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Regulation (EU) No 165/2014 of the European Parliament and of the Council

of 4 February 2014

on tachographs in road transport, repealing Council Regulation (EEC) No 3821/85 on recording equipment in road transport and amending Regulation (EC) No 561/2006 of the European Parliament and of the Council on the harmonisation of certain social legislation relating to road transport

(Text with EEA relevance)

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ANNEX I - REQUIREMENTS FOR CONSTRUCTION, TESTING, INSTALLATION AND INSPECTION FOR ANALOGUE TACHOGRAPHS

ANNEX II - APPROVAL MARK AND CERTIFICATE

Regulation (EU) No 165/2014 of the European Parliament and of the Council

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on tachographs in road transport, repealing Council Regulation (EEC) No 3821/85 on recording equipment in road transport and amending Regulation (EC) No 561/2006 of the European Parliament and of the Council on the harmonisation of certain social legislation relating to road transport

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 91 thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee,

After consulting the Committee of the Regions,

Acting in accordance with the ordinary legislative procedure,

Whereas:

- (1) Council Regulation (EEC) No 3821/85 lays down provisions concerning the construction, installation, use and testing of tachographs. It has been substantially amended on several occasions. In order to ensure greater clarity, its main provisions should therefore be simplified and re-structured.
- (2) Experience has shown that, in order to ensure the effectiveness and efficiency of the tachograph system, certain technical elements and control procedures should be improved.
- (3) Certain vehicles are subject to an exemption from the provisions of Regulation (EC) No 561/2006 of the European Parliament and of the Council. In order to ensure coherence, it should also be possible to exempt such vehicles from the scope of this Regulation.
- (4) Tachographs should be installed in vehicles to which Regulation (EC) No 561/2006 applies. Certain vehicles should be excluded from the scope of that Regulation in order to introduce some flexibility, namely vehicles with a maximum permissible mass not exceeding 7,5 tonnes used for carrying materials, equipment or machinery for the driver's use in the course of his work, and which are used only within a 100 km radius from the base of the undertaking, on condition that driving such vehicles does not constitute the driver's main activity. In order to ensure coherence between the relevant exemptions set out in Regulation (EC) No 561/2006, and to reduce the administrative burden on transport undertakings whilst respecting the objectives of that Regulation, certain maximum permissible distances set out in those exemptions should be revised.
- (5) The Commission will consider extending the period of validity of the adaptor for M1 and N1 vehicles until 2015 and give further consideration to a long-term solution for M1 and N1 vehicles before 2015.
- (6) The Commission should consider the inclusion of weight sensors in heavy goods vehicles and should assess the potential for weight sensors to contribute to improved compliance with road transport legislation.
- (7) The use of tachographs connected to a global navigation satellite system is an appropriate and cost-efficient means of recording automatically the position of a vehicle at certain points during the daily working period in order to support control officers during controls, and should therefore be provided for.
- (8) In its judgment in Case C-394/92 *Michielsen and Geybels Transport Service*, the Court of Justice provided a definition of the term 'daily working period', and the control authorities should read the provisions of this Regulation in the light of that definition. The 'daily working period' commences at the time when the driver switches on the tachograph following a weekly or daily rest period, or, if the daily rest is divided into separate periods, following a rest period of at least nine hours' duration. It ends at the beginning of a daily rest period or, if the daily rest is divided into separate periods, at the

beginning of a rest period extending over a minimum of nine consecutive hours.

- (9) Directive 2006/22/EC of the European Parliament and of the Council requires Member States to carry out a minimum number of checks at the roadside. Remote communication between the tachograph and control authorities for roadside control purposes facilitates targeted roadside checks, making it possible to reduce the administrative burden created by random checks on transport undertakings, and should therefore be provided for.
- (10) Intelligent transport systems (ITS) can help to meet the challenges faced by the European transport policy, such as increasing road transport volumes and congestion, and rising energy consumption. Standardised interfaces should therefore be provided in tachographs in order to ensure their interoperability with ITS applications.
- (11) Priority should be given to the development of applications which help drivers to interpret the data recorded in the tachograph in order to enable them to comply with social legislation.
- (12) The security of the tachograph and its system is essential to ensure that trustworthy data is produced. Manufacturers should therefore design, test and continuously review the tachograph throughout its life cycle in order to prevent, detect and mitigate security vulnerabilities.
- (13) Field tests of a tachograph that has not yet been type-approved allow equipment to be tested in real-life situations before it is widely introduced, thereby allowing faster improvements. Field tests should therefore be permitted, on condition that participation in such tests and compliance with Regulation (EC) No 561/2006 is effectively monitored and controlled.
- (14) Given the importance of maintaining the highest possible security level, security certificates should be issued by a certification body recognised by the Management Committee within the framework of the 'Mutual Recognition Agreement of Information Technology Security Evaluation Certificates' of the Senior Officials Group on Information Systems Security (SOG-IS). In the context of international relations with third countries, the Commission should not recognise any certification body for the purposes of this Regulation unless that body provides equivalent conditions of security evaluation as envisaged by the Mutual Recognition Agreement. In this respect, the advice of the Management Committee should be relied upon.
- (15) Fitters and workshops play an important role in the security of tachographs. It is therefore appropriate to lay down certain minimum requirements for their reliability and for approving and auditing them. Moreover, Member States should take appropriate measures to ensure that conflicts of interest between fitters or workshops and transport undertakings are prevented. Nothing in this Regulation prevents Member States from ensuring their approval, control and certification through the procedures laid down in Regulation (EC) No 765/2008 of the European Parliament and of the Council, provided that the minimum criteria set out in this Regulation are fulfilled.
- (16) In order to ensure more effective scrutiny and control of driver cards, and to facilitate the tasks of control officers, national electronic registers should be established, and provision should be made for the interconnection of those registers.
- (17) When checking the uniqueness of driver cards, Member States should use the procedures included in Commission Recommendation 2010/19/EU.
- (18) Consideration should be given to the special situation in which a Member State should be able to provide a driver who does not have his normal residence in a Member State or in a country which is a contracting party to the European Agreement concerning the Work of Crews of Vehicles Engaged in International Road Transport of 1 July 1970 ('the AETR Agreement') with a temporary, non-renewable driver card. In such cases, the Member States concerned are to fully apply the relevant provisions of this Regulation.
- (19) In addition, it should be possible for a Member State to issue driver cards to drivers resident on its territory even when the Treaties do not apply to certain parts thereof. In such cases, the Member States concerned are to fully apply the relevant provisions of this Regulation.
- (20) Control officers face continuous challenges as a result of changes to the tachograph and new manipulation techniques. In order to ensure more effective control, and to enhance the harmonisation of control approaches throughout the Union, a common methodology should be adopted for the initial and continuing training of control officers.
- (21) The recording of data by the tachograph, as well as developing technologies for the recording of position data, remote communication and the interface with ITS, will entail the processing of personal data. Therefore, the relevant Union rules, in particular those laid down in Directive 95/46/EC of the European Parliament and of the Council and Directive 2002/58/EC of the European Parliament and of

the Council, apply.

- (22) In order to allow for fair competition in the development of applications related to the tachograph, intellectual property rights and patents related to the transmission of data in or out of the tachograph should be available to all on a royalty-free basis.
- (23) Where applicable, the data exchanged during communication with the control authorities in the Member States should comply with relevant international standards, such as the suite of standards related to Dedicated Short-Range Communication established by the European Committee for Standardisation.
- (24) To ensure fair competition in the internal road transport market and to send a clear signal to drivers and transport undertakings, Member States should impose, in compliance with the categories of infringements defined in Directive 2006/22/EC, effective, proportionate, dissuasive and non-discriminatory penalties, without prejudice to the principle of subsidiarity.
- (25) Member States should ensure that the selection of vehicles for inspection is carried out without discrimination on grounds of the nationality of the driver, or of the country of registration or entry into service of the commercial vehicle.
- (26) In the interests of the clear, effective, proportionate and uniform implementation of social rules in road transport, Member States' authorities should apply the rules in a uniform manner.
- (27) Each Member State should inform the Commission of any discoveries it makes regarding the availability of fraudulent devices or installations to manipulate the tachograph, including those offered through the internet, and the Commission should inform all other Member States of those discoveries.
- (28) The Commission should continue to maintain its internet-based helpdesk, which allows drivers, transport undertakings, control authorities and approved fitters, workshops and vehicle manufacturers to submit questions and concerns related to the digital tachograph, including regarding new types of manipulations or fraud.
- (29) Through the adaptations of the AETR Agreement, the use of the digital tachograph has been made mandatory as regards vehicles registered in third countries which are signatories to the AETR Agreement. As those countries are directly affected by changes to the tachograph introduced by this Regulation, they should be able to participate in a dialogue on technical matters, including regarding the system for the exchange of information on driver cards and workshop cards. A Tachograph Forum should therefore be set up.
- (30) In order to ensure uniform conditions for the implementation of this Regulation, implementing powers should be conferred on the Commission relating to requirements, display and warning functions and type-approval of tachographs, as well as to detailed provisions for smart tachographs; the procedures to be followed for carrying out field tests and the forms to be used in order to monitor those field tests; the standard form for the written statement giving reasons for seal removal; the common procedures and specifications necessary for the interconnection of electronic registers; and the methodology specifying the content of the initial and continuing training of control officers. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council.
- (31) The implementing acts adopted for the purpose of this Regulation, which will replace the provisions in Annex I B to Regulation (EEC) No 3821/85 and other implementing measures, should be adopted by 2 March 2016. However, if for some reason those implementing acts have not been adopted in time, transitional measures should safeguard the necessary continuity.
- (32) Implementing acts referred to in this Regulation should not be adopted by the Commission where the committee referred to in this Regulation delivers no opinion on the draft implementing act presented by the Commission.
- (33) In the context of the application of the AETR Agreement, references to Regulation (EEC) No 3821/85 should be understood as references to this Regulation. The Union will consider the appropriate steps to be taken within the United Nations Economic Commission for Europe to ensure the necessary coherence between this Regulation and the AETR Agreement.
- (34) The European Data Protection Supervisor was consulted in accordance with Article 28(2) of Regulation (EC) No 45/2001 of the European Parliament and of the Council and delivered an opinion on 5 October 2011.
- (35) Regulation (EEC) No 3821/85 should therefore be repealed,

HAVE ADOPTED THIS REGULATION:

CHAPTER I

PRINCIPLES, SCOPE AND REQUIREMENTS

Article 1

Subject-matter and principles

1. This Regulation sets out obligations and requirements in relation to the construction, installation, use, testing and control of tachographs used in road transport, in order to verify compliance with Regulation (EC) No 561/2006, Regulations (EC) No 1071/2009, (EC) No 1072/2009, (EC) No 1073/2009 of the European Parliament and of the Council and Directive 2002/15/EC of the European Parliament and of the Council and Council Directives 92/6/EEC and 92/106/EEC and, as far as posting of workers in road transport is concerned, Directives 96/71/EC, 2014/67/EU and (EU) 2020/1057 of the European Parliament and of the Council.

Tachographs shall, as regards their construction, installation, use and testing, comply with the requirements of this Regulation.

2. This Regulation sets out the conditions and requirements under which the information and data, other than personal data, recorded, processed or stored by tachographs may be used for purposes other than the verification of compliance with the acts referred to in paragraph 1.

Article 2

Definitions

1. For the purposes of this Regulation, the definitions set out in Article 4 of Regulation (EC) No 561/2006 shall apply.

2. In addition to the definitions referred to in paragraph 1, for the purposes of this Regulation the following definitions shall apply:

- (a) ‘tachograph’ or ‘recording equipment’ means the equipment intended for installation in road vehicles to display, record, print, store and output automatically or semi-automatically details of the movement, including the speed, of such vehicles, in accordance with Article 4(3), and details of certain periods of activity of their drivers;
- (b) ‘vehicle unit’ means the tachograph excluding the motion sensor and the cables connecting the motion sensor. The vehicle unit may be a single unit or several units distributed in the vehicle, provided that it complies with the security requirements of this Regulation; the vehicle unit includes, among other things, a processing unit, a data memory, a time measurement function, two smart card interface devices for driver and co-driver, a printer, a display, connectors and facilities for entering the user’s inputs;
- (c) ‘motion sensor’ means a part of the tachograph providing a signal representative of vehicle speed and/or distance travelled;
- (d) ‘tachograph card’ means a smart card, intended for use with the tachograph, which allows identification by the tachograph of the role of the cardholder and allows data transfer and storage;
- (e) ‘record sheet’ means a sheet designed to accept and retain recorded data, to be placed in an analogue tachograph, and on which the marking devices of the analogue tachograph continuously inscribe the information to be recorded;
- (f) ‘driver card’ means a tachograph card, issued by the authorities of a Member State to a particular driver, which identifies the driver and allows for the storage of driver activity data;
- (g) ‘analogue tachograph’ means a tachograph using a record sheet in accordance with this Regulation;
- (h) ‘digital tachograph’ means a tachograph using a tachograph card in accordance with this Regulation;

- (i) ‘control card’ means a tachograph card issued by the authorities of a Member State to a national competent control authority which identifies the control body and, optionally, the control officer, and which allows access to the data stored in the data memory or in the driver cards and, optionally, in the workshop cards for reading, printing and/or downloading;
- (j) ‘company card’ means a tachograph card issued by the authorities of a Member State to a transport undertaking needing to operate vehicles fitted with a tachograph, which identifies the transport undertaking and allows for the displaying, downloading and printing of the data, stored in the tachograph, which have been locked by that transport undertaking;
- (k) ‘workshop card’ means a tachograph card issued by the authorities of a Member State to designated staff of a tachograph manufacturer, a fitter, a vehicle manufacturer or a workshop, approved by that Member State, which identifies the cardholder and allows for the testing, calibration and activation of tachographs, and/or downloading from them;
- (l) ‘activation’ means the phase in which the tachograph becomes fully operational and implements all functions, including security functions, through the use of a workshop card;
- (m) ‘calibration’ of a digital tachograph means updating or confirming vehicle parameters, including vehicle identification and vehicle characteristics, to be held in the data memory through the use of a workshop card;
- (n) ‘downloading’ from a digital tachograph means the copying, together with the digital signature, of a part, or of a complete set, of data files recorded in the data memory of the vehicle unit or in the memory of a tachograph card, provided that this process does not alter or delete any stored data;
- (o) ‘event’ means an abnormal operation detected by the digital tachograph which may result from a fraud attempt;
- (p) ‘fault’ means an abnormal operation detected by the digital tachograph which may result from an equipment malfunction or failure;
- (q) ‘installation’ means the mounting of a tachograph in a vehicle;
- (r) ‘non-valid card’ means a card detected as faulty, or whose initial authentication failed, or whose start of validity date is not yet reached, or whose expiry date has passed;
- (s) ‘periodic inspection’ means a set of operations performed to check that the tachograph works properly, that its settings correspond to the vehicle parameters, and that no manipulation devices are attached to the tachograph;
- (t) ‘repair’ means any repair of a motion sensor or of a vehicle unit that requires the disconnection of its power supply, or its disconnection from other tachograph components, or the opening of the motion sensor or vehicle unit;
- (u) ‘type-approval’ means a process to certify, by a Member State, in accordance with Article 13, that the tachograph, its relevant components or the tachograph card to be introduced to market fulfil the requirements of this Regulation;
- (v) ‘interoperability’ means the capacity of systems and the underlying business processes to exchange data and to share information;
- (w) ‘interface’ means a facility between systems which provides the media through which they can connect and interact;
- (x) ‘time measurement’ means a permanent digital record of the coordinated universal date and time (UTC);
- (y) ‘time adjustment’ means an automatic adjustment of current time at regular intervals and within a maximum tolerance of one minute, or an adjustment performed during calibration;
- (z) ‘open standard’ means a standard set out in a standard specification document available freely or at a nominal charge which it is permissible to copy, distribute or use for no fee or for a nominal fee.

Article 3

Scope

1. Tachographs shall be installed and used in vehicles registered in a Member State which are used for the carriage of passengers or goods by road and to which Regulation (EC) No 561/2006 applies.

2. Member States may exempt from the application of this Regulation the vehicles mentioned in Article 13(1) and (3) of Regulation (EC) No 561/2006.

3. Member States may exempt from the application of this Regulation vehicles used for transport operations which have been granted an exception in accordance with Article 14(1) of Regulation (EC) No 561/2006.

Member States may exempt from the application of this Regulation vehicles used for transport operations which have been granted an exception in accordance with Article 14(2) of Regulation (EC) No 561/2006; they shall immediately notify the Commission thereof.

4. No later than three years from the end of the year of entry into force of the detailed provisions referred to in the second paragraph of Article 11, the following categories of vehicles operating in a Member State other than their Member State of registration shall be fitted with a smart tachograph as provided in Articles 8, 9 and 10 of this Regulation:

- (a) vehicles fitted with an analogue tachograph;
- (b) vehicles fitted with a digital tachograph complying with the specifications in Annex IB to Regulation (EEC) No 3821/85 applicable until 30 September 2011 ;
- (c) vehicles fitted with a digital tachograph complying with the specifications in Annex IB to Regulation (EEC) No 3821/85 applicable from 1 October 2011 ; and
- (d) vehicles fitted with a digital tachograph complying with the specifications in Annex IB to Regulation (EEC) No 3821/85 applicable from 1 October 2012 .

4a. No later than four years after the entry into force of detailed provisions referred to in the second paragraph of Article 11, vehicles which are fitted with a smart tachograph complying with Annex IC to Commission Implementing Regulation (EU) 2016/799 (23) operating in a Member State other than their Member State of registration shall be fitted with a smart tachograph as provided in Articles 8, 9 and 10 of this Regulation.

5. In the case of national transport operations, Member States may require the installation and use of tachographs in accordance with this Regulation in any of the vehicles for which their installation and use are not otherwise required by paragraph 1.

Article 4

Requirements and data to be recorded

1. Tachographs, including external components, tachograph cards and record sheets shall fulfil stringent technical and other requirements such as to permit the proper implementation of this Regulation.

2. Tachographs and tachograph cards shall comply with the following requirements.

They shall:

- record data related to the driver, driver activity and the vehicle which shall be accurate and reliable;
- be secure, in particular guaranteeing the integrity and the origin of the source of data recorded by and retrieved from vehicle units and motion sensors;
- be interoperable as between the various generations of vehicle units and tachograph cards;
- allow for efficient verification of compliance with this Regulation and other applicable legal acts;
- have enough memory capacity to store all of the data required under this Regulation;
- be user-friendly.

3. Digital tachographs shall record the following data:

- (a) the distance travelled, and the speed of the vehicle;

- (b) time measurement;
 - (c) position points as referred to in Article 8(1);
 - (d) the identity of the driver;
 - (e) the activity of the driver;
 - (f) control, calibration and tachograph repair data, including the identity of the workshop;
 - (g) events and faults.
4. Analogue tachographs shall record at least the data referred to in points (a), (b) and (e) of paragraph 3.
 5. Access to the data stored in the tachograph and the tachograph card may be granted at all times to:
 - (a) the competent control authorities;
 - (b) the relevant transport undertaking so that it can comply with its legal obligations, in particular as set out in Articles 32 and 33.
 6. The downloading of data shall be performed with the minimum of delay to transport undertakings or drivers.
 7. Data recorded by the tachograph which may be transmitted in or out of the tachograph, whether wirelessly or electronically, shall be in the form of publicly available protocols as defined in open standards.
 8. To ensure that tachographs and tachograph cards comply with the principles and requirements of this Regulation, and in particular of this Article, the Commission shall, by means of implementing acts, adopt detailed provisions necessary for the uniform application of this Article, in particular provisions which provide for the technical means of how to fulfil those requirements. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 42(3).
 9. The detailed provisions referred to in paragraph 8 shall, where appropriate, be based on standards and shall guarantee interoperability and compatibility between the various generations of vehicle units and all tachograph cards.

Article 5

Functions of the digital tachograph

Digital tachographs shall ensure the following functions:

- speed and distance measurement;
- monitoring driver activities and driving status;
- monitoring the insertion and withdrawal of tachograph cards;
- recording of drivers' manual entries;
- calibration;
- automatic recording of the position points referred to in Article 8(1);
- monitoring control activities;
- detection and recording of events and faults;
- reading from data memory and recording and storing in data memory;
- reading from tachograph cards and recording and storing in tachograph cards;
- displaying, warning, printing and downloading data to external devices;
- time adjustment and measurement;
- remote communication;
- company locks management;
- built-in and self-tests.

Article 6

Display and warning

1. Information contained in digital tachographs and tachograph cards relating to vehicle activities and to drivers and co-drivers shall be displayed in a clear, unambiguous and ergonomic way.
2. The following information shall be displayed:
 - (a) time;
 - (b) mode of operation;
 - (c) driver activity:

if the current activity is driving, the driver's current continuous driving time and the current cumulative break time,

if the current activity is availability/other work/rest or break, the current duration of that activity (since it was selected) and the current cumulative break time;
 - (d) data related to warnings;
 - (e) data related to menu access.

Additional information may be displayed, provided that it is clearly distinguishable from the information required in this paragraph.

3. Digital tachographs shall warn drivers when detecting any event and/or fault, and before and at the time of exceeding the maximum allowed continuous driving time, in order to facilitate compliance with the relevant legislation.
4. Warnings shall be visual and may also be audible. Warnings shall have a duration of at least 30 seconds, unless they are acknowledged by the user by pushing any key of the tachograph. The reason for the warning shall be displayed and shall remain visible until acknowledged by the user using a specific key or command of the tachograph.
5. To ensure that tachographs comply with the requirements of this Article concerning display and warnings, the Commission shall, by means of implementing acts, adopt detailed provisions necessary for the uniform application of this Article. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 42(3).

Article 7

Data protection

1. Member States shall ensure that the processing of personal data in the context of this Regulation is carried out solely for the purpose of verifying compliance with this Regulation and with Regulations (EC) No 561/2006, (EC) No 1071/2009, (EC) No 1072/2009, (EC) No 1073/2009, Directives 2002/15/EC, 92/6/EEC and 92/106/EEC and, as far as posting of workers in road transport is concerned, Directives 96/71/EC, 2014/67/EU and (EU) 2020/1057.
2. Member States shall, in particular, ensure that personal data are protected against uses other than those strictly linked to the Union legal acts referred to in paragraph 1 in relation to:

- (a) the use of a global navigation satellite system (GNSS) for the recording of location data as referred to in Article 8;
- (b) the use of remote communication for control purposes as referred to in Article 9, the use of tachographs with an interface as referred to in Article 10, the electronic exchange of information on driver cards as referred to in Article 31, and in particular any cross-border exchanges of such data with third countries; and
- (c) the keeping of records by transport undertakings as referred to in Article 33.

3. Digital tachographs shall be designed in such a way as to ensure privacy. Only data necessary for the purposes referred to in paragraph 1 shall be processed.

4. Owners of vehicles, transport undertakings and any other entity concerned shall comply, where applicable, with the relevant provisions on the protection of personal data.

CHAPTER II

SMART TACHOGRAPH

Article 8

Recording of the position of the vehicle at certain points during the daily working period

1. In order to facilitate the verification of compliance with the relevant legislation, the position of the vehicle shall be recorded automatically at the following points, or at the closest point to such places where the satellite signal is available:

- the starting place of the daily working period,
- every time the vehicle crosses the border of a Member State,
- every time the vehicle performs loading or unloading activities,
- every three hours of accumulated driving time, and
- the ending place of the daily working period.

In order to facilitate the verification of compliance by control authorities, the smart tachograph shall also record whether the vehicle has been employed for the carriage of goods or passengers, as required by Regulation (EC) No 561/2006.

For those purposes, vehicles registered for the first time 36 months after the entry into force of the detailed provisions referred to in the first paragraph of Article 11 shall be fitted with a tachograph connected to a positioning service based on a satellite navigation system.

However, the recording of the border-crossing and additional activities referred to in the second and third indents of the first subparagraph and in the second subparagraph shall apply to vehicles that were registered in a Member State for the first time more than two years after the entry into force of the detailed provisions referred to in the second paragraph of Article 11, without prejudice to the obligation to retrofit certain vehicles later in accordance with Article 3(4).

2. As regards the connection of the tachograph to a positioning service based on a satellite navigation system, as referred to in paragraph 1, use shall be made only of service connections that exploit a positioning service free of charge. No position data other than those expressed, wherever possible, in geographical coordinates for determining the points referred to in paragraph 1, shall be permanently stored in the tachograph. Position data which need to be temporarily stored in order to allow for the automatic recording of the points referred to in paragraph 1 or to corroborate the motion sensor shall not be accessible to any user and shall automatically be deleted once they are no longer required for those purposes.

Article 9

Remote early detection of possible manipulation or misuse

1. In order to facilitate targeted roadside checks by the competent control authorities, tachographs installed in vehicles registered for the first time 36 months after the entry into force of the detailed provisions referred to in Article 11 shall be able to communicate to those authorities while the vehicle is in motion.
2. Three years after the entry into force of detailed provisions referred to in the second paragraph of Article 11, Member States shall equip their control authorities to an appropriate extent with the remote early detection equipment necessary to permit the data communication referred to in this Article, taking into account their specific enforcement requirements and strategies. Until that time, Member States may decide whether to equip their control authorities with such remote early detection equipment.
3. The communication referred to in paragraph 1 shall be established with the tachograph only when so requested by the equipment of the control authorities. It shall be secured to ensure data integrity and authentication of the recording and control equipment. Access to the data communicated shall be restricted to control authorities authorised to check infringements of the Union legal acts referred to in Article 7(1), and of this Regulation and to workshops in so far as it is necessary to verify the correct functioning of the tachograph.
4. The data exchanged during communication shall be limited to the data necessary for the purpose of targeted roadside checks of vehicles with a potentially manipulated or misused tachograph. Such data shall relate to the following events or data recorded by the tachograph:
 - the latest security breach attempt,
 - the longest power supply interruption,
 - sensor fault,
 - motion data error,
 - vehicle motion conflict,
 - driving without a valid card,
 - card insertion while driving,
 - time adjustment data,
 - calibration data including the dates of the two latest calibrations,
 - vehicle registration number,
 - speed recorded by the tachograph,
 - exceeding maximum driving time.
5. The data exchanged shall be used for the sole purpose of verifying compliance with this Regulation. They shall not be transmitted to entities other than authorities controlling driving and rest periods and to judicial bodies, in the framework of an ongoing judicial procedure.
6. The data may only be stored by the control authorities for the duration of a roadside check, and shall be deleted at the latest three hours after their communication, unless the data indicate a possible manipulation or misuse of the tachograph. If, in the course of the ensuing roadside check, the manipulation or misuse is not confirmed, the data transmitted shall be deleted.
7. Transport undertakings which operate vehicles shall be responsible for informing drivers of the possibility of remote communication for the purpose of early detection of possible manipulation or misuse of tachographs.
8. In no case shall a remote early detection communication of the type described in this Article lead to automatic fines or penalties for the driver or transport undertaking. The competent control authority, on the basis of the data exchanged, may decide to carry out a check on the vehicle and the tachograph. The result of the remote communication system shall not prevent control authorities from carrying out random roadside checks based on the risk rating system introduced by Article 9 of Directive 2006/22/EC.

Article 10

Interface with Intelligent Transport Systems

The tachographs of vehicles registered for the first time 36 months after the entry into force of the detailed provisions referred to in Article 11 may be equipped with standardised interfaces allowing the data recorded or produced by tachograph to be used in operational mode, by an external device, provided that the following conditions are met:

- (a) the interface does not affect the authenticity and the integrity of the data of the tachograph;
- (b) the interface complies with the detailed provisions of Article 11;
- (c) the external device connected to the interface has access to personal data, including ge positioning data, only after the verifiable consent of the driver to whom the data relates.

The tachographs of vehicles registered for the first time in a Member State more than two years after the entry into force of detailed provisions referred to in the second paragraph of Article 11 shall be equipped with the interface referred to in paragraph 1.

Article 11

Detailed provisions for smart tachographs

In order to ensure that smart tachographs comply with the principles and requirements set out in this Regulation, the Commission shall, by means of implementing acts, adopt detailed provisions necessary for the uniform application of Articles 8, 9 and 10, excluding any provisions which would provide for the recording of additional data by the tachograph.

By 21 August 2021, the Commission shall adopt implementing acts laying down detailed provisions for the uniform application of the obligation to record and store data relating to any border crossing of the vehicle and activities referred to in the second and third indent of the first subparagraph of Article 8(1) and in the second subparagraph of Article 8(1).

By 21 February 2022, the Commission shall adopt implementing acts laying down detailed provisions necessary for the uniform application of rules on data requirements and functions, including Articles 8, 9 and 10 of this Regulation, and the installation of, tachographs for vehicles referred to in point (aa) of Article 2(1) of Regulation (EC) No 561/2006.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 42(3).

The detailed provisions referred to in the first, second and third paragraphs of this Article shall:

- (a) in relation to the performance of the functions of the smart tachograph as referred to in this Chapter, include the necessary requirements to guarantee the security, accuracy and reliability of data as provided to the tachograph by the satellite positioning service and the remote communication technology referred to in Articles 8 and 9;
- (b) specify the various conditions and requirements for the satellite positioning service and the remote communication technology referred to in Articles 8 and 9 to be either outside or embedded in the tachograph and, when outside, specify the conditions for the use of the satellite positioning signal as a second motion sensor;

- (c) specify the necessary standards for the interface referred to in Article 10. Such standards may include a provision on the distribution of access rights for drivers, workshops and transport undertakings, and control roles for the data recorded by the tachograph, which control roles shall be based on an authentication/authorisation mechanism defined for the interface, such as a certificate for each level of access and subject to the technical feasibility thereof.

CHAPTER III

TYPE-APPROVAL

Article 12

Applications

1. Manufacturers or their agents shall submit an application for approval of a type of vehicle unit, motion sensor, model record sheet or tachograph card to the type-approval authorities designated to that effect by each Member State.
2. Member States shall communicate to the Commission by 2 March 2015 the name and contact details of the designated authorities referred to in paragraph 1, and shall provide updates thereafter as necessary. The Commission shall publish a list of designated type-approval authorities on its website and shall keep that list updated.
3. An application for type-approval shall be accompanied by the appropriate specifications, including necessary information regarding the seals, and by security, functionality and interoperability certificates. The security certificate shall be issued by a recognised certification body designated by the Commission.

Functionality certificates shall be issued to the manufacturer by the type-approval authority.

The interoperability certificate shall be issued by a single laboratory under the authority and responsibility of the Commission.

4. In respect of tachographs, their relevant components, and tachograph cards:
 - (a) the security certificate shall certify the following for the vehicle unit, tachograph cards, motion sensor, and connection to the GNSS receiver when the GNSS is not embedded in the vehicle units:
 - (i) compliance with security targets;
 - (ii) fulfilment of the following security functions: identification and authentication, authorisation, confidentiality, accountability, integrity, audit, accuracy and reliability of service;
 - (b) the functional certificate shall certify that the tested item fulfils the appropriate requirements in terms of functions performed, environmental characteristics, electromagnetic compatibility characteristics, compliance with physical requirements and compliance with other applicable standards;
 - (c) the interoperability certificate shall certify that the tested item is fully interoperable with the necessary tachographs or tachograph card models.
5. Any modification in software or hardware of the tachograph or in the nature of materials used for its manufacture shall, before being applied, be notified to the authority which granted type-approval for the equipment. That authority shall confirm to the manufacturer the extension of the type-approval, or may require an update or a confirmation of the relevant functional, security and/or interoperability certificates.

6. No application in respect of any one type of vehicle unit, motion sensor, model record sheet or tachograph card may be submitted to more than one Member State.

7. The Commission shall, by means of implementing acts, adopt detailed provisions for the uniform application of this Article. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 42(3).

Article 13

Granting of type-approval

A Member State shall grant type-approval to any type of vehicle unit, motion sensor, model record sheet or tachograph card which complies with the requirements set out in Articles 4 and 11, provided that the Member State is in a position to check that production models conform to the approved type.

Any modifications or additions to an approved model must receive additional type-approval from the Member State which granted the original type-approval.

Article 14

Type-approval mark

Member States shall issue to the applicant a type-approval mark conforming to a pre-established model, for each type of vehicle unit, motion sensor, model record sheet or tachograph card which they approve pursuant to Article 13 and Annex II. Such models shall be adopted by the Commission through implementing acts in accordance with the examination procedure referred to in Article 42(3).

Article 15

Approval or refusal

The competent authorities of the Member State to which the application for type-approval has been submitted shall, in respect of each type of vehicle unit, motion sensor, model record sheet or tachograph card which they approve, send within one month a copy of the type-approval certificate accompanied by copies of the relevant specifications, including those relating to the seals, to the authorities of the other Member States. Where the competent authorities do not approve the application for type-approval, they shall notify the authorities of the other Member States that approval has been refused and shall communicate the reasons for their decision.

Article 16

Compliance of equipment with type-approval

1. If a Member State which has granted type-approval as provided for in Article 13 finds that any vehicle units, motion sensors, record sheets or tachograph cards bearing the type-approval mark issued by it do not conform to the type which it has approved, it shall take the necessary measures to ensure that production models conform to the approved type. The measures taken may, if necessary, extend to withdrawal of type-approval.

2. A Member State which has granted type-approval shall withdraw such approval if the vehicle unit, motion sensor, record sheet or tachograph card which has been approved is not in conformity with this Regulation or if it displays any general defect during use which makes it unsuitable for the purpose for which it is intended.

3. If a Member State which has granted type-approval is notified by another Member State of one of the cases referred to in paragraphs 1 or 2, it shall, after consulting the notifying Member State, take the steps laid down in those paragraphs, subject to paragraph 5.

4. A Member State which ascertains that one of the cases referred to in paragraph 2 has arisen may forbid until further notice the placing on the market and putting into service of the vehicle unit, motion sensor, record sheet or tachograph card concerned. The same applies in the cases referred to in paragraph 1 with respect to vehicle units, motion sensors, record sheets or tachograph cards which have been exempted from EU initial verification, if the manufacturer, after due warning, does not bring the equipment into line with the approved model or with the requirements of this Regulation.

In any event, the competent authorities of the Member States shall within one month notify one another and the Commission of any withdrawal of type-approval or of any other measures taken pursuant to paragraphs 1, 2 or 3, and shall specify the reasons for such action.

5. If a Member State which has granted a type-approval disputes the existence of any of the cases specified in paragraphs 1 or 2 notified to it, the Member States concerned shall endeavour to settle the dispute and the Commission shall be kept informed.

If talks between the Member States have not resulted in agreement within four months of the date of the notification referred to in paragraph 3, the Commission, after consulting experts from all Member States and having considered all the relevant factors, such as economic and technical factors, shall within six months of the expiry of that four-month period adopt a decision which shall be notified to the Member States concerned and communicated at the same time to the other Member States. The Commission shall in each case lay down the time-limit for implementation of its decision.

Article 17

Approval of record sheets

1. An applicant for type-approval of a model record sheet shall state on the application form the type or types of analogue tachograph on which the record sheet in question is designed to be used, and shall provide suitable equipment of such type or types for the purpose of testing the record sheet.

2. The competent authorities of each Member State shall indicate on the approval certificate for the model record sheet the type or types of analogue tachograph on which that model record sheet may be used.

Article 18

Justification of refusal decisions

All decisions pursuant to this Regulation refusing or withdrawing approval of a type of vehicle unit, motion sensor, model record sheet or tachograph card shall specify in detail the reasons on which they are based. A decision shall be communicated to the party concerned, who shall at the same time be informed of the remedies available under the law of the relevant Member State and of the time-limits for the exercise of such remedies.

Article 19

Recognition of type-approved tachographs

Member States shall not refuse to register any vehicle fitted with a tachograph, or prohibit the entry into service or use of such vehicle for any reason connected with the fact that the vehicle is fitted with such equipment, if the equipment bears the type-approval mark referred to in Article 14 and the installation plaque referred to in Article 22(4).

Article 20

Security

1. Manufacturers shall design, test and review vehicle units, motion sensors and tachograph cards put into production so as to detect vulnerabilities arising in all phases of the product life-cycle, and shall prevent or mitigate their possible exploitation. The frequency of tests shall be laid down by the Member State which granted the approval certificate, within a limit which shall not exceed two years.
2. For this purpose, manufacturers shall submit the documentation necessary for vulnerability analysis to the certification body referred to in Article 12(3).
3. For the purposes of paragraph 1, the certification body referred in Article 12(3) shall conduct tests on vehicle units, motion sensors and tachograph cards to confirm that known vulnerabilities cannot be exploited by individuals in possession of publicly available knowledge.
4. If, in the course of the tests referred to in paragraph 1, vulnerabilities in system elements (vehicle units, motion sensors and tachograph cards) are detected, those elements shall not be put on the market. If vulnerabilities are detected in the course of the tests referred to in paragraph 3 for elements already on the market, the manufacturer or the certification body shall inform the competent authorities of the Member State which granted the type-approval. Those competent authorities shall take all measures necessary to ensure that the problem is addressed, in particular by the manufacturer, and shall inform the Commission without delay of the vulnerabilities detected and of the measures envisaged or taken, including where necessary the withdrawal of type-approval in accordance with Article 16(2).

Article 21

Field tests

1. Member States may authorise field tests of tachographs which have not yet been type-approved. Member States shall mutually recognise such authorisations for field tests.
2. Drivers and transport undertakings participating in a field test shall comply with the requirements of Regulation (EC) No 561/2006. In order to demonstrate such compliance, drivers shall follow the procedure set out in Article 35(2) of this Regulation.
3. The Commission may adopt implementing acts to lay down the procedures to be followed for carrying out field tests and the forms to be used in order to monitor those field tests. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 42(3).

CHAPTER IV

INSTALLATION AND INSPECTION

Article 22

Installation and repair

1. Tachographs may be installed or repaired only by fitters, workshops or vehicle manufacturers approved by the competent authorities of the Member States for that purpose in accordance with Article 24.
2. Approved fitters, workshops or vehicle manufacturers shall, in accordance with the specifications included in the type-approval certificate referred to in Article 15, seal the tachograph after having verified that it is functioning properly, and, in particular, in such a way as to ensure that no manipulation device can tamper with or alter the data recorded.
3. The approved fitter, workshop or vehicle manufacturer shall place a special mark on the seals which it affixes and, in addition, for digital tachographs, shall enter the electronic security data for carrying out authentication checks. The competent authorities of each Member State shall send to the Commission the register of the marks and electronic security data used and the necessary information related to the electronic security data used. The Commission shall give Member States access to that information upon request.
4. For the purpose of certifying that the installation of the tachograph took place in accordance with the requirements of this Regulation, an installation plaque shall be affixed in such a way as to be clearly visible and easily accessible.
5. Tachograph components shall be sealed as specified in the type-approval certificate. Any connections to the tachograph which are potentially vulnerable to tampering, including the connection between the motion sensor and the gearbox, and the installation plaque where relevant, shall be sealed.

A seal shall be removed or broken only:

- by fitters or workshops approved by the competent authorities under Article 24 for repair, maintenance or recalibration purposes of the tachograph, or by control officers properly trained and, where required authorised, for control purposes;
- for the purpose of vehicle repair or modification which affects the seal. In such cases, a written statement stating the date and time at which the seal was broken and giving the reasons for the seal removal shall be kept on board the vehicle. The Commission shall develop a standard form for the written statement through implementing acts.

The removed or broken seals shall be replaced by an approved fitter or a workshop without undue delay and at the latest within seven days of their removal or breaking. When the seals have been removed or broken for control purposes, they may be replaced by a control officer equipped with sealing equipment and a unique special mark without undue delay.

When a control officer removes a seal, the control card shall be inserted in the tachograph from the moment of the removal of the seal until the inspection is finished, including in the case of the placement of a new seal. The control officer shall issue a written statement containing at least the following information:

- vehicle identification number,
- name of the officer,
- control authority and Member State,
- number of the control card,
- number of the removed seal,
- date and time of seal removal,
- number of the new seal, where the control officer has placed a new seal.

Before replacing the seals, a check and calibration of the tachograph shall be performed by an approved workshop, except where a seal has been removed or broken for control purposes and replaced by a control officer.

Inspections of tachographs

1. Tachographs shall be subject to regular inspection by approved workshops. Regular inspections shall be carried out at least every two years.
2. The inspections referred to in paragraph 1 shall check at least the following:
 - the tachograph is correctly fitted and appropriate for the vehicle;
 - the tachograph is working properly;
 - the tachograph carries the type-approval mark;
 - the installation plaque is affixed;
 - all seals are intact and effective;
 - there are no manipulation devices attached to the tachograph or traces of the use of such devices;
 - the tyre size and the actual circumference of the tyres.
3. Workshops shall draw up an inspection report in cases where irregularities in the functioning of the tachograph had to be remedied, whether as a result of a periodic inspection or of an inspection carried out at the specific request of the national competent authority. They shall keep a list of all inspection reports drawn up.
4. Inspection reports shall be retained for a minimum period of two years from the time the report was made. Member States shall decide whether inspection reports are to be retained or sent to the competent authority during that period. In cases where the inspection reports are kept by the workshop, upon request from the competent authority, the workshop shall make available the reports of inspections and calibrations carried out during that period.

Article 24

Approval of fitters, workshops and vehicle manufacturers

1. Member States shall approve, regularly control and certify the fitters, workshops and vehicle manufacturers which may carry out installations, checks, inspections and repairs of tachographs.
2. Member States shall ensure that fitters, workshops and vehicle manufacturers are competent and reliable. For that purpose, they shall establish and publish a set of clear national procedures and shall ensure that the following minimum criteria are met:
 - (a) the staff are properly trained;
 - (b) the equipment necessary to carry out the relevant tests and tasks is available;
 - (c) the fitters, workshops and vehicle manufacturers are of good repute.
3. Audits of approved fitters or workshops shall be carried out as follows:
 - (a) approved fitters or workshops shall be subject, at least every two years, to an audit of the procedures they apply when handling tachographs. The audit shall focus in particular on the security measures taken and the handling of workshop cards. Member States may carry out these audits without conducting a site visit;
 - (b) unannounced technical audits of approved fitters or workshops shall also take place in order to check the calibrations, inspections and installations carried out. Those audits shall cover at least 10 % of the approved fitters and workshops annually.
4. Member States and their competent authorities shall take appropriate measures to prevent conflicts of interests between fitters or workshops and transport undertakings. In particular, where there is a serious risk of a conflict of interests, additional specific measures shall be taken to ensure that the fitter or workshop complies with this Regulation.

5. The competent authorities of the Member States shall forward to the Commission, if possible electronically, on an annual basis, the lists of approved fitters and workshops and the cards issued to them. The Commission shall publish those lists on its website.

6. The competent authorities in Member States shall withdraw approvals, either temporarily or permanently, from fitters, workshops and vehicle manufacturers which fail to meet their obligations under this Regulation.

Article 25

Workshop cards

1. The period of validity of workshop cards shall not exceed one year. When renewing the workshop card, the competent authority shall ensure that the criteria listed in Article 24(2) are met by the fitter, workshop or vehicle manufacturer.

2. The competent authority shall renew a workshop card within 15 working days after receipt of a valid renewal request and all the necessary documentation. If a workshop card is damaged, malfunctions, or is lost or stolen, the competent authority shall supply a replacement card within five working days of receiving a detailed request to that effect. Competent authorities shall maintain a register of lost, stolen or defective cards.

3. If a Member State withdraws the approval of a fitter, workshop or vehicle manufacturer as provided for in Article 24, it shall also withdraw the workshop cards issued thereto.

4. Member States shall take all necessary measures to prevent the workshop cards distributed to approved fitters, workshops and vehicle manufacturers from being falsified.

CHAPTER V

DRIVER CARDS

Article 26

Issuing of driver cards

1. Driver cards shall be issued, at the request of the driver, by the competent authority of the Member State where the driver has his normal residence. They shall be issued within one month of the receipt by the competent authority of the request and all necessary documentation.

2. For the purposes of this Article, ‘normal residence’ means the place where a person usually lives, that is for at least 185 days in each calendar year, because of personal and occupational ties, or, in the case of a person with no occupational ties, because of personal ties which show close links between that person and the place where he is living.

However, the normal residence of a person whose occupational ties are in a place different from their personal ties and who consequently lives in turn in different places situated in two or more Member States shall be regarded as being the place of their personal ties, provided that such person returns there regularly. This last condition need not be complied with where the person is living in a Member State in order to carry out a fixed-term assignment.

3. Drivers shall give proof of their normal residence by any appropriate means, such as their identity card or any other valid document. Where the competent authorities of the Member State issuing the driver card have doubts as to the validity of a statement as to normal residence, or for the purpose of certain specific controls, they may request any additional information or evidence.

4. In duly justified and exceptional cases, Member States may issue a temporary and non-renewable driver card valid for a maximum period of 185 days to a driver who does not have his normal residence in a Member State or in a State which is a Contracting Party to the AETR Agreement, provided that such driver is in a labour law relationship with an undertaking established in the issuing Member State and, in so far as Regulation (EC) No 1072/2009 of the European Parliament and of the Council applies, presents a driver attestation as referred to in that Regulation.

The Commission shall, on the basis of data provided by Member States, closely monitor the application of this paragraph. It shall report its findings every two years to the European Parliament and to the Council, and shall examine in particular whether temporary driver cards produce any negative impact on the labour market, and whether temporary cards are issued to named drivers ordinarily on more than one occasion. The Commission may make an appropriate legislative proposal to revise this paragraph.

5. The competent authorities of the issuing Member State shall take appropriate measures to ensure that an applicant does not already hold a valid driver card and shall personalise the driver card, ensuring that its data are visible and secure.

6. The driver card shall not be valid for more than five years.

7. A valid driver card shall not be withdrawn or suspended unless the competent authorities of a Member State find that the card has been falsified, or the driver is using a card of which he is not the holder, or the card held has been obtained on the basis of false declarations and/or forged documents. If such suspension or withdrawal measures are taken by a Member State other than the issuing Member State, the former shall return the card to the authorities of the Member State which issued it, as soon as possible, indicating the reasons for the withdrawal or suspension. If the return of the card is expected to take longer than two weeks, the suspending or withdrawing Member State shall inform the issuing Member State within those two weeks of the reasons for suspension or withdrawal.

7a. The competent authority of the issuing Member State may require a driver to replace the driver card by a new one if this is necessary to comply with the relevant technical specifications.

8. Member States shall take all necessary measures to prevent driver cards from being falsified.

9. This Article shall not prevent a Member State from issuing a driver card to a driver who has his normal residence in a part of that Member State's territory, to which the Treaty on European Union and the Treaty on the Functioning of the European Union do not apply, provided that the relevant provisions of this Regulation are applied in such cases.

Article 27

Use of driver cards

1. The driver card is personal.

2. A driver may hold no more than one valid driver card, and is only authorised to use his own personalised driver card. A driver shall not use a driver card which is defective or which has expired.

Article 28

Renewal of driver cards

1. Where a driver wishes to renew his driver card, he shall apply to the competent authorities of the Member State of his normal residence not later than 15 working days before the expiry date of the card.

2. Where, in the case of renewals, the Member State of the driver's normal residence is different from that which issued his current card, and where the authorities of the former Member State are requested to renew the driver card, they shall inform the authorities which issued the earlier card of the reasons for its renewal.

3. In the event of a request for the renewal of a card which is imminently about to expire, the competent authority shall supply a new card before the expiry date, provided that the request was sent within the time-limits laid down in paragraph 1.

Article 29

Stolen, lost or defective driver cards

1. Issuing authorities shall keep records of issued, stolen, lost or defective driver cards for a period at least equivalent to their period of validity.

2. If a driver card is damaged or if it malfunctions, the driver shall return it to the competent authority of the Member State of his normal residence. Theft of the driver card shall be formally declared to the competent authorities of the State where the theft occurred.

3. Any loss of the driver card shall be reported in a formal declaration to the competent authorities of the issuing Member State and to the competent authorities of the Member State of the driver's normal residence if this is different.

4. If the driver card is damaged, malfunctions or is lost or stolen, the driver shall, within seven calendar days, apply for its replacement to the competent authorities of the Member State of his normal residence. Those authorities shall supply a replacement card within eight working days after their receipt of a detailed request to that effect.

5. In the circumstances set out in paragraph 4, the driver may continue to drive without a driver card for a maximum period of 15 calendar days or for a longer period if this is necessary for the vehicle to return to the premises where it is based, provided that the driver can prove the impossibility of producing or using the card during that period.

Article 30

Mutual recognition and exchange of driver cards

1. Driver cards issued by Member States shall be mutually recognised.

2. Where the holder of a valid driver card issued by a Member State has established his normal residence in another Member State, he may ask for his card to be exchanged for an equivalent driver card. It shall be the responsibility of the Member State which carries out the exchange to verify whether the card produced is still valid.

3. Member States carrying out an exchange shall return the old card to the authorities of the issuing Member State and indicate the reasons for so doing.

4. Where a Member State replaces or exchanges a driver card, the replacement or exchange, and any subsequent replacement or exchange, shall be registered in that Member State.

Article 31

Electronic exchange of information on driver cards

1. In order to ensure that an applicant does not already hold a valid driver card as referred to in Article 26, Member States shall maintain national electronic registers containing the following information on driver cards, including on those referred to in Article 26(4), for a period at least equivalent to the period of validity of those cards:

- surname and first name of the driver,
- birth date and, if available, place of birth of the driver,
- valid driving licence number and country of issue of the driving licence (if applicable),
- status of the driver card,
- driver card number.

2. The Commission and the Member States shall take all necessary measures to ensure that the electronic registers are interconnected and accessible throughout the Union, using the TACHOnet messaging system referred to in Recommendation 2010/19/EU or a compatible system. In the case of the use of a compatible system, the exchange of electronic data with all other Member States shall be possible through the TACHOnet messaging system.

3. When issuing, replacing and, where necessary, renewing a driver card, Member States shall verify through electronic data exchange that the driver does not already hold another valid driver card. The data exchanged shall be limited to the data necessary for the purpose of this verification.

4. Control officers may have access to the electronic register in order to check the status of a driver card.

5. The Commission shall adopt implementing acts to lay down the common procedures and specifications necessary for the interconnection referred to in paragraph 2, including the format for the data exchanged, the technical procedures for electronic consultation of the national electronic registers, access procedures and security mechanisms. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 42(3).

CHAPTER VI

USE OF EQUIPMENT

Article 32

Correct use of tachographs

1. Transport undertakings and drivers shall ensure the correct functioning and proper use of digital tachographs and driver cards. Transport undertakings and drivers using analogue tachographs shall ensure their correct functioning and the proper use of record sheets.

2. Digital tachographs shall not be set in such a way that they automatically switch to a specific category of activity when the vehicle's engine or ignition is switched off, unless the driver remains able to choose manually the appropriate category of activity.

3. It shall be forbidden to falsify, conceal, suppress or destroy data recorded on the record sheet or stored in the tachograph or on the driver card, or print-outs from the tachograph. Any manipulation of the tachograph, record sheet or driver card which could result in data and/or printed information being falsified, suppressed or destroyed shall also be prohibited. No device which could be used to this effect shall be present on the vehicle.

4. Vehicles shall not be fitted with more than one tachograph, except for the purposes of the field tests referred to in Article 21.

5. Member States shall forbid the production, distribution, advertising and/or selling of devices constructed and/or intended for the manipulation of tachographs.

Article 33

Responsibility of transport undertakings

1. Transport undertakings shall be responsible for ensuring that their drivers are properly trained and instructed as regards the correct functioning of tachographs, whether digital or analogue, shall make regular checks to ensure that their drivers make correct use thereof, and shall not give to their drivers any direct or indirect incentives that could encourage the misuse of tachographs.

Transport undertakings shall issue a sufficient number of record sheets to drivers of vehicles fitted with analogue tachographs, taking into account the fact that record sheets are personal in character, the length of the period of service and the possible need to replace record sheets which are damaged or have been taken by an authorised control officer. Transport undertakings shall issue to drivers only record sheets of an approved model suitable for use in the equipment installed in the vehicle.

Where a vehicle is fitted with a digital tachograph, the transport undertaking and the driver shall ensure that, taking into account the length of the period of service, the printing of data from the tachograph at the request of a control officer can be carried out correctly in the event of an inspection.

2. Transport undertakings shall keep record sheets and printouts, whenever printouts have been made to comply with Article 35, in chronological order and in a legible form, for at least a year after their use, and shall give copies to the drivers concerned who request them. Transport undertakings shall also give copies of data downloaded from driver cards to the drivers concerned who request them, together with printed paper versions of those copies. Record sheets, printouts and downloaded data shall be produced or handed over at the request of any authorised control officer.

3. Transport undertakings shall be liable for infringements of this Regulation committed by their drivers or by drivers at their disposal. However, Member States may make such liability conditional on the transport undertaking's infringement of the first subparagraph of paragraph 1 of this Article and Article 10(1) and (2) of Regulation (EC) No 561/2006.

Article 34

Use of driver cards and record sheets

1. Drivers shall use record sheets or driver cards every day on which they drive, starting from the moment they take over the vehicle. The record sheet or driver card shall not be withdrawn before the end of the daily working period unless its withdrawal is otherwise authorised or is necessary in order to enter the symbol of the country after having crossed a border. No record sheet or driver card may be used to cover a period longer than that for which it is intended.

2. Drivers shall adequately protect the record sheets or driver cards, and shall not use dirty or damaged record sheets or driver cards.

3. When, as a result of being away from the vehicle, a driver is unable to use the tachograph fitted to the vehicle, the periods of time referred to in points (ii), (iii) and (iv) of paragraph 5(b) shall:

- (a) if the vehicle is fitted with an analogue tachograph, be entered on the record sheet, either manually, by automatic recording or other means, legibly and without dirtying the record sheet; or
- (b) if the vehicle is fitted with a digital tachograph, be entered onto the driver card using the manual entry facility provided for in the tachograph.

Member States shall not impose on drivers a requirement to present forms attesting to their activities while away from the vehicle.



4. Where there is more than one driver on board a vehicle fitted with a digital tachograph, each driver shall ensure that his driver card is inserted into the correct slot in the tachograph.



Where there is more than one driver on board a vehicle fitted with an analogue tachograph, the drivers shall amend the record sheets as necessary, so that the relevant information is recorded on the record sheet of the driver who is actually driving.

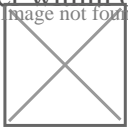

5. Drivers shall:


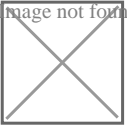
(a) ensure that the time recorded on the record sheet corresponds to the official time in the country of registration of the vehicle;



(b) operate the switch mechanisms enabling the following periods of time to be recorded separately and distinctly:

(i)   : driving time,

(ii)   : 'other work', which means any activity other than driving, as defined in point (a) of Article 3 of Directive 2002/15/EC, and also any work for the same or another employer within or outside of the transport sector,

(iii)   : 'availability', as defined in point (b) of Article 3 of Directive 2002/15/EC,

(iv)   : breaks, rest, annual leave or sick leave,

(v)   : the rest period spent on a ferry or train as required by Article 9 of Regulation (EC) No 561/2006.

6. Each driver of a vehicle fitted with an analogue tachograph shall enter the following information on his record sheet:

(a) on beginning to use the record sheet — his surname and first name;

(b) the date and place where use of the record sheet begins and the date and place where such use ends;

(c) the registration number of each vehicle to which the driver is assigned, both at the start of the first journey recorded on the record sheet and then, in the event of a change of vehicle, during use of the record sheet;

(d) the odometer reading:

(i) at the start of the first journey recorded on the record sheet,

(ii) at the end of the last journey recorded on the record sheet,

(iii) in the event of a change of vehicle during a working day, the reading on the first vehicle to which the driver was assigned and the reading on the next vehicle;

(e) the time of any change of vehicle;

(f) the symbols of the countries in which the daily working period started and finished. The driver shall also enter the symbol of the country that the driver enters after crossing a border of a Member State at the beginning of the driver's first stop in that Member State. That first stop shall be made at the nearest possible stopping place at or after the border. Where the crossing of the border of a Member State takes place on a ferry or train, the driver shall enter the symbol of the country at the port or station of arrival.

7. The driver shall enter in the digital tachograph the symbols of the countries in which the daily working period started and finished.

From 2 February 2022 the driver shall also enter the symbol of the country that the driver enters after crossing a border of a Member State at the beginning of the driver's first stop in that Member State. That first stop shall be made at the nearest possible stopping place at or after the border. Where the crossing of the border of a Member State takes place on a ferry or train, the driver shall enter the symbol of the country at the port or station of arrival.

Member States may require drivers of vehicles engaged in transport operations inside their territory to add more detailed geographic specifications to the country symbol, provided that those Member States have notified those detailed geographic specifications to the Commission before 1 April 1998 .

It shall not be necessary for drivers to enter the information referred to in the first subparagraph if the tachograph is automatically recording location data in accordance with Article 8.

Article 35

Damaged driver cards and record sheets

1. In the event of damage to a record sheet bearing recordings or to a driver card, drivers shall keep the damaged record sheet or driver card together with any spare record sheet used to replace it.

2. Where a driver card is damaged, malfunctions, or is lost or stolen, the driver shall:

- (a) at the start of his journey, print out the details of the vehicle he is driving, and enter on that printout:
 - (i) details that enable the driver to be identified (name, driver card or driving licence number), including his signature;
 - (ii) the periods referred to in points (ii), (iii) and (iv) of Article 34(5)(b);
- (b) at the end of the journey, print out the information relating to periods of time recorded by the tachograph, record any periods of other work, availability and rest taken since the printout made at the start of the journey, where not recorded by the tachograph, and mark on that document details enabling the driver to be identified (name, driver card or driving licence number), including the driver's signature.

Article 36

Records to be carried by the driver

1. Where a driver drives a vehicle fitted with an analogue tachograph, he shall be able to produce, whenever an authorised control officer so requests:

- (i) the record sheets for the current day and those used by the driver in the previous 28 days,
- (ii) the driver card, if one is held, and
- (iii) any manual records and printouts made during the current day and the previous 28 days as required under this Regulation and Regulation (EC) No 561/2006.

2. Where the driver drives a vehicle fitted with a digital tachograph, he shall be able to produce, whenever an authorised control officer so requests:

- (i) his driver card,
- (ii) any manual records and printouts made during the current day and the previous 28 days as required under this Regulation and Regulation (EC) No 561/2006,
- (iii) the record sheets corresponding to the same period as that referred to in point (ii) during which he drove a vehicle fitted with an analogue tachograph.

3. An authorised control officer may check compliance with Regulation (EC) No 561/2006 by analysis of the record sheets, of the displayed, printed or downloaded data which have been recorded by the tachograph or by the driver card or, failing that, of any other supporting document that justifies non-compliance with a provision, such as Articles 29(2) and 37(2) of this Regulation.

Article 37

Procedures in the event of malfunctioning equipment

1. In the event of the breakdown or faulty operation of a tachograph, the transport undertaking shall have it repaired by an approved fitter or workshop, as soon as circumstances permit.

If the vehicle is unable to return to the transport undertaking's premises within a period of one week calculated from the day of the breakdown or of the discovery of defective operation, the repair shall be carried out en route.

Measures taken by Member States pursuant to Article 41 shall give the competent authorities power to prohibit the use of the vehicle in cases where the breakdown or faulty operation has not been remedied as provided in the first and the second subparagraphs of this paragraph in so far as this is in accordance with the national legislation in the Member State concerned.

2. While the tachograph is unserviceable or malfunctioning, the driver shall mark data enabling him to be identified (name, driver card or driving licence number), including a signature, as well as the information for the various periods of time which are no longer recorded or printed out correctly by the tachograph:

- (a) on the record sheet or sheets, or
- (b) on a temporary sheet to be attached to the record sheet or to be kept together with the driver card.

CHAPTER VII

ENFORCEMENT AND SANCTIONS

Article 38

Control officers

1. In order to monitor effectively compliance with this Regulation, sufficient equipment and appropriate legal powers shall be made available to authorised control officers to enable them to carry out their duties in accordance with this Regulation. That equipment shall include, in particular:

- (a) control cards allowing access to data recorded in tachographs and in tachograph cards, and optionally in workshop cards;
- (b) the tools necessary to download data files from vehicle units and tachograph cards and to be able to analyse such data files and printouts from digital tachographs in combination with record sheets or charts from analogue tachographs.

2. If, after having carried out a check, control officers find sufficient evidence leading to reasonable suspicion of fraud, they shall be empowered to direct the vehicle to an authorised workshop to perform further tests in order to check, in particular, that the tachograph:

- (a) works properly;
- (b) records and stores data correctly, and that the calibration parameters are correct.

3. Control officers shall be empowered to request authorised workshops to perform the tests referred to in paragraph 2 and specific tests designed to detect the presence of manipulation devices. If manipulation devices are detected, the equipment, including the device itself, the vehicle unit or its components, and the driver card, may be removed from the vehicle and may be used as evidence in accordance with national rules of procedure relating to the handling of such evidence.

4. Control officers shall, where appropriate, make use of the possibility to check tachographs and driver cards which are on site during a check of the premises of undertakings.

Article 39

Training of control officers

1. Member States shall ensure that control officers are appropriately trained for the analysis of the data recorded and the checking of tachographs in order to achieve efficient and harmonised control and enforcement.

2. Member States shall inform the Commission of the training requirements for their control officers by 2 September 2016.

3. The Commission shall, by means of implementing acts, adopt measures specifying the content of the initial and continuing training of control officers, including training in relation to techniques to target controls and to detect manipulation devices and fraud. Those measures shall include guidelines to facilitate the implementation of the relevant provisions of this Regulation and of Regulation (EC) No 561/2006. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 42(3).

4. Member States shall include the content specified by the Commission in the training given to control officers.

Article 40

Mutual assistance

Member States shall assist each other in applying this Regulation and in checking compliance therewith.

Within the framework of that mutual assistance, the competent authorities of the Member States shall, in particular, regularly send to each other all available information concerning infringements of this Regulation by fitters and workshops, types of manipulation practices, and any penalties imposed for such infringements.

Article 41

Penalties

1. Member States shall, in accordance with national constitutional arrangements, lay down rules on penalties applicable to infringements of this Regulation and shall take all measures necessary to ensure that they are implemented. Those penalties shall be effective, proportionate, dissuasive and non-discriminatory, and shall be in compliance with the categories of infringements set out in Directive 2006/22/EC.

2. The Member States shall notify the Commission of those measures and the rules on penalties by 2 March 2016. They shall inform the Commission of any subsequent change to those measures.

CHAPTER VIII

FINAL PROVISIONS

Article 42

Committee

1. The Commission shall be assisted by a committee. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.

2. Where reference is made to this paragraph, Article 4 of Regulation (EU) No 182/2011 shall apply.

3. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Where the committee delivers no opinion, the Commission shall not adopt the draft implementing act and the third subparagraph of Article 5(4) of Regulation (EU) No 182/2011 shall apply.

Where the opinion of the committee is to be obtained by a written procedure, that procedure shall be terminated without result when, within the time-limit for delivery of the opinion, the chair of the committee so decides or a simple majority of committee members so request.

Article 43

Tachograph Forum

1. A Tachograph Forum shall be set up in order to support dialogue on technical matters concerning tachographs among Member States' experts, members of the committee referred to in Article 42, and experts from third countries which are using the tachograph under the AETR Agreement.
2. Member States should delegate as experts to the Tachograph Forum the experts participating in the committee referred to in Article 42.
3. The Tachograph Forum shall be open to participation by experts from interested third countries which are Contracting Parties to the AETR Agreement.
4. Stakeholders, representatives of vehicle manufacturers, tachograph manufacturers, social partners and the European Data Protection Supervisor shall be invited to the Tachograph Forum.
5. The Tachograph Forum shall adopt its rules of procedure.
6. The Tachograph Forum shall meet at least once a year.

Article 44

Communication of national measures

Member States shall communicate to the Commission the text of the laws, regulations and administrative provisions which they adopt in the field governed by this Regulation no later than 30 days after their date of adoption and for the first time by 2 March 2015.

Article 45

Amendment of Regulation (EC) No 561/2006

Regulation (EC) No 561/2006 is hereby amended as follows:

(1) in Article 3, the following point is inserted after point (a):

‘(aa) vehicles or combinations of vehicles with a maximum permissible mass not exceeding 7,5 tonnes used for carrying materials, equipment or machinery for the driver's use in the course of his work, and which are used only within a 100 km radius from the base of the undertaking and on the condition that driving the vehicle does not constitute the driver's main activity;’;

(2) Article 13(1) is amended as follows:

(a) in points (d), (f) and (p), the words ‘50 kilometre’ or ‘50 km’ are replaced by the words ‘100 km’;

(b) the first subparagraph of point (d) is replaced by the following:

‘(d) vehicles or combinations of vehicles with a maximum permissible mass not exceeding 7,5 tonnes used by universal service providers as defined in Article 2(13) of Directive 97/67/EC of the European Parliament and of the Council of 15 December 1997 on common rules for the development of the internal market of Community postal services and the improvement of quality of service to deliver items as part of the universal service.’.

Article 46

Transitional measures

In so far as the implementing acts referred to in this Regulation have not been adopted so that they may be applied at the time of application of this Regulation, the provisions in Regulation (EEC) No 3821/85, including in Annex IB thereto, shall continue to apply, on a transitional basis, until the date of application of the implementing acts referred to in this Regulation.

Article 47

Repeal

Regulation (EEC) No 3821/85 is hereby repealed. References to the repealed Regulation shall be construed as references to this Regulation.

Article 48

Entry into force

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

It shall, subject to the transitional measures in Article 46, apply with effect from 2 March 2016. However, Articles 24, 34 and 45 shall apply with effect from 2 March 2015.

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

ANNEX I

**REQUIREMENTS FOR CONSTRUCTION, TESTING, INSTALLATION AND INSPECTION FOR
ANALOGUE TACHOGRAPHS**

I. DEFINITIONSU.K.

In this Annex:

(a) ‘recording equipment’ or ‘analogue tachograph’ means:

equipment intended for installation in road vehicles to show and record automatically or semi-automatically details of the movement of such vehicles and details of certain periods of activity of their drivers;

(b)

‘constant of the recording equipment’ means:

the numerical characteristic giving the value of the input signal required to show and record a distance travelled of one kilometre; this constant must be expressed either in revolutions per kilometre ($k = \dots \text{ rev/km}$), or in impulses per kilometre ($k = \dots \text{ imp/km}$);

(c)

‘characteristic coefficient’ means:

the numerical characteristic giving the value of the output signal emitted by the part of the vehicle linking it with the recording equipment (gearbox output shaft or axle) while the vehicle travels a distance of one measured kilometre under normal test conditions (see point 4 of Part VI of this Annex). The characteristic coefficient is expressed either in revolutions per kilometre ($w = \dots \text{ rev/km}$) or in impulses per kilometre ($w = \dots \text{ imp/km}$);

(d)

‘effective circumference of wheel tyres’ means:

the average of the distances travelled by the several wheels moving the vehicle (driving wheels) in the course of one complete rotation. The measurement of these distances must take place under normal test conditions (see point 4 of Part VI of this Annex) and is expressed in the form: $l = \dots \text{ mm}$.

II. GENERAL CHARACTERISTICS AND FUNCTIONS OF RECORDING EQUIPMENTU.K.

The equipment must be able to record the following:

1. distance travelled by the vehicle;
2. speed of the vehicle;
3. driving time;
4. other periods of work or of availability;
5. breaks from work and daily rest periods;
6. opening of the case containing the record sheet;
7. for electronic recording equipment which is equipment operating by signals transmitted electrically from the distance and speed sensor, any interruption exceeding 100 milliseconds in the power supply of the recording equipment (except lighting), in the power supply of the distance and speed sensor and any interruption in the signal lead to the distance and speed sensor.

For vehicles used by two drivers, the equipment must be capable of recording simultaneously but distinctly and on two separate record sheets details of the periods listed under points 3, 4 and 5 of the first paragraph.

III. CONSTRUCTION REQUIREMENTS FOR RECORDING EQUIPMENT

(a) General points

1. Recording equipment shall include the following:

1.1. Visual instruments showing:

- distance travelled (distance recorder),
- speed (speedometer),
- time (clock).

1.2. Recording instruments comprising:

- a recorder of the distance travelled,
- a speed recorder,
- one or more time recorders satisfying the requirements laid down in point (c)(4).

1.3. A means of marking showing on the record sheet individually:

- each opening of the case containing that record sheet,
- for electronic recording equipment, as defined in point 7 of the first paragraph of Part II, any interruption exceeding 100 milliseconds in the power supply of the recording equipment (except lighting), not later than at switching-on the power supply again,
- for electronic recording equipment, as defined in point 7 of the first paragraph of Part II, any interruption exceeding 100 milliseconds in the power supply of the distance and speed sensor and any interruption in the signal lead to the distance and speed sensor.2. Any inclusion in the equipment of devices additional to those listed in point 1 must not interfere with the proper operation of the mandatory devices or with the reading of them.

The equipment must be submitted for approval complete with any such additional devices.

3. MaterialsU.K.

3.1. All the constituent parts of the recording equipment must be made of materials with sufficient stability and mechanical strength and stable electrical and magnetic characteristics.

3.2. Any modification in a constituent part of the equipment or in the nature of the materials used for its manufacture must, before being applied in manufacture, be submitted for approval to the authority which granted type-approval for the equipment.

4. Measurement of distance travelled

The distances travelled may be measured and recorded either:

- so as to include both forward and reverse movement, or
- so as to include only forward movement.

Any recording of reversing movements must on no account affect the clarity and accuracy of the other recordings.

5. Measurement of speed

5.1. The range of speed measurement shall be as stated in the type-approval certificate.

5.2. The natural frequency and the damping of the measuring device must be such that the instruments showing and recording the speed can, within the range of measurement, follow acceleration changes of up to 2 m/s^2 , within the limits of accepted tolerances.

6. Measurement of time (clock)

6.1. The control of the mechanism for resetting the clock must be located inside a case containing the record sheet; each opening of that case must be automatically recorded on the record sheet.

6.2. If the forward movement mechanism of the record sheet is controlled by the clock, the period during which the latter will run correctly after being fully wound must be greater by at least 10 % than the recording period corresponding to the maximum sheet-load of the equipment.

7. Lighting and protection

7.1. The visual instruments of the equipment must be provided with adequate non-dazzling lighting.

7.2. For normal conditions of use, all the internal parts of the equipment must be protected against damp and dust. In addition, they must be made proof against tampering by means of casings capable of being sealed.

(b) Visual instruments

1. Distance travelled indicator (distance recorder)

1.1. The value of the smallest grading on the instrument showing distance travelled must be 0,1 kilometres. Figures showing hectometres must be clearly distinguishable from those showing whole kilometres.

1.2. The figures on the distance recorder must be clearly legible and must have an apparent height of at least 4 mm.

1.3. The distance recorder must be capable of reading up to at least 99 999,9 kilometres.

2. Speed indicators (speedometer)

2.1. Within the range of measurement, the speed scale must be uniformly graduated by 1, 2, 5 or 10 kilometres per hour. The value of a speed graduation (space between two successive marks) must not exceed 10 % of the maximum speed shown on the scale.

2.2. The range indicated beyond that measured need not be marked by figures.

2.3. The length of each space on the scale representing a speed difference of 10 kilometres per hour must not be less than 10 millimetres.

2.4. On an indicator with a needle, the distance between the needle and the instrument face must not exceed three millimetres.

3. Time indicator (clock)

The time indicator must be visible from outside the equipment and must give a clear, plain and unambiguous reading.

(c) Recording instruments

1. General points

1.1. All equipment, whatever the form of the record sheet (strip or disc), must be provided with a mark enabling the record sheet to be inserted correctly, in such a way as to ensure that the time shown by the clock and the time-marking on the record sheet correspond.

1.2. The mechanism moving the record sheet must be such as to ensure that the latter moves without play and can be freely inserted and removed.

1.3. For record sheets in disc form, the forward movement device must be controlled by the clock mechanism. In this case, the rotating movement of the record sheet must be continuous and uniform, with a minimum speed of seven millimetres per hour measured at the inner border of the ring marking the edge of the speed recording area. In equipment of the strip type, where the forward movement device of the record sheets is controlled by the clock mechanism, the speed of rectilinear forward movement must be at least 10 millimetres per hour.

1.4. Recording of the distance travelled, of the speed of the vehicle and of any opening of the case containing the record sheet or sheets must be automatic.

2. Recording distance travelled

2.1. Every kilometre of distance travelled must be represented on the record by a variation of at least one millimetre on the corresponding coordinate.

2.2. Even at speeds reaching the upper limit of the range of measurement, the record of distances must still be clearly legible.

3. Recording speed

3.1. Whatever the form of the record sheet, the speed recording stylus must normally move in a straight line and at right angles to the direction of travel of the record sheet. However, the movement of the stylus may be curvilinear, provided the following conditions are satisfied:

- the trace drawn by the stylus must be perpendicular to the average circumference (in the case of record sheets in disc form) or to the axis (in the case of record sheets in strip form) of the area reserved for speed recording,
- the ratio between the radius of curvature of the trace drawn by the stylus and the width of the area reserved for speed recording must be not less than 2,4 to 1, whatever the form of the record sheet,
- the markings on the time-scale must cross the recording area in a curve of the same radius as the trace drawn by the stylus. The spaces between the markings on the time-scale must represent a period not exceeding one hour.

3.2. Each variation in speed of 10 kilometres per hour must be represented on the record by a variation of at least 1,5 millimetres on the corresponding coordinate.

4. Recording time

4.1. Recording equipment must be so constructed that the period of driving time is always recorded automatically and that it is possible, through the operation where necessary of a switch device, to record separately the other periods of time as indicated in points (ii), (iii) and (iv) of Article 34(5)(b) of this Regulation.

4.2. It must be possible, from the characteristics of the traces, their relative positions and if necessary the signs laid down in Article 34 of this Regulation, to distinguish clearly between the various periods of time. The various periods of time should be differentiated from one another on the record by differences in the thickness of the relevant traces, or by any other system of at least equal effectiveness from the point of view of legibility and ease of interpretation of the record.

4.3. In the case of vehicles with a crew consisting of more than one driver, the recordings provided for in point 4.1 must be made on separate record sheets, each record sheet being allocated to one driver. In this case, the forward movement of the separate record sheets must be effected either by a single mechanism or by separate synchronised mechanisms.

(d) Closing device

1. The case containing the record sheet or sheets and the control of the mechanism for resetting the clock must be fitted with a lock.

2. Each opening of the case containing the record sheet or sheets and the control of the mechanism for resetting the clock must be automatically recorded on the record sheet or sheets.

(e) Markings

1. The following markings must appear on the instrument face of the equipment:

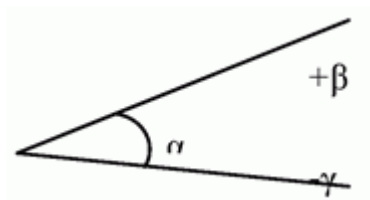
- close to the figure shown by the distance recorder, the unit of measurement of distance, indicated by the abbreviation 'km',
- near the speed scale, the marking 'km/h',
- the measurement range of the speedometer, in the form 'Vmin ... km/h, Vmax ... km/h'. This marking is not necessary if it is shown on the descriptive plaque of the equipment.

However, these requirements shall not apply to recording equipment approved before 10 August 1970.

2. The descriptive plaque must be built into the equipment and must show the following markings, which must be visible on the equipment when installed:

- name and address of the manufacturer of the equipment,
- manufacturer's number and year of construction,

- approval mark for the equipment type,
- the constant of the equipment in the form 'k = ... rev/km' or 'k = ... imp/km',
- optionally, the range of speed measurement, in the form indicated in point 1,
- should the sensitivity of the instrument to the angle of inclination be capable of affecting the readings given by the equipment beyond the permitted tolerances, the permissible angle expressed as:



where α is the angle measured from the horizontal position of the front face (fitted the right way up) of the equipment for which the instrument is calibrated, while β and γ represent respectively the maximum permissible upward and downward deviations from the angle of calibration α .

(f) Maximum tolerances (visual and recording instruments)

1. On the test bench before installation:

- distance travelled : 1 % more or less than the real distance, where that distance is at least one kilometre;
- speed : 3 km/h more or less than the real speed;
- time : \pm two minutes per day with a maximum of 10 minutes per seven days in cases where the running period of the clock after rewinding is not less than that period.

2. On installation:

- distance travelled : 2 % more or less than the real distance, where that distance is at least one kilometre;
- speed : 4 km/h more or less than the real speed;
- time :

\pm two minutes per day, or

\pm 10 minutes per seven days.

3. In use:

- (a) distance travelled: 4 % more or less than the real distance, where that distance is at least one kilometre;
- (b) speed: 6 km/h more or less than the real speed;
- (c) time:

± two minutes per day, or

± 10 minutes per seven days.

4. The maximum tolerances set out in points 1, 2 and 3 are valid for temperatures between 0 °C and 40 °C, temperatures being taken in close proximity to the equipment.

5. Measurement of the maximum tolerances set out in points 2 and 3 shall take place under the conditions laid down in Part VI.

IV. RECORD SHEETS

(a) General points

1. The record sheets must be such that they do not impede the normal functioning of the instrument and that the records which they contain are indelible and easily legible and identifiable.

The record sheets must retain their dimensions and any records made on them under normal conditions of humidity and temperature.

In addition it must be possible to write on the record sheets, without damaging them and without affecting the legibility of the recordings, the information referred to in Article 34 of this Regulation.

Under normal conditions of storage, the recordings must remain clearly legible for at least one year.

2. The minimum recording capacity of the record sheets, whatever their form, must be 24 hours.

If several discs are linked together to increase the continuous recording capacity which can be achieved without intervention by staff, the links between the various discs must be made in such a way that there are no breaks in or overlapping of recordings at the point of transfer from one disc to another.

(b) Recording areas and their graduation

1. The record sheets shall include the following recording areas:

- an area exclusively reserved for data relating to speed,
- an area exclusively reserved for data relating to distance travelled,
- one or more areas for data relating to driving time, to other periods of work and availability, to breaks from work and to rest periods for drivers.

2. The area for recording speed must be scaled off in divisions of 20 kilometres per hour or less. The speed corresponding to each marking on the scale must be shown in figures against that marking. The symbol

'km/h' must be shown at least once within the area. The last marking on the scale must coincide with the upper limit of the range of measurement.

3. The area for recording distance travelled must be set out in such a way that the number of kilometres travelled may be read without difficulty.

4. The area or areas reserved for recording the periods referred to in point 1 must be so marked that it is possible to distinguish clearly between the various periods of time.

(c) Information to be printed on the record sheets

Each record sheet must bear, in printed form, the following information:

- name and address or trade name of the manufacturer,
- approval mark for the model of the record sheet,
- approval mark for the type or types of equipment in which the record sheet may be used,
- upper limit of the speed measurement range, printed in kilometres per hour.

By way of minimal additional requirements, each record sheet must bear, in printed form, a time-scale graduated in such a way that the time may be read directly at intervals of fifteen minutes while each five-minute interval may be determined without difficulty.

(d) Free space for handwritten insertions

A free space must be provided on the record sheets such that drivers may as a minimum write in the following details:

- surname and first name of the driver,
- date and place where use of the record sheet begins and date and place where such use ends,
- the registration number or numbers of the vehicle or vehicles to which the driver is assigned during the use of the record sheet,
- odometer readings from the vehicle or vehicles to which the driver is assigned during the use of the record sheet,
- the time at which any change of vehicle takes place.

V. INSTALLATION OF RECORDING EQUIPMENT

1. Recording equipment must be positioned in the vehicle in such a way that the driver has a clear view from his seat of the speedometer, distance recorder and clock while at the same time all parts of those instruments, including driving parts, are protected against accidental damage.

2. It must be possible to adapt the constant of the recording equipment to the characteristic coefficient of the vehicle by means of a suitable device, to be known as an adaptor.

Vehicles with two or more rear axle ratios must be fitted with a switch device whereby those various ratios may be automatically brought into line with the ratio for which the equipment has been adapted to the vehicle.

3. After the equipment has been checked on installation, an installation plaque must be affixed to the vehicle beside the equipment or in the equipment itself and in such a way as to be clearly visible. After every inspection by an approved fitter or workshop requiring a change in the setting of the installation itself, a new installation plaque must be affixed in place of the previous one.

The installation plaque must show at least the following details:

- name, address or trade name of the approved fitter, workshop or vehicle manufacturer,
- characteristic coefficient of the vehicle, in the form 'w = ... rev/km' or 'w = ... imp/km',
- effective circumference of the wheel tyres, in the form 'l = ... mm',
- the dates on which the characteristic coefficient of the vehicle was determined and the effective circumference of the wheel tyres was measured.

4. Sealing

The following parts must be sealed:

- (a) the installation plaque, unless it is attached in such a way that it cannot be removed without the markings thereon being destroyed;
- (b) the two ends of the link between the recording equipment proper and the vehicle;
- (c) the adaptor itself and the point of its insertion into the circuit;
- (d) the switch mechanism for vehicles with two or more axle ratios;
- (e) the links joining the adaptor and the switch mechanism to the rest of the equipment;
- (f) the casings required under point (a)(7.2) of Part III;
- (g) any cover giving access to the means of adapting the constant of the recording equipment to the characteristic coefficient of the vehicle.

In particular cases, further seals may be required on approval of the equipment type and a note of the positioning of those seals must be made on the approval certificate.

The seals mentioned in points (b), (c) and (e) of the first paragraph are authorised to be removed:

- in cases of emergency,
- in order to install, adjust or repair a speed limitation device or any other device contributing to road safety,

provided that the recording equipment continues to function reliably and correctly and is resealed by an approved fitter or workshop immediately after fitting the speed limitation device or any other device contributing to road safety or within seven days in other cases. For each occasion that those seals are broken, a written statement giving the reasons for such action must be prepared and made available to the competent authority.

5. The cables connecting the recording equipment to the transmitter must be protected by a continuous plastic-coated rust-protected steel sheath with crimped ends, except where an equivalent protection against manipulation is guaranteed by other means (for example by electronic monitoring such as signal encryption) capable of detecting the presence of any device which is unnecessary for the correct operation of the recording equipment and the purpose of which is to prevent the accurate operation of the recording equipment by short circuiting or interruption or by modification of the electronic data from the speed and distance sensor. A joint, comprised of sealed connections, is deemed to be continuous within the meaning of this Regulation.

The aforementioned electronic monitoring may be replaced by an electronic control which ensures that the recording equipment is able to record any movement of the vehicle, independent from the signal of the speed and distance sensor.

For the purposes of the application of this point, M 1 and N 1 vehicles are those defined in Part A of Annex II to Directive 2007/46/EC of the European Parliament and of the Council. For those vehicles that are equipped with tachographs in compliance with this Regulation and are not designed to be fitted with an armoured cable between the distance and speed sensors and the recording equipment, an adaptor shall be fitted as close as possible to the distance and speed sensors.

The armoured cable shall be fitted from the adaptor to the recording equipment.

VI. CHECKS AND INSPECTIONS

The Member States shall nominate the bodies which shall carry out the checks and inspections.

1. Certification of new or repaired instruments

Every individual device, whether new or repaired, shall be certified in respect of its correct operation and the accuracy of its readings and recordings, within the limits laid down in point (f)(1) of Part III, by means of sealing in accordance with point (f) of the first paragraph of point 4 of Part V.

For this purpose, the Member States may stipulate an initial verification, consisting of a check on, and confirmation of, the conformity of a new or repaired device with the type-approved model and/or with the requirements of this Regulation, or may delegate the power to certify to the manufacturers or to their authorised agents.

2. Installation

When being fitted to a vehicle, the equipment and the whole installation must comply with the provisions relating to maximum tolerances laid down in point (f)(2) of Part III.

The inspection tests shall be carried out by the approved fitter or workshop on its own responsibility.

3. Periodic inspections

(a) Periodic inspections of the equipment fitted to vehicles shall take place at least every two years and may be carried out in conjunction with roadworthiness tests of vehicles.

Those inspections shall include the following checks:

- that the equipment is working correctly,
- that the equipment carries the type-approval mark,
- that the installation plaque is affixed,
- that the seals on the equipment and on the other parts of the installation are intact,
- the actual circumference of the tyres.

(b) An inspection to ensure compliance with point (f)(3) of Part III on the maximum tolerances in use shall be carried out at least once every six years, although each Member State may stipulate a shorter inspection interval for vehicles registered in its territory. Such inspections must include replacement of the installation plaque.

4. Measurement of errors

The measurement of errors on installation and during use shall be carried out under the following conditions, which are to be regarded as constituting standard test conditions:

- vehicle unladen, in normal running order,
- tyre pressures in accordance with the manufacturer's instructions,
- tyre wear within the limits allowed by law,
- movement of the vehicle: the vehicle must proceed, driven by its own engine, in a straight line and on a level surface, at a speed of 50 ± 5 km/h. Provided that it is of comparable accuracy, the test may also be carried out on an appropriate test bench.

ANNEX II

APPROVAL MARK AND CERTIFICATE

I. APPROVAL MARK

1. The approval mark shall be made up of:

(a) a rectangle, within which shall be placed the letter 'e' followed by a distinguishing number or letter for the country which has issued the approval in accordance with the following conventional signs:

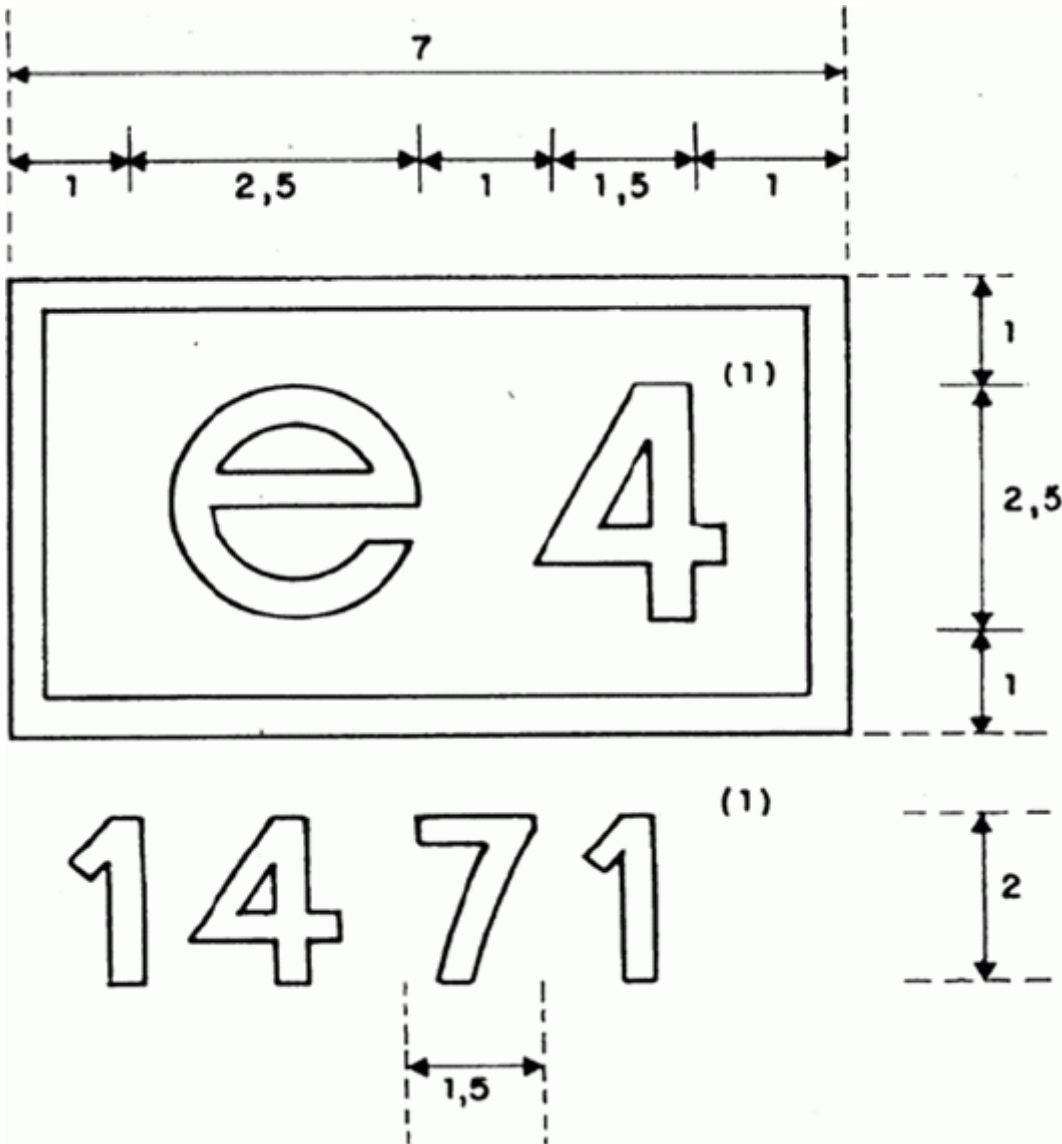
Belgium	6,
Bulgaria	34,
Czech Republic	8,
Denmark	18,
Estonia	29,
Ireland	24,
Greece	23,
Spain	9,
France	2,
Croatia	25,
Italy	3,
Cyprus	CY,
Latvia	32,
Lithuania	36,
Luxembourg	13,
Hungary	7,
Malta	MT,
Netherlands	4,
Austria	12,
Poland	20,
Portugal	21,
Romania	19,
Slovenia	26,
Slovakia	27,
Finland	17,
Sweden	5,
United Kingdom	11,

and

(b) an approval number corresponding to the number of the approval certificate drawn up for the prototype of the recording equipment or the record sheet or to the number of a tachograph card, placed at any point within the immediate proximity of that rectangle.

2. The approval mark shall be shown on the descriptive plaque of each set of equipment and on each record sheet and on each tachograph card. It must be indelible and must always remain clearly legible.

3. The dimensions of the approval mark drawn below are expressed in millimetres, these dimensions being minima. The ratios between the dimensions must be maintained.



II. APPROVAL CERTIFICATE FOR ANALOGUE TACHOGRAPHS

A Member State which has granted approval shall issue the applicant with an approval certificate, the model of which is given below. When informing other Member States of approvals issued or, if the occasion should arise, withdrawn, a Member State shall use copies of that certificate.

APPROVAL CERTIFICATE

Name of competent administration ...

Notification concerning:

- approval of a type of recording equipment
- withdrawal of approval of a type of recording equipment

- approval of a model record sheet
- withdrawal of approval of a model record sheet

...

Approval No ...

1. Trade mark or name ...
2. Name of type or model ...
3. Name of manufacturer ...
4. Address of manufacturer ...
5. Submitted for approval on ...
6. Tested at ...
7. Date and number of the test(s) ...
8. Date of approval ...
9. Date of withdrawal of approval ...
10. Type or types of recording equipment in which sheet is designed to be used ...
11. Place ...
12. Date ...
13. Descriptive documents annexed ...
14. Remarks (including the position of seals if applicable)

...

(Signature)

III. APPROVAL CERTIFICATE FOR DIGITAL TACHOGRAPHS

A Member State which has granted approval shall issue the applicant with an approval certificate, the model of which is given below. When informing other Member States of approvals issued or, if the occasion should arise, withdrawn, a Member State shall use copies of that certificate.

APPROVAL CERTIFICATE FOR DIGITAL TACHOGRAPHS

Name of competent administration ...

Notification concerning:

?approval of:

?withdrawal of approval of:

? recording equipment model

? recording equipment component

? a driver's card

? a workshop card

? a company card

? a controller's card

...

Approval No ...

1. Manufacturing brand or trademark ...

2. Name of model ...

3. Name of manufacturer ...

4. Address of manufacturer ...

5. Submitted for approval for ...

6. Laboratory(-ies) ...

7. Date and number of test report ...

8. Date of approval ...

9. Date of withdrawal of approval ...

10. Model of recording equipment(s) with which the component is designed to be used ...

11. Place ...

12. Date ...

13. Descriptive documents annexed ...

14. Remarks

...

(Signature)

