

COMMISSION REGULATION (EC) No 68/2009

of 23 January 2009

adapting for the ninth time to technical progress Council Regulation (EEC) No 3821/85 on recording equipment in road transport

(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EEC) No 3821/85 of 20 December 1985 on recording equipment in road transport ⁽¹⁾, and in particular Article 17(1) thereof,

Whereas:

(1) Annex 1 B to Regulation (EEC) No 3821/85 sets out the technical specifications for the construction, testing, installation and inspection of recording equipment in road transport.

(2) Paying particular attention to the overall security of the system and its application to vehicles in scope of Regulation (EEC) No 3821/85, certain technical specifications should be added to its Annex 1 B in order to make it possible to install recording equipment, which is in conformity with that Annex, in M1 and N1 type vehicles.

(3) The measures provided for in this Regulation are in accordance with the opinion of the Committee established under Article 18 of Regulation (EEC) No 3821/85,

HAS ADOPTED THIS REGULATION:

Article 1

Annex 1 B to Regulation (EEC) No 3821/85 is amended as follows:

1. In chapter I, the following definition is inserted:

‘(rr) “adaptor” means: a part of the recording equipment, providing a signal permanently representative of vehicle speed and/or distance travelled, and which is:

- installed and used only in M1 and N1 type vehicles (as defined in Annex II to Council Directive 70/156/EEC) put into service for the first time between 1 May 2006 and 31 December 2013,

- installed where it is not mechanically possible to install any other type of existing motion sensor which is otherwise compliant with the provisions of this Annex and its Appendixes 1 to 11,

- installed between the vehicle unit and where the speed/distance impulses are generated by integrated sensors or alternative interfaces.

Seen from a vehicle unit, the adaptor behaviour is the same as if a motion sensor, compliant the provisions of this Annex and its Appendixes 1 to 11, was connected to the vehicle unit.

Use of such an adaptor in those vehicles described above shall allow for the installation and correct use of a vehicle unit compliant with all the requirements of this Annex.

For those vehicles, the recording equipment includes cables, an adaptor, and a vehicle unit.’

2. In chapter V, section 2, requirement 250 shall be replaced by the following:

‘250. The plaque shall bear at least the following details:

- name, address or trade name of the approved fitter or workshop,

- characteristic coefficient of the vehicle, in the form “w = ... imp/km”,

- constant of the recording equipment, in the form “k = ... imp/km”,

- effective circumference of the wheel tyres in the form “l = ... mm”,

- tyre size,

- the date on which the characteristic coefficient of the vehicle was determined and the effective circumference of the wheel tyres measured,

⁽¹⁾ OJ L 370, 31.12.1985, p. 8.

- the vehicle identification number, ‘— 250a.
- the part of the vehicle where the adaptor, if any, is installed, — Installation plaques for vehicles equipped with adaptors, or for vehicles where the motion sensor is not connected to the gear-box shall be fitted at the time of installation. For all other vehicles, installation plaques bearing the new information shall be fitted at the time of inspection following the installation.’
- the part of the vehicle where the motion sensor is installed, if not connected to the gear-box or an adaptor is not being used,
- a description of the colour of the cable between the adaptor and that part of the vehicle providing its incoming impulses, 4. After Appendix 11, an Appendix 12 as set out in the Annex to this Regulation is added.
- the serial number of the embedded motion sensor of the adaptor.’

3. In chapter V, section 2, the following requirement shall be added:

Article 2

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply 6 months after the date of publication.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 23 January 2009.

For the Commission
Antonio TAJANI
Vice-President

ANNEX

Appendix 12

ADAPTOR FOR M 1 AND N1 CATEGORY VEHICLES

CONTENTS

1.	Abbreviations and reference documents	5
1.1.	Abbreviations	5
1.2.	Reference standards	5
2.	General characteristics and functions of the adaptor	5
2.1.	Adaptor general description	5
2.2.	Functions	6
2.3.	Security	6
3.	Requirements for the recording equipment when an adaptor is installed	6
4.	Construction and functional requirements for the adaptor	7
4.1.	Interfacing and adapting incoming speed pulses	7
4.2.	Inducing the incoming pulses to the embedded motion sensor	7
4.3.	Embedded motion sensor	7
4.4.	Security requirements	7
4.5.	Performance characteristics	7
4.6.	Materials	7
4.7.	Markings	8
5.	Installation of the recording equipment when an adaptor is used	8
5.1.	Installation	8
5.2.	Sealing	8
6.	Checks, inspections and repairs	8
6.1.	Periodic inspections	8
7.	Type approval of recording equipment when an adaptor is used	9
7.1.	General points	9
7.2.	Functional certificate	9

1. ABBREVIATIONS AND REFERENCE DOCUMENTS

1.1. Abbreviations

TBD To Be Defined

VU Vehicle Unit

1.2. Reference standards

ISO 16844-3 Road vehicles – Tachograph systems – Part 3: Motion sensor interface

2. GENERAL CHARACTERISTICS AND FUNCTIONS OF THE ADAPTOR

2.1. Adaptor general description

ADA_001 The adaptor shall provide a connected VU with secured motion data permanently representative of vehicle speed and distance travelled.

The adaptor is only intended for those vehicles that are required to be equipped with recording equipment in compliance with this Regulation.

It shall be installed and used only in those types of vehicle defined under (rr), where it is not mechanically possible to install any other type of existing motion sensor which is otherwise compliant with the provisions of this Annex and its Appendixes 1 to 11.

The adaptor shall not be mechanically interfaced to a moving part of the vehicle, as required by Appendix 10 of this Annex (section 3.1), but connected to the speed/distance impulses which are generated by integrated sensors or alternative interfaces.

ADA_002 A type approved motion sensor (according to the provisions of this Annex, section VIII - Type approval of recording equipment and tachograph cards) shall be fitted into the adaptor housing, which shall also include a pulse converter device inducing the incoming pulses to the embedded motion sensor. The embedded motion sensor itself shall be connected to the VU, so that the interface between the VU and the adaptor shall be compliant with the requirements set out in ISO 16844-3.

2.2. Functions

ADA_003 The adaptor shall include the following functions:

- interfacing and adapting the incoming speed pulses,
- inducing the incoming pulses to the embedded motion sensor,
- all functions of the embedded motion sensor, providing secured motion data to the VU.

2.3. Security

ADA_004 The adaptor shall not be security certified according to the motion sensor generic security target defined in Appendix 10 of this Annex. Security related requirements specified in section 4.4 of this Appendix shall apply instead.

3. REQUIREMENTS FOR THE RECORDING EQUIPMENT WHEN AN ADAPTOR IS INSTALLED

The requirements in this and the following Chapters indicate how the requirements of this Annex shall be understood when an adaptor is used. The related requirement numbers are provided between brackets.

ADA_005 The recording equipment of any vehicle fitted with an adaptor must comply with all the provisions of this Annex, except otherwise specified in this Appendix.

ADA_006 When an adaptor is installed, the recording equipment includes cables, the adaptor (instead of a motion sensor), and a VU (001).

ADA_007 The detection of events and/or faults function of the recording equipment is modified as follows:

- the 'power supply interruption' event shall be triggered by the VU, while not in calibration mode, in case of any interruption exceeding 200 milliseconds of the power supply of the embedded motion sensor (066),
- any power supply interruption of more than 200 ms (milliseconds) of the adaptor shall generate a power supply interruption of the embedded motion sensor of equivalent length. The adaptor interrupter threshold shall be defined by the adaptor manufacturer,
- the 'motion data error' event shall be triggered by the VU in case of interruption of the normal data flow between the embedded motion sensor and the VU and/or in case of data integrity or data authentication error during data exchange between the embedded motion sensor and the VU (067),
- the 'security breach attempt' event shall be triggered by the VU for any other event affecting the security of the embedded motion sensor, while not in calibration mode (068),
- the 'recording equipment' fault shall be triggered by the VU, while not in calibration mode, for any fault of the embedded motion sensor (070).

ADA_008 The adaptor faults detectable by the recording equipment shall be those related with the embedded motion sensor (071).

ADA_009 The VU calibration function shall allow to automatically pair the embedded motion sensor with the VU (154, 155).

ADA_010 The terms 'motion sensor' or 'sensor' in the VU Security Target in Appendix 10 of this Annex refer to the embedded motion sensor.

4. CONSTRUCTION AND FUNCTIONAL REQUIREMENTS FOR THE ADAPTOR

4.1. Interfacing and adapting incoming speed pulses

ADA_011 The adaptor input interface shall accept frequency pulses representative of the vehicle speed and distance travelled. Electrical characteristics of the incoming pulses are: *TBD by the manufacturer*. Adjustments accessible to only the adaptor manufacturer and to the approved workshop performing the adaptor installation shall allow the correct interfacing of the adaptor input to the vehicle, if applicable.

ADA_012 The adaptor input interface shall be able, if applicable, to multiply or divide the frequency pulses of the incoming speed pulses by a fixed factor, to adapt the signal to a value in the k factor range defined by this Annex (4 000 to 25 000 pulses/km). This fixed factor may only be programmed by the adaptor manufacturer, and the approved workshop performing the adaptor installation.

4.2. Inducing the incoming pulses to the embedded motion sensor

ADA_013 The incoming pulses, possibly adapted as specified above, shall be induced to the embedded motion sensor, so that each incoming pulse shall be detected by the motion sensor.

4.3. Embedded motion sensor

ADA_014 The embedded motion sensor shall be stimulated by the induced pulses, thus allowing it to generate motion data accurately representing the vehicle movement, as if it was mechanically interfaced to a moving part of the vehicle.

ADA_015 The identification data of the embedded motion sensor shall be used by the VU to identify the adaptor (077).

ADA_016 The installation data stored in the embedded motion sensor shall be considered to represent the adaptor installation data (099).

4.4. Security requirements

ADA_017 The adaptor housing shall be designed so that it cannot be opened. It shall be sealed, so that physical tampering attempts can be easily detected (e.g. through visual inspection, see ADA_035).

ADA_018 It shall not be possible to remove the embedded motion sensor from the adaptor without breaking the seal(s) of the adaptor housing, or breaking the seal between the sensor and the adaptor housing (see ADA_035).

ADA_019 The adaptor shall ensure that motion data may only be processed and derived from the adaptor input.

4.5. Performance characteristics

ADA_020 The adaptor shall be fully operational in the temperature range (*TBD by the manufacturer, depending on the installation position*) (159).

ADA_021 The adaptor shall be fully operational in the humidity range 10 % to 90 % (160).

ADA_022 The adaptor shall be protected against over-voltage, inversion of its power supply polarity, and short circuits (161).

ADA_023 The adaptor shall conform to Commission Directive 2006/28/EC (*) adapting to technical progress Council Directive 72/245/EEC, related to electromagnetic compatibility, and shall be protected against electrostatic discharges and transients (162).

4.6. Materials

ADA_024 The adaptor shall meet the protection grade (*TBD by the manufacturers, depending upon the installation position*) (164, 165).

ADA_025 The colour of the adaptor housing shall be yellow.

(*) OJ L 65, 7.3.2006, p. 27.

4.7. Markings

- ADA_026 A descriptive plaque shall be affixed to the adaptor and shall show the following details (169):
- name and address of the manufacturer of the adaptor,
 - manufacturer's part number and year of manufacture of the adaptor,
 - approval mark of the adaptor type or of the recording equipment type including the adaptor,
 - the date on which the adaptor has been installed,
 - the vehicle identification number of the vehicle on which it has been installed.
- ADA_027 The descriptive plaque shall also show the following details (if not directly readable from the outside on the embedded motion sensor):
- name of the manufacturer of the embedded motion sensor,
 - manufacturer's part number and year of manufacture of the embedded motion sensor,
 - approval mark for the embedded motion sensor.

5. INSTALLATION OF THE RECORDING EQUIPMENT WHEN AN ADAPTOR IS USED

5.1. Installation

- ADA_028 Adaptors to be installed in vehicles shall be delivered only to vehicle manufacturers, or to workshops approved by the competent authorities of the Member States and authorised to install, activate and calibrate digital tachographs.
- ADA_029 Such approved workshop installing the adaptor shall adjust the input interface and select the division ratio of the input signal (if applicable).
- ADA_030 Such approved workshop installing the adaptor shall seal the adaptor housing.
- ADA_031 The adaptor shall be fitted as close as possible to that part of the vehicle which provides its incoming pulses.
- ADA_032 The cables for providing the adaptor power supply shall be red (positive supply) and black (ground).

5.2. Sealing

- ADA_033 The following sealing requirements shall apply:
- the adaptor housing shall be sealed (see ADA_017),
 - the housing of the embedded sensor shall be sealed to the adaptor housing, unless it is not possible to remove the embedded sensor without breaking the seal(s) of the adaptor housing (see ADA_018),
 - the adaptor housing shall be sealed to the vehicle,
 - the connection between the adaptor and the equipment which provides its incoming pulses shall be sealed on both ends (to the extent of what is reasonably possible).

6. CHECKS, INSPECTIONS AND REPAIRS

6.1. Periodic inspections

- ADA_034 When an adaptor is used, each periodic inspection (periodic inspection means in compliance with Requirement 256 through to Requirement 258 of Chapter VI of Annex 1B) of the recording equipment shall include the following checks (257):
- that the adaptor carries the appropriate type approval markings,
 - that the seals on the adaptor and its connections are intact,

- that the adaptor is installed as indicated on the installation plaque,
- that the adaptor is installed as specified by the adapter and/or vehicle manufacturer,
- that mounting an adaptor is authorised for the inspected vehicle.

7. TYPE APPROVAL OF RECORDING EQUIPMENT WHEN AN ADAPTOR IS USED

7.1. General points

- ADA_035 Recording equipment shall be submitted for type approval complete, with the adaptor (269).
- ADA_036 Any adaptor may be submitted for its own type approval, or for type approval as a component of a recording equipment.
- ADA_037 Such type approval shall include functional tests involving the adaptor. Positive results to each of these tests are stated by an appropriate certificate (270).

7.2. Functional certificate

- ADA_038 A functional certificate of an adaptor or of recording equipment including an adaptor shall be delivered to the adaptor manufacturer only after all the following minimum functional tests have been successfully passed.

No	Test	Description	Related requirements
1.	Administrative examination		
1.1.	Documentation	Correctness of documentation of the adaptor	
2.	Visual inspection		
2.1.	Compliance of the adaptor with documentation		
2.2.	Identification/markings of the adaptor		ADA_026, ADA_027
2.3.	Materials of the adaptor		163 to 167 ADA_025
2.4.	Sealing		ADA_017, ADA_018, ADA_035
3.	Functional tests		
3.1.	Inducing the speed pulses to the embedded motion sensor		ADA_013
3.2.	Interfacing and adapting incoming speed pulses		ADA_011, ADA_012
3.3.	Motion measurement accuracy		022 to 026
4.	Environmental tests		
4.1.	Manufacturer test results	Results of manufacturer environment tests	ADA_020, ADA_021, ADA_022, ADA_023, ADA_024
5.	EMC		
5.1.	Radiated emissions and susceptibility	Verify compliance with Directive 2006/28/EC	ADA_023
5.2.	Manufacturer test results	Results of manufacturer environment tests	ADA_023