

COMMISSION OF THE EUROPEAN COMMUNITIES

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Proposal for a

COUNCIL REGULATION (EC)

amending Council Regulation (EEC) 3821/85

and Council Directive 88/599/EEC

on recording equipment in road transport

(presented by the Commission)

EXPLANATORY MEMORANDUM

Subject : Proposal for a Council Regulation amending Council Regulation (EEC) 3821/85 and Council Directive 88/599/EEC on Recording Equipment in Road Transport (tachograph)

A. THE PURPOSE OF THE PROPOSED SYSTEM

The purpose of the proposed amendment to Council Regulation 3821/85 is to provide for the mandatory fitment of an additional element to the current tachograph system as used by professional drivers with the aim of improving the enforcement of, and compliance with, social legislation relating to road transport, as laid down in Council Regulation (EEC) 3820/85.

The Union's social legislation set limits on periods of driving, and requirements for rest periods. These periods are currently difficult to enforce. Moreover, and particularly in the current depressed haulage market, there are strong economic pressures on drivers and operators to exceed the statutory limits on driving periods

As the Commission's White Paper on the Future Development of the Common Transport Policy recognises "There is evidence that observance with (Community) rules is far from adequate even in those states where controls are relatively strict".

The risk of arrest and prosecution of offenders is currently too low to deter these illegal practices, which create a distortion of competition between those who flout the law and those operators and drivers who work within it.

Many years of practical experience have highlighted two main deficiencies with the current system. Firstly, there exists the potential for fraudulent manipulation of the system and, thereby, fabrication of the required output data. Secondly, the existing system's output, in the form of a paper disc, is time-consuming to read and collate and, thus, does not lend itself to a comprehensive audit by enforcement authorities of operator's records, at their premises. The difficulties of carrying out a comprehensive audit of compliance with the regulations, encourages fraudulent operators to flout the system.

Again, quoting from the White Paper "In order to know whether someone can drive lawfully it may be necessary to consult records going back seven days or even longer. Interpretation of the tachograph disc needs considerable expertise and experience. This lack of immediate transparency contributes to temptations to manipulate the system".

To counter this problem it is proposed to improve the existing system by adding a unit which will provide for the digital storage of the data essential for recording driver's social hours, onto a driver's smart card. Member States will be responsible for personalising and issuing the driver cards.

A previous amendment [ref. Commission Regulation (EEC) No. 3314/90 of 16.11.1990⁽¹⁾] modified the technical provisions of the Regulation so as to ensure, as far as possible, that an interruption of the power supply, or of the signal from the distance and speed sensor, to the tachograph would give a clear indication of these interruptions on the record sheet/tachograph disc, thus providing a disincentive to this type of abuse. However, electronic interruptions of this kind are not the only means of fraudulent use. The recording mechanisms of the tachograph and the recording disc itself are not sufficiently tamperproof.

The proposed amendment would provide a system which would allow for a quick and reliable check of compliance at the roadside. It would also be more "user friendly" for the driver, thus reducing the risk of inadvertent infringement of driving hours. It would also allow enforcement agencies to carry out comprehensive analysis of drivers hours data at operators premises by downloading the data. The existing tachograph disc would be used as a "hard copy" to verify the electronically recorded data.

The proposed regulation also envisages a procedure whereby the Commission, assisted by the committee for technical adaptation could approve alternative systems which, for example, replace the hard copy record sheet with a data storage system which may be digital. However, any such equipment must have accuracy and security comparable to the tachograph.

The overall aim is to enable the presentation and analysis of accurate, secure data so as to facilitate both rapid roadside enforcement and, where the Member State requires, an audit of the driver's hours at the operators base. These measures will permit more effective enforcement and hence promote equitable competition, counter driver exploitation and enhance road safety.

B. JUSTIFICATION FOR ACTION AT COMMUNITY LEVEL

1. Subsidiarity

- (a) What are the objectives of the proposed action in relation to the Community's obligations ?

The objective is to improve enforcement of, and compliance with, Community social legislation on driver's hours, relating to road transport, governed by Council Regulation (EEC) 3820/85. At present Council Regulation 3821/85 provides for the installation and use of recording equipment (tachograph) to control this legislation. However, the incompatibility of the present system with a comprehensive audit of compliance with the relevant social regulations encourages the operation of vehicles in excess of those regulations. Therefore, it is proposed that additional equipment, over and above the existing tachograph, must be fitted to commercial vehicles. This will facilitate enforcement both during roadside checks by Member States' authorities on vehicles on their territory and, if required, on their own operators and drivers at the operator's premises. The control of driver's maximum driving hours will ensure the maintenance of satisfactory social standards, will contribute to the equity of competition and benefit road safety - all Community aims.

⁽¹⁾ OJ No L 318, 17.11.1990, p. 20

- (b) Does competence for the planned activity lie solely with the Community or is it shared with the Member States ?

The legal basis of the proposed modification is Article 75, paragraph 1 (c). Therefore, competence is shared between the Community and the Member States.

- (c) What is the Community dimension of the problem (for example, how many Member States are involved and what solution has been used up to now) ?

Regulation (EEC) 3821/85 which provides the means of measuring and controlling driver social hours, as laid down by Regulation (EEC) 3820/85, applies in all Member States. Consequently, all Community commercial vehicles covered by this Regulation must now be equipped with a tachograph system and will therefore be subject to the proposed amendment, with the exception of vehicles registered prior to 1 January 1990. The new system also requires drivers to insert a personalised drivers card into the system, before beginning work, to allow the relevant data to be recorded. Consequently, authorities are required to handle, personalise and issue such cards and the relevant drivers are required to use them each time they drive an equipped commercial vehicle within the Community.

- (d) What is the most effective solution taking into account the means available to the Community and those of the Member States ?

That all relevant vehicles in Member States are fitted with the additional equipment and that drivers are issued with the driver's cards. This will enable the enforcement of the social legislation Community-wide by the control of compatible systems.

Member States could not individually take such measures without creating distortions of competition and practical difficulties for Community drivers, operators and industry.

- (e) What real added value will the activity proposed by the Community provide and what would be the cost of inaction ?

The added value of the proposal for the Community will be the enhancement of the enforcement of the driver's social hours which will provide a significant contribution to road safety, equity of competition and will ensure the maintenance of satisfactory social standards. Inaction would perpetuate the status quo whereby a high number of journeys contravene the social hours regulations.

- (f) What forms of action are available to the Community (recommendation, financial support, regulation, mutual recognition, etc.) ?

Regulations (EEC) 3820/85 and (EEC) 3821/85 provide the basis for this proposal. Consequently, the proposal is framed in the form of a Council Regulation. The Commission, assisted by the committee for technical adaptation, may approve equipment as an alternative to that specified in the annex to this Regulation provided it fulfills certain essential functions. Once approved, the Member States must accept such equipment by mutual recognition. It is an essential element of this proposal that all Member States equip their vehicles with compatible equipment, at the same time. Failure to do so would distort the

market and not achieve an improvement on today's practices. Consequently a recommendation would not be a viable option.

- (g) Is it necessary to have a uniform regulation or is a directive setting out the general objectives sufficient, leaving implementation at the level of the Member States ?

As set out under (f), this proposal adapts an existing Regulation and therefore needs to be a Regulation in itself. Moreover, because of the need to fix uniform standards and the technical nature of this proposal, a directive would not be an appropriate instrument.

C. GENERAL DESCRIPTION OF THE PROPOSED EQUIPMENT

This proposed amendment provides for additional elements to the recording equipment so as to provide an integrated on-board automatic data processing system. The system will, as at present, receive data from the vehicle motion sensor and transmit that data onto a record sheet, the existing tachograph chart. The data will also be picked up by the "electronic driver information device" and relevant data on driver's hours, rest times, etc, transferred onto a driver card. The driver card is a "smart card" issued to a driver by the relevant Member State authority. The card will be personalised for that particular driver : name, licence number etc. In time it is envisaged that this card will become the driving licence itself. The driver card will be capable of absorbing 28 days of driving data.

There will be a positive and permanent data link provided between the driver card and tachograph record sheet - the insertion of the driver card into the vehicle data processor will generate a sequential serial number on the record sheet. This will render falsification of data during roadside checks, and during any control at the undertakings premises, virtually impossible. Also, there will be a "fingerprint" generated in the data on the driver card which, when downloaded onto an office system, will link that data set (i.e. for a particular driver on a particular day) with the relevant record sheet.

The current generation of tachograph (production up to 1997) will not be able to provide a serial number link with the driver card, however the "fingerprint" facility will be possible.

The recording and processing of information on driver's hours onto a driver's personal card, instead of relying solely on the paper disc, will make the information easier to use by both enforcement authorities and by the operators, and, will provide the possibility for a double check with the record sheet. This simplification will consequently enhance enforcement and ensure that driver's hours data are free from fraudulent manipulation.

Bearing in mind the rapid technological developments in digital recording systems, on board computers, etc., the Commission, assisted by the committee for technical adaptation, may also approve recording equipment which, for example, replaces the traditional tachograph and its hard copy record sheet, with a data storage system which may be digital. However, any such equipment must provide an equivalent paper print out output which is available on demand, and which contains the necessary statutory information, and is as at least as simple to interpret, as the current record sheet. The equipment must also contain a visual display and smart card facility as described in the annex to this regulation.

D. WHO WILL BE AFFECTED BY THE REGULATION AND TO WHAT EXTENT?

This proposed Regulation will affect the road freight and inter urban passenger transport sector in all Member States. There is no disguising the fact that operators will be concerned at the cost of the systems additional equipment. It is estimated that the proposal will add 80 % to the cost of the existing tachograph, or about 200 ECUS. The cost of each driver's smart card, which contains the driver's personal data and receives digitised data on his driving hours, would be around 25 ECUS, which includes the administrative cost of the authorities issuing the cards to specific drivers. The cost to the authorities of the blank cards should be in the order of 10 ECUS each. About 6 Million trucks and coaches would fall under the scope of this proposal. This is a price that has to be paid to enable authorities to achieve effective enforcement of the Community's social legislation and thereby ensure equity of competition. Those operators who share in this concern, as well as the trade union movement, are fully supportive.

E. IMPLEMENTATION TIMING

A lead time of about three years between the date of the formal adoption of the proposal and the start of compulsory fitment on new vehicles would be necessary to enable truck and coach manufacturers to undertake the necessary preparatory work. This should provide sufficient time for Member States administrations to arrange the issue and supervision of the driver's smart card.

For the driver card system to be effective within a limited time, retrofitment to relevant vehicles should be completed as quickly as possible. A rapid retro-fit programme would also reduce the risk of an adverse effect on the truck manufacturing industry, where the increased effectiveness of enforcement would discourage the purchase of new vehicles in which the new equipment was compulsorily fitted.

All vehicles, subject to social Regulation 3820/85 and equipped with a tachograph provided for by Regulation 3821/85 and registered after January 1990 will have to adapt their current tachograph system to include the additional equipment specified in the annex to this proposal. Also, all drivers licenced to drive these vehicles will need to be issued with a driver card. The retrofitting programme should be completed by January 2000. Manufacturers of new vehicles will need to fit the proposed system by January 1998.

The manufacturers of recording equipment will need to gain type approval by a Member State to the provisions of this amending regulation by 1 January 1997 before that equipment can be sold onto the market. The Regulation will refer to CEN standards for the driver's smart card and its interface with the recording equipment.

F. CONSULTATION

In drafting this proposal the Commission has consulted Member States, all sides of industry and trade unions. An expert group including industry and representatives from Member States, held meetings over two years and established the general philosophy of the approach. Expertise from industry, "smart card" designers and transport consultants agreed the technical feasibility of the system.

In accordance with Article 99 of the EEA agreement, EFTA countries have been consulted and their comments have been noted.

G. CONTENTS OF THE PROPOSAL

Article 1 relates to the "type approval" and the "use of equipment" chapters of regulation (EEC) 3821/85 and provides for the following amendments :

1. Articles 4, 5, 6, 7, 8, 11 and 15 are amended to include the driver card within the type approval requirements.
2. Article 14 has been extended by three new paragraphs.
 - § 3 relates to the issuing by the statutory authority of the driver card after the authority has included the personal details of the driver within the cards' memory ;
 - § 4 concerns replacement of an old driver's card by a new one by the authority and the need to keep appropriate records ;
 - § 5 recognises Member States right to require the archiving of data from the driver's card for enforcement purposes or by the undertaking for management information and that any downloading of data would need to be registered on the driver card.
3. Article 15 is amended :
 - a third indent to the third paragraph is added to give instructions to the driver on how to use the driver card ;
 - a third sub paragraph is added to paragraph 6 which will make it an offence to falsify data recorded by the equipment or have at the driver's disposal a device which could be used to that end.
 - the seventh paragraph includes the driver card data and visual display as well as the record sheet, as information available to the authorized inspecting officer.
4. A third paragraph is added to Article 16 concerning the procedure to be followed if a Driver Card is lost, becomes defective, etc.
5. Article 17 has been extended to allow for the Commission, with the assistance of the Committee as defined in Article 18, to amend the current regulation in the light of technical progress and also to approve alternative systems which offer the same essential functions as the system described in Annex I (A).

6. Article 18 which relates to the technical adaptation committee procedure is replaced so as to establish a new committee for the approval of technical adaptations to Annex I (A). Such adaptations may include alternative systems which are provided for within Article 17. The new Committee structure and operating procedure are defined in procedure I, of Article 2 to Decision 87/373/EEC (1).
7. A new annex, Annex I (A) is added.

Article 2 concerns the retrofit programme which is applicable to all relevant vehicles registered after 1 January 1990. It also gives exemption from some of the technical "security" requirements of Annex I (A) for vehicles equipped with the present generation of tachograph for vehicles first used before 1 January 1998. The Type Approval requirements for any additional equipment are specified. Finally, the Article requires that the retrofitting programme be completed by 1 January 2000.

Article 3 permits Member States to grant EEC type approval for recording equipment approved to Annex 1 of the unamended regulation up until 1 January 1997.

Article 4 requires that any new vehicle brought into service from 1 January 1998 must be fitted with recording equipment conforming to this amending Regulation.

Article 5 amends Directive n° 88/159/EEC.

Article 6 gives an entry into force of this Regulation of 1 January 1996.

H. INTEREST FOR EEA

In accordance with Article 99 of the EEA Agreement, EFTA countries were consulted and agreed with the principle of the proposal.

(1) OJ No L 197, 18.7.1987.

**PROPOSAL FOR A COUNCIL REGULATION
AMENDING COUNCIL REGULATION (EEC) No 3821/85
AND COUNCIL DIRECTIVE No 88/599/EEC
ON RECORDING EQUIPMENT IN ROAD TRANSPORT**

The Council of the European Union -

Having regard to the Treaty establishing the European Community, and in particular Article 75 thereof;

Having regard to the proposal from the Commission ⁽¹⁾;

In cooperation with the European Parliament ⁽²⁾;

Having regard to the Opinion of the Economic and Social Committee ⁽³⁾;

Whereas Council Regulation 3821/85 of 20 December 1985 on recording equipment in road transport ⁽⁴⁾, as last amended by Commission Regulation (EEC) No 3688/92 ⁽⁵⁾ lays down provisions concerning construction, installation, use and testing of recording equipments in road transport;

⁽¹⁾ OJ No C ...

⁽²⁾ OJ No C ...

⁽³⁾ OJ No C ...

⁽⁴⁾ OJ No L 370, 31.12.1985, p. 8.

⁽⁵⁾ OJ No L 374, 22.12.1992, p. 12.

Whereas economic pressures on transport undertakings and therefore on the individual driver works against respecting the necessary social hours and speed restrictions and that current enforcement does not provide a sufficient incentive to counter gross infringement;

Whereas this gross infringement is unacceptable to the individual driver, adversely affects equitable competition and presents a road safety hazard;

Whereas road safety would be enhanced by the encouragement of sensible driving through the automatic recording of other details of a vehicle's journey, such as speed and distance covered;

Whereas it is essential that any future system maintains the benefits with at least the same degree of accuracy, reliability and acceptability of the current system which over the past four decades has improved compliance with national and Community law;

Whereas the EEC social regulations contain requirements for limits on the daily driving and rest time and also for the total driving and rest time, for up to two weeks;

Whereas these requirements are currently difficult to enforce given that data are recorded on several daily record sheets, out of which the record sheets for the current week and the last day of the previous week are stored in the cab;

Whereas the introduction of the driver card should put an end to many of the most common abuses of the present system ensuring that data recorded is readily available by visual display, is unambiguous, easily intelligible, reliable and, above all, provides an indisputable record of the driver's actions for the last twenty eight days of driving;

Whereas it is therefore appropriate to modify Regulation (EEC) No 3821/85 in order to provide for the addition of an electronic driver information device to allow the insertion of the driver card into the existing recording equipment;

Whereas, in accordance of the principle of subsidiarity, a Community action is necessary in order to prevent distortions of competition and practical difficulties which could arise for Community drivers, operators and industry from the application of diverging national rules,

Whereas this regulation, as far as it concerns the specification of the driver card, applies the "new approach" to technical harmonised standards by establishing a general framework for the equipment specification, leaving detailed requirements to industrial standardisation procedures;

Whereas it is appropriate to provide for a simplified procedure for the adaptation of the technical aspects of this regulation and the provision of alternative systems which fulfil the same essential functions;

Whereas technical adaptation, together with alternative systems which, for example, replaces the existing "tachograph" recording equipment and record sheet by equipment which stores data in digital form, should be approved by the Commission, assisted by a consultative committee;

Whereas the approval of an alternative system will be dependent upon the degree to which that system at least fulfills the function of the system described in Annex 1A ;

Whereas the scope of this regulation includes vehicles which are subject to the provisions of Regulation (EEC) No 3820/85 and were first put into circulation after 1 January 1990 ;

HAS ADOPTED THIS REGULATION :

Article 1

Council Regulation (EEC) No 3821/85 is hereby amended as follows :

1. (Concerns only the Portuguese version)
2. Article 1 is amended by adding "or I (A)" after "Annexes I".
3. Articles 4, 5, 6, 7, 8, 11 and 15(1), (2) first and second sub paragraph, (3), (4) are amended by adding the words "or driver card" where reference is made to "record sheet" or "record sheets".
4. Third, fourth and fifth paragraphs are added to Article 14 as follows:

" 3. The driver card as defined in Annex I (A) shall be issued to the driver by the competent authority of the Member State where the driver has his normal residence. The authorities will personalise the driver card by adding the data referred to in Annex I (A) Chapter IV (F) to blank smart cards conforming to the appropriate CEN standards, with a serial number within the chip.

The driver shall only possess one driver card at any one time. The driver is authorised to use only his own personalised driver card. The driver shall not use a driver card which has expired.

4. When a new driver card is issued replacing the old, all stored data shall be transferred from the old driver card as far as possible. The new card shall contain the same driver number but the index shall be increased by one. The issuing authority will keep records of loss or failure of the driver card. The issuing authority shall supply a replacement card within three days of receiving a request for a replacement.
5. Member States may require that the driver data stored on the smart card are archived by the undertaking or its competent authorities. In such cases they may require that data transmission is noted on the driver card (time, company name)."

5. The following amendments are made to Article 15 :

A third indent is added to paragraph 3 :

"- At the end of the daily working period, the driver shall initiate the release of the driver card via a control button."

A third sub-paragraph is added to paragraph 6 :

" It shall be forbidden to manipulate the equipment in any way such that any recordings made are falsified. No device which is designed to be used to that effect shall be present on the vehicle."

The following sentence is added to paragraph 7 :

" An authorized inspecting officer may check the observance of Regulation (EEC) No 3820/85 by analysis of the record sheet, by the visual display of the recording equipment or by reading data from the driver card provided the authorized inspecting officer has access to a suitable reading device. "

6. A third paragraph is added to Article 16 as follows :

"3. Should a driver card become damaged or defective then the driver should return that card to the issuing authority and report the fact to the competent authorities of the Member State where the fault has occurred. The loss of a driver card should be reported to the issuing authority and the competent authorities of the Member State where the loss occurred. The driver may continue to drive without a driver card for a maximum period of fifteen days, provided the driver can produce sufficient evidence that a report has been made to the competent authorities, or for a longer period if this is necessary for the vehicle to return to its premises."

7. A second and third paragraph are added to Article 17 as follows :

"2. New annexes may be adopted in accordance with the same procedure in order to establish technical requirements for recording equipment in which the record sheet, and its recording facility as defined in Annex I (A) are replaced by technology which delivers comparable accuracy and resolution. That technology may record data in digital form. However, the function of the record sheet with regard to its usefulness in providing a visual record of the drivers hours data and speed shall be replicated in a printout which shall be available on demand. The technical requirements of these new Annexes shall contain procedures for downloading the recorded data. The functioning and specifications of the driver card together with its interface to the recording equipment and the visual display will be that described in Annex I (A) to this regulation.

"3 Any consequential amendment to this Regulation may be adopted in accordance with the same procedure."

8. Article 18 is replaced as follows :

The Commission shall be assisted by a committee of an advisory nature composed of the representatives of the Member States and chaired by the representative of the Commission.

The representative of the Commission shall submit to the committee a draft of the measures to be taken. The committee shall deliver its opinion on the draft, within a time limit which the chairman may lay down according to the urgency of the matter, if necessary by taking a vote.

The opinion shall be recorded in the minutes; in addition, each Member State shall have the right to ask to have its position recorded in the minutes.

The Commission shall take the utmost account of the opinion delivered by the committee. It shall inform the committee of the manner in which its opinion has been taken into account.

9. A new annex, Annex I (A), is added.

Article 2

1. Vehicles that entered into service before 1 January 1990 shall be equipped with recording equipment referred to in Annex 1 or Annex 1 (A). Article 14. 3, 4, 5 and Article 15.3 and Article 16.3 do not apply to these vehicles equipped with recording equipment referred to in Annex I.
2. Vehicles that entered into service from 1 January 1990 and prior to 1 January 1996 shall, before 1 January 2000, be equipped with recording equipment referred to in Annex 1 (A) to this Regulation with the exemption from the following requirements of Annex 1 (A) :

Chapter II (a) 7, 8, 9, (c) 5 and (e) 13, 14

Chapter II (e) 9 with regard to the first sequential record sheet number per day

Chapter II (e) 10 , 11

Chapter III (a) 1.2 4th indent and 1.5 2nd and 3rd indent and (a) 7.4

Chapter IV (b) and (d)

3. Vehicles that entered into service from 1 January 1996 to 1 January 1998 shall, before 1 January 2000, be equipped with recording equipment referred to in Annex I (A) to this Regulation with the exemption from the following requirements of Annex I (A) :

Chapter II (a) 8, 9 and (c) 5

Chapter II (e) 9 with regard to the first sequential record sheet number per day

Chapter II (e) 10, 11

Chapter III (a) 1.2 4th indent and (a) 7.4

Chapter IV (b) and (d)

4. If, in order to meet the requirements of paragraph 2 or 3, additional equipment has to be fitted to existing recording equipment, this additional equipment is subject to the requirements for type approval according to Chapter III of the Regulation. The application for type approval of the additional equipment shall indicate the type or types of recording equipment with which it will be used. For purposes of testing the additional equipment, a suitable type or types of the recording equipment shall be provided.

The competent authorities of each Member State shall indicate on the approval certificate of the additional equipment the type or types of recording equipment on which that additional equipment may be used.

Article 3

As from 1 January 1997 Member States shall no longer grant EEC type approval to any new type of recording equipment which does not comply with the provisions of Annex I (A) of this Regulation.

Article 4

As from 1 January 1998 the recording equipment of any new vehicle brought into service for the first time shall comply with the provisions of Regulation (EEC) No 3821/85, as amended by this Regulation.

Article 5

Directive 88/599/EEC is hereby amended as follows :

- Article 3 of the said Directive shall be amended by adding the words "or driver card" where reference is made to record sheets.

Article 6

This Regulation shall enter into force on 1 January 1996.

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

Done at

For the Council
The President

ANNEX 1 (A)
TO REGULATION (EEC) N° 3821/85

REQUIREMENTS FOR CONSTRUCTION, TESTING, INSTALLATION, AND
INSPECTION

I. DEFINITIONS

In this Annex :

(a) Recording equipment means :

the total equipment intended for installation in road vehicles to show and record automatically or semi-automatically details of the movement of such vehicles and of certain working periods of their drivers. This equipment includes an electronic driver information device, one (two) card reader(s) for the insertion of one (two) driver card(s), a memory, visual instruments, and recording facilities for one (two) record sheet(s).

(b) Record sheet means :

a sheet designed to accept and retain recorded data, to be placed in the recording equipment and on which the marking devices of the latter inscribe a continuous record of the information to be recorded. The record sheet is personal to the driver and shall be identified as such.

(c) Driver card means :

a removable information storage device allocated by the authorities of the Member States to each individual driver for the purposes of identification of the driver and storage of essential data. The format and technical specifications of the driver card shall meet the requirements laid down in Chapter IV of this Annex.

(d) The 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 ($k = \dots \text{ imp/km}$).

(e) Characteristic coefficient of the vehicle 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 kilometre under normal test conditions (see Chapter VII. e). The characteristic coefficient is expressed either in revolutions per kilometre ($w = \dots \text{rev/km}$) or in impulses per kilometre ($w = \dots \text{imp/km}$).

(f) Effective circumference of the wheel tyres means :

the average of the distances travelled by each of the wheels moving the vehicle (driving wheels) in the course of one complete rotation. The measurement of these distances must be made under normal test conditions (see Chapter VII. (e)) and is expressed in the form ' $l = \dots \text{mm}$ '.

(g) Workshop Card means :

A removable data transfer and storage device as with the driver card, for use in the card reader of the recording equipment, allocated by the authorities of the Member States to each work shop. The workshop card identifies the workshop and allows for testing, calibration and programming of the recording equipment.

II. GENERAL CHARACTERISTICS AND FUNCTIONS OF RECORDING EQUIPMENT

The equipment must be able to record, store and display the following:

(a) Recording on the record sheet

1. Distance travelled by the vehicle
2. Speed of the vehicle
3. Periods of driving time
4. Other periods of work or of availability
5. Breaks from work and daily rest periods
6. Each opening of the case containing the record sheet if the case can be opened, or the insertion and/or the removal of the record sheet
7. For electronic recording equipment which is equipment operated 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
8. The last four digits of the driver card issue number and a three-digit sequential number
9. The start of driving without an inserted or a functioning driver card

(b) Storing in the memory

1. The data to be stored on the driver card according to (c)
2. The data to be displayed according to (e)

(c) Storing on the driver card

1. The essential data of the periods listed under II(a) 3, 4 and 5 for a period of at least 28 days.
2. The time of the first insertion and the last removal of the driver card per day with date and the total distance travelled during this day for at least 28 days.
3. Vehicles driven, minimum 4 per day for at least 28 days, with time, date and distance travelled and the last 8 digits of the chassis number.
4. The last 10 events according to (e) 9 to (e) 12 and 10 faults according to (e) 16 and (e) 17 with the last 8 digits of the chassis number.

5. A three-digit sequential number for recording on the record sheet.
6. The data according to Chapter IV (f)4b, (f)5a and (f)5b.
7. If the vehicle has been used before the current driver, by a driver without a driver card, the date time, duration, and the last 8 digits of the chassis number.
8. The data of the individual driver referred to under 1 to 5 is transmitted automatically to the driver card when it is removed from the card reader. The recording on the driver card must be in such a way that it is not possible to tamper with the data.

(d) Recording and storing in case of two drivers

For vehicles used by two drivers the driving time listed under II (a) 3 must be recorded on the record sheet and stored on the driver card of the driver who is driving the vehicle. The equipment must further be capable of recording simultaneously but distinctly details of the information listed under II(a) 4 and 5 on two separate record sheets and storing this on two driver cards.

(e) Displaying on request

1. Driver card issue number (a)
2. Current driving time since the last break or rest period (b)
3. Driving time for the day after the last rest period of at least 8 hours (c)
4. Driving times for the day between two rest periods of at least 8 hours for the preceding 27 days on which the driver has driven, with date, time and duration
5. Total of the driving times for the current week and the preceding week and the total of the driving times of the two completed preceding weeks.
6. Rest periods of at least 8 hours duration for the day and the preceding 27 days in each case with date, time and duration
7. Vehicles driven, minimum 4 per day for at least 28 days with the last 8 digits of the chassis number, distance travelled per vehicle and day, time of first insertion and last removal of the driver card, the time of change of vehicle, and the first sequential record sheet number per day
8. Actual sequential number according Chapter II (a) 8
9. Driving without record sheet with date, time, duration and driver card issue number
10. Time adjustment in the memory with date, time and driver card issue number

11. Interruption of power supply to the recording equipment with date, time, duration and driver card issue number (as defined in II (a) 7)
12. Sensor interruption with date, time, duration and driver card issue number (as defined in II (a) 7) and in III (a) 7.4
13. The last 8 digits of the chassis number
14. Driving without driver card with date, time and duration
15. Driver card issue number of the previous driver with the times of the last insertion and removal of his driver card and the driving time and distance travelled during this period.
16. Automatically identifiable system faults of the recording equipment with, where possible, date, time and driver card issue number
17. Faults in the driver card with date and time and driver card issue number where possible
18. The events 9 to 12 and faults 16 and 17 which are stored on the driver card with the last 8 digits of the chassis number
19. The events 9 to 12 and 14 and the faults 16 and 17 at least for the last 10 events and last 10 faults
20. Workshop card number of the authorized fitter or workshop with date of at least the last installation inspection and/or periodic inspection of the recording equipment according to Chapter VII (c) and (d).

Whenever time is displayed it should be in hours and minutes, and whenever the date is displayed it should be by day and month.

III. CONSTRUCTION AND FUNCTIONAL 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)
- display (on request according to chapter II (e))

1.2. Recording instruments comprising :

- a recorder of the distance travelled
- a speed recorder
- one or more time recorders
- a recorder for the last four digits of the driver card issue number and a three-digit sequential number

1.3. Memory for processing and storing the items listed in Chapter II (c), (d) and (e)

1.4 Card reader for reading and transferring the items listed in Chapter II (c) and (d).

1.5. Marking devices

A marking device recording on the record sheet:

- each opening of the case containing that sheet if the case can be opened; or the insertion and/or removal of the record sheet
- any interruption in power supply to the recording equipment (according to Chapter II (a) 7), at the latest when the power supply is restored;
- any short circuit or interruption of the link between the recording equipment and the distance and speed sensor according to Chapter II (a) 7 and Chapter III.(a) 7.4.

2. Any inclusion in the recording equipment of any device, or devices, approved or otherwise, additional to those listed above, must not interfere with, or be capable of interfering with, the proper accurate operation of the mandatory devices or with the reading of them. The recording equipment must be submitted for approval complete with any such additional devices.

3. Materials

- 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 recording equipment.

4. Measurement of distance travelled

The distance travelled may be measured and recorded either :

- so as to include both forward and reverse movements, 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 measurement of time can be effected mechanically and/or electronically.
- 6.2. If the control of the mechanism for resetting the clock is located inside a case containing the record sheet, each opening of that case must be automatically recorded on the record sheet. If the case cannot be opened, the resetting must only be possible if the record sheet is removed.
- 6.3. 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.

6.4 The clock time in the memory can be reset only when the driver card is inserted. The frequency of resetting is restricted to once per day and to a maximum of 2 minutes per day.

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.

7.3. Protection against electrical interference and magnetic fields must be provided complying with standards for electronics in vehicles.

7.4. The cables connecting the recording equipment to the transmitter must be protected by electronic monitoring, such as signal encryption, capable of detecting as far as possible the presence within that part of the system of any device, not otherwise necessary for the correct operation of the recording equipment, and which is capable of preventing the accurate operation of the recording equipment by any short circuit or interruption or by modification of the electronic data from the speed and distance sensor, or by the duplication of otherwise approved devices, when that device is connected and put into operation.

The aforementioned electronic monitoring can 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. In this case, the requirements in Chapter II (a) 7 to control the power supply of the distance and speed sensor, the signal from the distance and speed sensor and any interruption of the signal lead to the distance and speed sensor are not applicable.

7.5. The total system, including the connections to the speed and distance sensor must be protected against manipulation. Any joint in any cable connecting any part of the recording equipment to any other part of the recording equipment must be so constructed so as to prevent the unauthorised access to cable ends and terminals once the joint or connection is sealed.

7.6. The recording equipment must as far as possible self detect faults.

(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 showing at least 999 999.9 kilometres.

2. Speed indicator (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 recording equipment and give a clear, plain and unambiguous reading.

4. Visual instrument for selectively displaying on request

- 4.1 The display must permit, as options, to show the information according to Chapter II(e) by actuation of a switch device. The request can take place selectively or sequentially.
- 4.2 The display must be clearly legible, the figure height at least 5 mm and the value referring to the driver must be marked and separable for driver 1 and driver 2.

(c) Warning signals

1. A warning to the driver for at least 30 seconds if the vehicle is driven without the driver card in place.
2. A warning of 30 seconds to the driver before exceeding 4 1/2 hours driving time per period of driving time and 9 hours daily driving time.
3. A warning to the driver if he has failed to observe 8 hours daily rest period within the last 24 hours
4. An external warning signal, visible to other road users, shall be made whenever the driver has driven in excess of any legal period of driving time or if the vehicle is used without a driver card in place. In cases of necessity, this signal can be interrupted by breaking a sealed switch.

(d) Recording instruments

1. General points

- 1.1. All recording 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 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 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 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 if the case can be opened 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 movement 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 sheets in disc form) or to the axis (in the case of 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.

For equipment designed for a maximum speed exceeding 100 Kilometers per hour, the variation of 1.5 mm can be reduced to at least 1 mm.

4. Recording time

4.1. Recording equipment must be so constructed that the period of driving time is always recorded automatically when the vehicle is in motion 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 Article 15 (3), second indent (b), (c) and (d) of the 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 15 of the 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. If in a recording equipment the time periods of two drivers have to be recorded on 2 separate record sheets according to Chapter II (d), the forward movement of the separate sheets must be effected either by a single mechanism or by separate synchronized mechanisms.

(e) Memory

1. The storing of the periods of time according Chapter II (a) 3, 4 and 5 has to be effected in intervals of 3 minutes.
2. The period of driving time has always to be stored automatically when the vehicle is in motion.
3. The other periods of time as indicated in Article 15.3, second indent (b), (c) and (d) of the Regulation have always to be stored distinctly through the operation where necessary of a switch device.

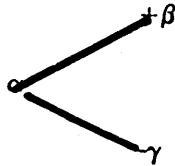
(f) Closing device

The case containing the record sheet or sheets and the control of the mechanism for resetting the clock must be provided with a closing device if the case can be opened.

(g) Markings

1. The following markings must appear on the instrument face of the recording equipment :
 - near 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.
2. The descriptive plaque must be built into the recording equipment and must show the following markings, which must be visible on the recording equipment when installed :
 - name and address of the manufacturer of the equipment,
 - manufacturer's number and year of manufacture of the equipment,
 - approval mark for the recording equipment type,
 - the constant of the recording equipment in the form 'k = ... rev/km' or 'k = ... imp/km',

- optionally, the range of speed measurements, 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 .

(h) Maximum tolerances (visual and recording instruments)

1. On the test bench before installation :

(a) distance travelled :

1 % more or less than the real distance, the distance being at least one kilometre;

(b) speed :

3 km/h more or less than the real speed;

(c) time :

\pm two minutes per day with a maximum 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 and periodic inspection:

(a) distance travelled :

2% more or less than the real distance, that distance being at least one kilometre;

(b) speed :

4 km/h more or less than the real speed;

(c) time :

\pm two minutes per day, or
 \pm ten minutes per seven days.

3. In use
 - (a) distance travelled :
4% more or less than the real distance, the distance being at least one kilometre;
 - (b) speed :
6 km/h more or less than the real speed;
 - (c) time :
± two minutes per day, or
± ten minutes per seven days.
4. The maximum tolerances set out in points 1, 2 and 3 are valid for temperatures between 0° and +40°C, the 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 Chapter VII.

IV. DRIVER CARD

(a) Insertion/removal

The recording equipment must be so constructed that the driver card is locked in position on its proper insertion into the card reader and that the driver card issue number is automatically stored in the memory. The release of the driver card by means of an appropriate mechanism may only function when the vehicle is stationary and after the relevant data has been stored on the driver card.

(b) Record sheet numbering

The driver card should produce a three-digit sequential number for its recording on the record sheet and for its display on request.

The proper insertion of the driver card into the card reader will automatically generate a signal which will cause the recording of the last 4 digits of the driver card issue number and a three-digit sequential number on the record sheet as soon as the record sheet is inserted and operational.

(c) Data match on driver card and record sheet

It shall be ensured that the data recorded on the record sheet matches with that transferred on to the driver card in such a way as to provide also in case of downloading the data onto a data archive a discrete linkage between the 2 sets of data.

(d) Driving without driver card

The start of driving times without the driver card, i.e. where the driver card has not been inserted, or without a functioning driver card must be especially marked or indicated on the record sheet.

(e) Memory capacity of the driver card

The driver card will hold sufficient capacity to store for at least 28 days the data according to Chapter II (c) for the actual driver. In the event that the data card is full, new data will replace the old in such a way that the card will always hold the last 28 days data.

(f) Visible data

The driver card must bear the following visible data:

1. driver's surname
2. other names
3. date and place of birth
4. a. date of issue of the card
b. expiry date of the card
c. issuing authority
5. a. driving licence number including number of replacement issue
b. driver card issue number including index number of replacement issue
6. driver's photograph
7. driver's signature

The data according to 4b, 5a and 5b are also stored in the driver card memory.

(g) Downloading of data

The data from the driver card shall be available for downloading onto a data archive at the operators' premises or at an approved organisation without a loss of the information on the driver card.

(h) Standards

The driver card and recording equipment must conform to the following standards :

- ISO 7810
- ISO 7816-1
- ISO 7816-2
- ISO 7816-3 (Protocol T = 1)
- draft ISO 7816-4
- draft ISO 10373
- CEN. For detailed specification of CEN standards see Appendix 1 and 2.

V. 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 sheets, without damaging them and without affecting the legibility of the recordings, the information referred to in Article 15(5) of the Regulation.

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

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

If several record sheets are linked together to increase the continuous recording capacity which can be achieved without intervention by an operator, the links between the various sheets must be made in such a way that there are no breaks in or overlapping of recordings at the point of transfer from one sheet 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 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 sheet,
- approval mark for the type or types of equipment in which the sheet may be used,
- upper limit of the speed measurement range, printed in kilometres per hour.

By way of minimal additional requirements, each 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 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 sheet begins and date and place where such use ends,
- the registration or chassis number or numbers of the vehicle or vehicles to which the driver is assigned during the use of the sheet,
- odometer readings from the vehicle or vehicles to which the driver is assigned during the use of the sheet,
- the time at which any change of vehicle takes place.

VI. INSTALLATION OF RECORDING EQUIPMENT

(a) Installation

1. Recording equipment must be positioned in the vehicle in such a way that the driver has a clear view from his seat of 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 axle ratios must be fitted with a switch device whereby these various ratios will automatically be brought into line with the ratio for which the equipment has been adapted to the vehicle.

(b) Installation plaque

After the equipment has been checked on installation, an installation plaque which is clearly visible shall be affixed on or in or beside the equipment. After every inspection by an approved fitter or workshop requiring a change in the calibration of the installation, a new plaque must be affixed in place of the previous one.

The plaque must show at least the following details :

- name, address or trade name of the approved fitter or workshop,
- characteristic coefficient of the vehicle, in the form 'w = ... rev/km' or 'w = ... Imp/km',
- effective circumference of the wheel tyres in the form 'l = ... mm',
- the date on which the characteristic coefficient of the vehicle was determined and the effective circumference of the wheel tyres measured,
- the last 8 digits of the chassis number of the vehicle.

(c) Sealing

1. 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 proper and the point of its insertion into the circuit,
 - (d) the switching mechanism for vehicles with two or more axle ratios,
 - (e) the links joining the adaptor and the switching mechanism to the rest of the equipment,
 - (f) the casings required under Chapter III (a) 7.2.
 - (g) any cover giving access to the means of adapting the constant of the recording equipment to the characteristic coefficient of the vehicle.
2. In particular cases, further seals may be required on approval of the equipment type and a note of the positioning of these seals must be made on the approval certificate.
3. The seals mentioned in chapter VI (c) 1 (b), (c) and (e) are authorised to be removed :
- in case of emergency
 - to install, to adjust or to 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 (according Chapter VII) immediately after fitting the speed limitation device or any other device contributing to road safety or within 7 days in other cases.

For each occasion that these seals are broken a written statement giving the reasons for such action must be prepared and made available to the competent authority.

VII. CHECKS AND INSPECTIONS

(a) Approval of test stations (fitters and workshops)

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

(b) 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 Chapter III (h) 1, by means of sealing in accordance with Chapter VI (c) 1 (f).

(c) Installation inspection and programming

1. When being fitted to a vehicle, the recording equipment and the whole installation must comply with the provisions relating to maximum tolerances laid down in Chapter III (h) 2.
2. The following programming of the recording equipment has to be carried out:
 - the date of installation test
 - the time in the member state where the vehicle is registered
 - the daylight saving time adjustments decided by the EC-Commission
 - the last 8 digits of the chassis number
 - the number of the workshop card of the approved fitter or workshop

(d) Periodic inspections

1. Periodic inspections of the equipment fitted to vehicles shall take place after any repair of the equipment or after any alteration of the characteristic coefficient of the vehicle or of the efficient circumference of the wheel tyres or at least once within two years since the last inspection and may be carried out in conjunction with roadworthiness tests of vehicles.

These inspections shall include the following checks :

- that the recording equipment is working correctly, including the data transfer to the workshop card,
- that compliance with the provision of Chapter III (h) 2 on the maximum tolerances on installation is ensured,
- that the recording 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.

2. The following programming of the recording equipment has to be carried out:

- the date of the periodic inspection
- the time in the member state where the vehicle is registered
- the daylight saving time adjustments decided by the EC-Commission
- the last 8 digits of the chassis number
- the number of the workshops card of the approved workshop

3. Such inspections must include replacement of the installation plaque.

(e) 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 national law,
- vehicle movement : the vehicle shall advance under its own engine power in a straight line on level ground and at a speed of 50 ± 5 km/h. The measuring distance shall be at least 1,000 m.
- Provided that it is of comparable accuracy, the test may also be carried out on an appropriate test bench.

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BUSINESS IMPACT ASSESSMENT FORM

Title of proposal : Proposal for a Council Regulation amending Council Regulation (EEC) 3821/85 and Council Directive 88/599/EEC on Recording Equipment in Road Transport Doc No. VII/122/92

THE PROPOSAL

1. The purpose of the proposed amendment to Council Regulation 3821/85 is to provide for the mandatory fitment of an additional element to the current tachograph system for the use by professional drivers with the aim of improving control of and compliance with Community social legislation relating to road transport governed by Council Regulation (EEC) 3820/85. It is recognised that this legislation is widely abused.

The Union's social legislation sets limits on driving periods and requirements for rest times. These requirements are currently difficult to control given the strong economic pressure on drivers and operators to exceed the statutory driving hours particularly in today's depressed haulage market.

To counter this problem it is proposed to extend the current system by an additional unit which will provide for the digital storage of the essential data for controlling driver's social hours onto a driver's smart card.

This proposed system provides a quick and reliable method of checking compliance during roadside enforcement checks by the authorities, and by the driver so as to prevent inadvertent infringement of driving hours. The system would also enable authorities to comprehensively interrogate driver's hours data at an operator's premises and hence enhance the enforcement of the social regulations.

This will enable more effective enforcement and hence promote equitable competition, improve the driver's social conditions and enhance road safety.

The scope of the proposal covers vehicles first registered after 1 January 1990 which are included within the scope of the social hours Regulation (EEC) N° 3820/85. That regulation provides exemptions, for instance, for goods vehicles of less than 3.5 tonnes maximum weight and passenger vehicles suitable for carrying not more than nine persons, public service vehicles (defined as passenger carrying vehicles on regular services where the route is less than 50 km), military and emergency service vehicles, milk containers etc. However, vehicles which are only used for local purposes by perhaps small business e.g. small construction companies, are not specifically exempted.

THE IMPACT ON BUSINESS

2. Who will be affected by the proposal ?

The road freight and inter urban passenger transport sector in all Member States will be affected. There is no disguising the fact that operators will be concerned at the cost of additional equipment, in particular SME type operators where the potential use of the stored information for management purposes is not perceived as having added value.

It is estimated that the proposal will add 80 % to the cost of the existing tachograph, or about 200 ECU. The cost of each driver's card which contains the driver's personal data and receives digitised data on his driving hours, would be around 25 Ecus, which includes the administrative cost of the authorities issuing the cards to specific drivers. The cost to the authorities of the blank smart cards will be of the order of 10 ECUS each. About 6 Million trucks and coaches would fall under the scope of this proposal. This is a price that has to be paid to enable authorities to achieve effective enforcement of the Community's social legislation and thereby ensure equity of competition. Those operators who share in this concern, and the trade union movement, are fully supportive.

A lead time of three years between the date of the formal adoption of the proposal and the start of compulsory fitment on new vehicles would be necessary to enable truck and coach manufacturers to undertake the necessary preparatory work. This should provide sufficient time for Member States administrations to arrange the issue and control of the driver's smart card.

For the driver card system to be effective within a limited time, retrofitment to relevant vehicles should be completed as quickly as possible. A rapid retro-fit programme would also reduce the risk of an adverse effect on the truck manufacturing industry, since the increased effectiveness of enforcement could discourage the purchase of new vehicles in which the new equipment was compulsorily fitted.

The manufacturers of vehicle data units and tachograph systems are in favour of the proposal which should stimulate the market and provide other business opportunities. This proposal is utilising accepted or planned CEN standards which will be accessible throughout the industry.

This will potentially benefit SMES who can supply on board digital equipment to meet the required specification. At the moment a virtual monopoly exists in the supply of tachographs. The proposal will therefore open up the market.

3. What will business have to do to comply with the proposal ?

All vehicles, subject to social Regulation 3820/85 and equipped with a tachograph provided for by Regulation 3821/85 and registered after January 1990 will have to adapt their current tachograph system to include the additional equipment specified in the annex to this proposal. Also, all drivers licenced to drive these vehicles will need to be issued with a driver card. The retrofitting programme should be completed by January 2000. Manufacturers of new vehicles will need to fit the proposed system to their vehicles by January 1997 for new types of vehicle and January 1998 for all vehicles.

The manufacturers of recording equipment will need to gain type approval by a Member State before that equipment can be sold onto the market.

4. What economic effects is the proposal likely to have

- on employment ?

The road haulage trade unions are very concerned that enforcement by Member States authorities is not sufficient to give their drivers the necessary social protection, and they are driving far in excess of the statutory hours as a condition of maintaining employment. Not only does this have a detrimental effect on the driver but also presents an acute road safety risk. The trade unions see effective enforcement and the technology to better enable that enforcement as a positive incentive to employment and are therefore fully in support of this proposal.

There will also be extra employment in the on-board data processor manufacturing industry, in particular as an essential requirement of this proposal is retrofitting equipments to the existing fleet.

However, reducing the potential for operators to run in excess of the statutory driver's hours could adversely affect those business whoes position in the market is dependent on enforcement violation. Their loss should be the gain for those operators who do not break the law.

- on investment and the creation of business ?

As mentioned above, the trade unions see the enhanced tachograph as a method of improving enforcement and hence, providing necessary social protetion. The consequence of improved enforcement should be an expansion of the number of drivers engaged in the business. The smart card and microprocessor industry will need to supply the necessary equipment to meet the requirements and this will serve to expand a business which enjoys a very limited market at present. The effect on smart card production and design for transport use will be enhanced by the application of a tangible requirement. This can only assist the application of smart card technology in automatic payment and control systems such as road pricing.

- on the competitive position of business ?

At present, those operators who work or would wish to work within the law are being penalised by operators who don't. The risk to the latter of being apprehended obviously is not currently a sufficient deterrent.

By increasing the risk of prosecution the competitive position of honest operators will be enhanced. This proposal opens the market to any company that can meet the appropriate CEN standards.

5. Does the proposal contain measures to take account of the specific situation of small and medium-sized firms ?

There are no specific measures for small and medium sized firms other than to open the market for the supply of on board data recording systems. However, in reaching the final proposal the drafting has been tailored to be at least aware of these enterprises. For instance, a requirement that the driver must download the data from his driver card onto a PC at the operator or operator's agent base has been adapted to leave such a requirement to Member States. Nevertheless, for those companies who do not wish to make use of the data provided by this system (and this is likely to be the smaller undertakings) for their own management control and provide the necessary computing equipment, then the additional equipment required from this proposal could be unwelcome.

Apart from the extra cost of the equipment, the proposal does not require any additional procedures on the part of the operator. For the driver, save for the daily use of his driver's card, there is no additional burden. Indeed, the driver's ability to know his current driver's hours status is considerably enhanced.

CONCLUSION

6. In drafting this proposal the Commission has consulted Member States, all sides of industry and trade unions. An expert group including industry and representatives from four Member States, held meetings over two years and established the general philosophy of the approach. Expertise from industry, "smart card" designers and transport consultants agreed the technical feasibility of the system.

This consultation procedure was completed with a meeting of the Joint Committee for Road Transport, at which the employers side took a reserved position on this Regulation as regards the cost implications, and its transitional nature.

Without doubt, the most significant market distortion through illegal operation is driving in excess of the social hours and non authorised driving. The enforcement of both these malpractices will be enhanced by the adoption of this Regulation.

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