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**ECONOMIC COMMISSION FOR EUROPE**

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

DRAFT SUPPLEMENT 3 TO THE 01 SERIES  
OF AMENDMENTS TO REGULATION No. 97

(Vehicle alarm systems)

Note: The text reproduced below was adopted by the Administrative Committee (AC.1) of the amended 1958 Agreement at its nineteenth session, following the recommendation by WP.29 at its one-hundred-and-twenty-fifth session. It is based on document TRANS/WP.29/2001/59, as corrected (TRANS/WP.29/815, para. 142).

Annex 9, amend to read:

"Annex 9

ELECTROMAGNETIC COMPATIBILITY

Note: To test the electromagnetic compatibility, either paragraph 1. or paragraph 2. shall be used, depending on the test facilities.

1. METHOD ISO

Immunity against disturbances conducted along supply lines

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

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 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	III	A
3a	III	C
3b	III	A
4	III	B
4	I	A
5	III	A

Immunity against disturbance coupled on signal lines

Leads which are not connected to supply lines (e.g. special signal lines) shall be tested in accordance with the International Standard ISO/DIS 7637:1993 part 3. The required functional status for all applied test pulses are given in table 2.

Table 2 - Test level / functional status (for signal lines)

Test pulse number	Test level	Functional status
3a	III	C
3b	III	A

Immunity against radiated high frequency disturbances

Testing of the immunity of a VAS/AS in a vehicle may be performed according to the prescriptions in Regulation No. 10, 02 series of amendments and test methods described in annex 6 for the vehicles and annex 9 for a separate technical unit.

Electrical disturbance from electrostatic discharges

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

Radiated emission

Tests shall be performed according to Regulation No. 10, 02 series of amendments prescriptions and according to the test methods described in annexes 4 and 5 for vehicles or annexes 7 and 8, for a separate technical unit.

## 2. METHOD IEC

Electromagnetic field

The VAS/AS shall undergo the basic test. It shall be subjected to the electromagnetic field test described in IEC Publication 839-1-3-1998 test A-13 with a frequency range from 20 to 1000 MHz, and for a field strength level of 30 V/m.

In addition, the VAS/AS shall be subjected to the electrical transient conducted and coupled tests described in the International Standard ISO 7637 Parts 1:1990, 2:1990 and 3:1993, as appropriate.

Electrical disturbance from electrostatic discharges

The VAS/AS shall undergo the basic test. It shall be subjected to testing for immunity against electrostatic discharge as described in either EN 61000-4-2, or ISO/TR 10605-1993, at the manufacturer's choice.

Radiated emissions

The VAS/AS shall be subjected to testing for the suppression of radio frequency interference according to tests prescribed in Regulation No. 10, 02 series of amendments and according to test methods described in annexes 4 and 5 for vehicles and annexes 7 and 8 for a separate technical unit."

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