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ANNEX I C

Requirements for construction, testing, installation, and inspection

3. CONSTRUCTION AND FUNCTIONAL REQUIREMENTS FOR RECORDING EQUIPMENT

3.9 Detection of events and/or faults

(71) This function shall detect the following events and/or faults:

3.9.1 'Insertion of a non-valid card' event

(72) This event shall be triggered at the insertion of any non-valid card, at the insertion of a driver card already replaced and/or when an inserted valid card expires.

3.9.2 'Card conflict' event

(73) This event shall be triggered when any of the valid cards combination noted X in the following table arises:

Card conflict		Driver slot				
		No card	Driver card	Control card	Workshop card	Company card
Co-driver slot	No card					
	Driver card				X	
	Control card			X	X	X
	Workshop card		X	X	X	X
	Company card			X	X	X

3.9.3 'Time overlap' event

(74) This event shall be triggered when the date / time of last withdrawal of a driver card, as read from the card, is later than the current date / time of the recording equipment in which the card is inserted.

3.9.4 'Driving without an appropriate card' event

(75) This event shall be triggered for any valid tachograph cards combination noted X in the following table, when driver activity changes to DRIVING, or when there is a change of the mode of operation while driver activity is DRIVING:

Driving without an appropriate card		Driver slot				
		No (or non-valid) card	Driver card	Control card	Workshop card	Company card
Co-driver slot	No (or non-valid) card	X		X		X

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Driver card	X		X	X	X
Control card	X	X	X	X	X
Workshop card	X	X	X		X
Company card	X	X	X	X	X

3.9.5 ‘Card insertion while driving’ event

(76) This event shall be triggered when a tachograph card is inserted in any slot, while driver activity is DRIVING.

3.9.6 ‘Last card session not correctly closed’ event

(77) This event shall be triggered when at card insertion the recording equipment detects that, despite the provisions laid down in paragraph 3.1., the previous card session has not been correctly closed (the card has been withdrawn before all relevant data have been stored on the card). This event shall be triggered by driver and workshop cards only.

3.9.7 ‘Over speeding’ event

(78) This event shall be triggered for each over speeding.

3.9.8 ‘Power supply interruption’ event

(79) This event shall be triggered, while not in calibration or control mode, in case of any interruption exceeding 200 milliseconds of the power supply of the motion sensor and/or of the vehicle unit. The interruption threshold shall be defined by the manufacturer. The drop in power supply due to the starting of the engine of the vehicle shall not trigger this event.

3.9.9 ‘Communication error with the remote communication facility’ event

(80) This event shall be triggered, **while not in calibration mode**, when the remote communication facility does not acknowledge the successful reception of remote communication data sent from the vehicle unit for more than three attempts.

3.9.10 ‘Absence of position information from GNSS receiver’ event

(81) This event shall be triggered, **while not in calibration mode**, in case of absence of position information originating from the GNSS receiver (whether internal or external) for more than three hours of accumulated driving time.

3.9.11 ‘Communication error with the external GNSS facility’ event

(82) This event shall be triggered, **while not in calibration mode**, in case of interruption of the communication between the external GNSS facility and the vehicle unit for more than 20 continuous minutes, when the vehicle is moving.

3.9.12 ‘Motion data error’ event

(83) This event shall be triggered, **while not in calibration mode**, in case of interruption of the normal data flow between the motion sensor and the vehicle unit and/or in case

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of data integrity or data authentication error during data exchange between the motion sensor and the vehicle unit.

3.9.13 *'Vehicle motion conflict' event*

- (84) This event shall be triggered, **while not in calibration mode**, in case motion information calculated from the motion sensor is contradicted by motion information calculated from the internal GNSS receiver or from the external GNSS facility and optionally by other independent sources, as specified in Appendix 12. This event shall not be triggered during a ferry/train crossing, an OUT OF SCOPE condition, or when the position information from the GNSS receiver is not available.

3.9.14 *'Security breach attempt' event*

- (85) This event shall be triggered for any other event affecting the security of the motion sensor and/or of the vehicle unit and/or the external GNSS facility as required in Appendix 10, while not in calibration mode.

[^{F1}3.9.15 *'Time conflict' event*

- (86) This event shall be triggered, **while not in calibration mode**, when the VU detects a discrepancy of more than 1 minute between the time of the vehicle unit's time measurement function and the time originating from the GNSS receiver. This event is recorded together with the internal clock value of the vehicle unit and comes together with an automatic time adjustment. After a time conflict event has been triggered, the VU will not generate other time conflict events for the next 12 hours. This event shall not be triggered in cases where no valid GNSS signal was detectable by the GNSS receiver for 30 days or more.]

Textual Amendments

- F1** Substituted by [Commission Implementing Regulation \(EU\) 2018/502 of 28 February 2018 amending Implementing Regulation \(EU\) 2016/799 laying down the requirements for the construction, testing, installation, operation and repair of tachographs and their components \(Text with EEA relevance\).](#)

3.9.16 *'Card' fault*

- (87) This fault shall be triggered when a tachograph card failure occurs during operation.

3.9.17 *'Recording equipment' fault*

- (88) This fault shall be triggered for any of these failures, while not in calibration mode:
- VU internal fault
 - Printer fault
 - Display fault
 - Downloading fault
 - Sensor fault
 - GNSS receiver or external GNSS facility fault
 - Remote Communication facility fault
 - [^{F2}ITS interface fault (if applicable)]

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Textual Amendments

- F2** Inserted by [Commission Implementing Regulation \(EU\) 2018/502 of 28 February 2018 amending Implementing Regulation \(EU\) 2016/799](#) laying down the requirements for the construction, testing, installation, operation and repair of tachographs and their components (Text with EEA relevance).

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Changes and effects yet to be applied to the whole legislation item and associated provisions

- Signature words omitted by [S.I. 2019/453 reg. 110](#)
- Annex 1C modified by [S.I. 2023/739 reg. 3Sch.](#)