 to the application of the requirement to the VAS and the vehicles in which the VAS is to be installed in the information documents.

Paragraph 7.2.12.

This proposal is to clarify the requirements regarding this paragraph. In Annex 9 (former), some of the tests require the checking of the functional status of the VAS after applying some conditioning.

However, paragraph 6.1.2.1. requires the checking whether the VAS causes an unnecessary alarm signal or not in paragraph 7.2.12. and it is necessary to clarify the relationship between the functional status and the necessity of the alarm signal to check the conformity of the VAS to the provisions.

Paragraph 18.8.

Correction of typographical errors.

Annex 9 (former), paragraph 1.

Immunity against disturbances conducted along supply lines and Table 1

- Update to the latest ISO standard version.

- Since 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.

- Modifications to Functional status in Table 1 are based on 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 installed in a place in a vehicle where users can not access 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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A. PROPOSAL

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2.13. **"separate technical unit"** means a device subject to the requirements of this regulation and intended to be part of a vehicle, which may be type-approved separately, but only in relation to one or more specified types of vehicle where this regulation makes express provisions for so doing;"

Paragraph 3.2., amend to read:

"3.2. For each type of VAS, the application must be accompanied by **an information document established in accordance with the model shown in Annex 1A, Part 1, and giving a description of the technical characteristics of the VAS, the method of installation for each make and type of vehicle on which VAS is intended to be installed.**"

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For the operation tests required in paragraphs 7.2.3., 7.2.4., 7.2.5., 7.2.6. and 7.2.8.4., 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 these paragraphs after each of the chosen tests. Vehicle manufacturers and suppliers have to guarantee satisfactory results only on non accumulated procedures."

Paragraph 7.2.3., amend to read:

"7.2.3. shall be repeated.

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In this case, the manufacturer of the VAS shall:

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In this case, the manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the AS due to the nature of installation conditions and the vehicle manufacturer shall prove it by submitting related documents.

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In this case, the vehicle manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the installation of the VAS where the relevant installation conditions are met.

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"7.2.12. submitted to the tests described in Annex 9.

In this case, a VAS which meets all the functional status of the tests in Annex 9 is deemed not to cause the alarm signal to sound unnecessarily in association with the requirements in paragraph 6.1.2.1.

With regard to the conformity to the functional status in each test, a VAS, which is designed to sound the alarm in the set state in some of the test conditions given in Annex 9 and sound the alarm signal in the tests, is deemed to function as designed in the tests and thus deemed to meet the functional status of the tests. In this case, the manufacturer of the VAS shall prove it by submitting related documents."

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"15.2. It shall be accompanied by **an information document in accordance with the model shown in Annex 1A, Part 2.**"

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If the device for unsetting the VAS AS is fitted within the protected area, a delay of 5 seconds minimum and 15 seconds maximum shall be allowed before the activation of the audible and optical signals. The delay period may be adjustable to suit individual operators' circumstances.

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"27.2.1 **An information document established in accordance with the model shown in Annex 1A, Part 1. and giving a description of the technical characteristics of the immobilizer, the measures taken against inadvertent activation and the method of installation for each make and type of vehicle on which the immobilizer is intended to be installed "**

Paragraph 28.3., amend to read:

"28.3. It shall be accompanied by **an information document giving a description of the technical characteristics of the immobilizer and the method of installation for each make and type of vehicle on which the immobilizer is intended to be installed in accordance with the model shown in Annex 1A, Part 2 or 3, as appropriate.**"

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in accordance with Part I as appropriate of Regulation No. 97 relating to ECE component type or separate technical unit type approval with regard to vehicle alarm systems

- 1. GENERAL**
- 1.1. Make (trade name of manufacturer):**
- 1.2. Type:**

- 1.3. Means of identification of type, if marked on the device 2/ :**
- 1.3.1. Location of that marking:**
- 1.4. Name and address of manufacturer:**
- 1.5. Location of the ECE approval mark:**
- 1.6. Address(es) of assembly plant(s):**
- 2. DESCRIPTION OF THE DEVICE**
- 2.1. A detailed description of the alarm system and of the vehicle parts related to the alarm system installed:**
- 2.1.1. A list of the main components comprising the alarm system:**
- 2.1.2. The measures taken against false alarms:**
- 2.2. Range of protection offered by the device:**
- 2.3. Method of setting/unsetting the device:**
- 2.4. Number of effective interchangeable codes, if applicable:**
- 2.5. List of main components of the device and, if applicable, their reference marks:**
- 3. DRAWINGS**
- 3.1. Drawings of the main components of the device (the drawings must show the intended space for ECE type approval mark):**
- 4. INSTRUCTIONS**
- 4.1. List of vehicles to which the device is intended to be fitted:**
- 4.2. Description of the method of installation illustrated by photographs and/or drawings:**
- 4.3. Instructions for use:**
- 4.4. Instructions for maintenance, if any:**
- 4.5. For a VAS type approved as a separate technical unit, which is to be installed in specified places in specified vehicles by virtue of the installation conditions, the description of the paragraphs of this Regulation which do not apply:**

1/ Strike out what does not apply (there are cases where nothing needs to be deleted, when more than one entry is applicable).

2/ If the means of identification of type contains characters not relevant to describe the component or separate technical unit types covered in this information document, such characters shall be represented in the documentation by the symbol "?" (e.g. ABC??123??).

Annex 1A - Part 2**INFORMATION DOCUMENT**

**in accordance with Part II of Regulation No. 97 relating to ECE system type approval of vehicle type with regard to the alarm system and immobilizer system
(Maximum format: A4 (210 mm x 297 mm))**

without / including an alarm system 1/

without / including an immobilizer 1/

1. GENERAL

1.1. Make (trade name of manufacturer):

1.2. Type:

1.3. Means of identification of type, if marked on the device 2/:

1.3.1. Location of that marking:

1.4. Category of vehicle 3/:

1.5. Name and address of the manufacturer:

1.6. Location of the ECE approval mark:

1.7. Address(es) of assembly plant(s):

2. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE

2.1. Photographs and/or drawings of a representative vehicle:

2.2. Left hand drive / right hand drive 1/

3. MISCELLANEOUS

3.1 Devices to prevent unauthorized use of the vehicle

3.1.2. Vehicle immobilizer:

3.1.2.1. Type approval number, if available:

3.1.2.2. For immobilizers not yet approved

3.1.2.2.1. A detailed technical description of the vehicle immobilizer and of the measures taken against inadvertent activation:

3.1.2.2.2. The system(s) on which the vehicle immobilizer acts:

3.1.2.2.3. Number of effective interchangeable codes, if applicable:

3.1.3. Alarm system, if any:

3.1.3.1. Type approval number, if available:

3.1.3.1.1. A detailed description of the vehicle type with regard to the arrangement of the installed VAS illustrated by photographs and/or drawings (where the VAS is already type approved as a separate technical unit, reference may be made to the description in paragraph 4.2. of the VAS manufacturer's information document):

3.1.3.2. For alarm systems not yet approved

3.1.3.2.1. A detailed description of the alarm system and of the vehicle parts related to the alarm system installed:

3.1.3.2.2. A list of the main components comprising the alarm system:

1/ Strike out what does not apply (there are cases where nothing needs to be deleted, when more than one entry is applicable).

2/ If the means of identification of type contains characters not relevant to describe component or separate technical unit types covered in this information document, such characters shall be represented in the documentation by the symbol "?" (e.g. ABC??123??).

3/ As defined in Annex 7 to the Consolidated Resolution on the Construction of Vehicles (R.E.3) (document TRANS/WP.29/78/Rev.1, as amended).

Annex 1A - Part 3
(Maximum format: A4 (210 mm x 297 mm))
INFORMATION DOCUMENT

in accordance with PART III as appropriate of Regulation No. 97 relating to ECE component type or separate technical unit type approval with regard to the immobilizer system

- 1. GENERAL**
 - 1.1. Make (trade name of manufacturer):**
 - 1.2. Type:**
 - 1.3. Means of identification of type, if marked on the device 2/ :**
 - 1.3.1. Location of that marking:**
 - 1.4. Name and address of manufacturer:**
 - 1.5. Location of the ECE approval mark:**
 - 1.6. Address(es) of assembly plant(s):**
- 2. DESCRIPTION OF THE DEVICE**
 - 2.1. A detailed description of the alarm system and of the vehicle parts related to the alarm system installed:**
 - 2.1.1. A list of the main components comprising the alarm system:**
 - 2.1.2. The measures taken against false alarms:**
 - 2.2. Range of protection offered by the device:**
 - 2.3. Method of setting/unsetting the device:**
 - 2.4. Number of effective interchangeable codes, if applicable:**
 - 2.5. List of main components comprising the device and, if applicable, their reference marks:**
- 3. DRAWINGS**
 - 3.1. Drawings of the main components of the device (the drawings must show the intended space for ECE type approval mark or reference mark, as applicable):**
- 4. INSTRUCTIONS**
 - 4.1. List of vehicles to which the device is intended to be fitted:**
 - 4.2. Description of the method of installation illustrated by photographs and/or drawings:**
 - 4.3. Instructions for use:**
 - 4.4. Instructions for maintenance, if any:**

2/ If the means of identification of type contains characters not relevant to describe the component or separate technical unit types covered in this information document, such characters shall be represented in the documentation by the symbol "?" (e.g. ABC??123??)"

Annex 9, paragraph 1., amend to read:

"1. METHOD ISO

Immunity against disturbances conducted along supply lines

Apply test pulses 1, 2a/2b, 3a, 3b, 4 and 5a/5b according to 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.

Concerning pulse 5, pulse 5b shall be applied on vehicles which include an alternator with internal limitation diode and pulse 5a shall be applied in other cases.

Concerning pulse 2, pulse 2a shall always be applied and, pulse 2b may be performed with the agreement between the car manufacturer and the technical approval services.

With the agreement of the Technical Service, test pulse 5a/5b need not be applied in the following circumstances:

- (a) **Type approval of a VAS which is to be type approved as a separate technical unit and is intended for fitment to (a) vehicle(s) without alternators**

In this case, the manufacturer of the VAS shall:

- (i) **specify in paragraph 4.5. of the information document (Annex 1A, Part 1), that the requirement of this paragraph was not applied to the VAS (in accordance with Part I of this Regulation), and**
- (ii) **specify in paragraph 4.1. of the information document, the list of vehicles to which the VAS is intended to be fitted and the relevant installation conditions in paragraph 4.2.**

- (b) **Type approval of a vehicle in respect of an AS intended for the fitment to vehicle(s) without alternators**

In this case, the manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the AS due to the nature of installation conditions.

- (c) **Type approval of a vehicle in respect of the installation of a VAS which is type approved as a separate technical unit and is intended for fitment to (a) vehicle(s) without alternators**

In this case, the vehicle manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the installation of the VAS where the relevant installation conditions are met.

This requirement does not apply in cases where the information required in paragraph 3.1.3.1.1. of Annex 1A, Part 2 has already been submitted for the approval of the separate technical unit.

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
2a	III	B
2b	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

.....

Electrical disturbance from electrostatic discharges

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

With the agreement of the Technical Service this requirement need not apply in the following circumstances:

- (a) **Type Approval of a VAS which is to be type approved as a separate technical unit**

In this case, the manufacturer of the VAS shall:

- (i) specify in paragraph 4.5. of the information document (Annex 1A, Part 2), that the requirement of this paragraph was not applied to the VAS (in accordance with Part I of this Regulation), and
- (ii) specify in paragraph 4.1. of the information document, the list of vehicles to which the VAS is intended to be fitted and the relevant installation conditions in paragraph 4.2.

- (b) **Type approval of a vehicle in respect of an AS**

In this case, the manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the AS due to the nature of installation conditions.

- (c) **Type approval of a vehicle in respect of the installation of a VAS which is type approved as a separate technical unit**

In this case, the vehicle manufacturer shall specify in paragraph 3.1.3.1.1. of the information document (Annex 1A, Part 2), that the requirement of this paragraph does not apply to the installation of the VAS where the relevant installation conditions are met.

This requirement does not apply in cases where the information required in paragraph 3.1.3.1.1. of Annex 1A, Part 2 has already been submitted for the approval of the separate technical unit.

Radiated emissions..."

B. JUSTIFICATION

Paragraphs 3.2., 5.2., 27.2.1., 28.3., and Annex 1A

This proposal is to align the regulation with the current text of Regulation No. 116, to add a model of the information document and accordingly to clarify the cases where this document is required.

Paragraph 7.2.1.

It is proposed to add an optional procedure to streamline the operation tests repeatedly required in paragraphs 7.2.3., 7.2.4., 7.2.5., 7.2.6. and 7.2.8.4. by adopting 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.

This amendment enables exemption of the tests for a VAS approved as separate technical unit or an AS to be installed in a vehicle which is type approved. It is possible to apply vehicle type approval of the immobilizers and alarm systems without the type approval for components/separate technical unit, while some devices to prevent unauthorized use are not subject to such component type approval.

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 7.2.3.

The VAS approved 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 penetrate.

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 penetrate.

In this case, to clarify the fitment procedure of the VAS, it is necessary to describe the exception to 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.

Regarding the last sentence, if the approved type is obtained for the type approval as a separate technical unit, the information specified in para. 3.1.3.1.1. has already been submitted at that time. The added sentence is necessary to avoid duplication of work to demand the same information again at the vehicle type approval. The same situation could be applied to paragraph 7.2.7. and Annex 9 (former), paragraph 1.

Paragraph 7.2.7.

The purpose of this requirement is to prevent the battery from running out by limiting the energy consumption of the VAS.

In the case of a VAS approved as a separate technical unit, 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 to the application of the requirement to the VAS and the vehicles in which the VAS is to be installed in the information documents.

Paragraph 7.2.12.

This proposal is to clarify the requirements regarding this paragraph. In Annex 9 (former), some of the tests require the checking of the functional status of the VAS after applying some conditioning.

However, paragraph 6.1.2.1. requires the checking whether the VAS causes an unnecessary alarm signal or not in paragraph 7.2.12. and it is necessary to clarify the relationship between the functional status and the necessity of the alarm signal to check the conformity of the VAS to the provisions.

Paragraph 18.8.

Correction of typographical errors.

Annex 9 (former), paragraph 1.

Immunity against disturbances conducted along supply lines and Table 1

- Update to the latest ISO standard version.

- Since 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.

- Modifications to Functional status in Table 1 are based on 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 installed in a place in a vehicle where users can not access 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.
