HOW TO CHECK DRIVERS USING A DIGITAL TACHOGRAPH?
LUXEMBOURG:
TRANSIT COUNTRY
in the EU centre
... ... even after the enlargement and considering the AETR countries
Content of a complete AETR road side check:

- **Recording equipment / Control device** (Visual or technical check: Approval, Installation plaque/calibration, seals, manipulations...)
- **Status of the WS card (lost, stolen...)**
- **Identification of the driver** (against the used Driver card and/or the printouts)
- **Status of the DC (lost, stolen...)**
- **Driving and rest periods / Activities**

Data from the Vehicle unit (VU) (Daily activities, Events, Speed (Speed limiter), Technical data)
  - By download
  - By printout

Data from the Driver card (DC) (Daily activities... / Events)
  - By download through the VU
  - By download from a card reader
  - By printout through the VU
Recording Equipment / Control device
CONCEPT OF THE DIGITAL TACHOGRAPH

WORKSHOP
- Logiciel
- Carte d'Atelier
- Systèmes de Service

VEHICLE / DRIVER
- Carte Conducteur
- Interface des Données
- Logiciel des Autorités de Contrôle

CONTROL
- Logiciel des Autorités de Contrôle
- Carte de Contrôle
- Contrôle sur route
- Contrôle dans l'Entreprise

COMPANY
- Logiciel pour la gestion et la maintenance de la flotte de véhicules
- Carte d'Entreprise

Website: www.eu-digitaltachograph.org
E-mail: secretariat@eu-digitaltachograph.org
INSTALLATION & CALIBRATION

WORKSHOP

Logiciel

Carte d'Atelier

Systèmes de Service

1b. Tacho

Not sealed

Secured

Sealed

Gearbox
In case of suspicion (e.g., when sensor faults, internal faults, motion data error, security breach attempt, multiple power supply interruptions, ... have been registered as faults or events by the VU) at least the Sensor seal might be checked—which actually is not easy to find...
Example of a motion sensor seal
SETRA S319UL
The Workshop card

- Very powerful – High risk for manipulations
- In case of suspicion: Checking the status of the card (lost / stolen) – (Need for an access to TACHOnet)
### UNECE Symbols used in the approval marks of Contracting Parties to (05/11/04)

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**Total:** 41 Parties (4 - Ireland, Cyprus and Malta - by virtue of EC accession)
TYPE APPROVED VU’s UNTIL NOW

[Image of digital tachographs]
SOME VISIBLE SECURITY ELEMENTS
SOME VISIBLE SECURITY ELEMENTS
USE OF THE DIGITAL TACHOGRAPH

- Display, 16-digits
- Interface for downloading Service-Interface
- Printer
- Button to release the printer drawer
- Navigation button
- Buttons for Smartcard ejection
- Buttons for driver 1 & 2 activities
- Central sealing
- Slot 1 & 2 for Smartcards

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E-mail: secretariat@eu-digitaltachograph.org
USE OF THE DIGITAL TACHOGRAPH

- Escape Button
- Display, 16-digits
- Enter Button
- Case for printpaper
- Smartcard drawer 1
- Up
- Down
- Button for driver 1 & 2 activities & Smartcard ejection
- Printer
- Smartcard drawer 2
Driver Card
Identification / Status
CARD SECURITY FUTURES

The card as well as the chip are highly secured.
IDENTIFICATION OF THE DRIVER

- Surname
- First name
- Birth date
- Date start of valid.
- Adm. expiry date.
- Issuing authority
- Driving License N°

Card Number:

Important:
Replacement index 
(lost / stolen!?)°
TACHOnet

Card Issuing Authority

Administrative tasks
- Check tachograph card status
- First issue of a card
- Lost/Stolen card declaration
- Malfunctioning card declaration
- Suspended card declaration

System tasks
- Logging/Monitoring Management
- Statistics Management

Check tachograph card status
- Lost/Stolen card hand in
- Renewal of a card
- Exchange of a card
- Replacement of a card
- Bulk check of issued driver card holders

Users & access rights Management

within 7 days!!

Enforcement Authority
- Check tachograph card status
- Check driver's issued card
- Lost/Stolen card declaration
- Malfunctioning card declaration

Website: www.eu-digitaltachograph.org
E-mail: secretariat@eu-digitaltachograph.org

Monitoring of the Implementation of Digital Tachograph
CHECKING CARD STATUS BY NUMBER

Verification du statut

Numéro de carte
Pays
Date d'expiration

[Options: Austria, Belgium, ...]

Date: [Example date]

Back | Rechercher | Annuler

Website: www.eu-digitaltachograph.org
E-mail: secretariat@eu-digitaltachograph.org
Monitoring of the Implementation of Digital Tachograph
### Carte

| Statut du certificat | VALID |

#### Statut

<table>
<thead>
<tr>
<th>Statut</th>
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#### Dossier

<table>
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<th>Nom Carte</th>
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#### Date de la carte

| Date début validité | 11/09/2005 |
| Date fin de validité | 11/09/2010 |

#### Fabrication

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#### Livraison

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#### Cartes (1)

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<th>Recep</th>
<th>Delivree</th>
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<th>Site</th>
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<td>Oui</td>
<td>Oui</td>
<td>10/10/2005</td>
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<td>Enlèvement</td>
<td>KB Kalchesbruck</td>
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MODIFICATION OF THE STATUS
CHECKING DRIVER’S ISSUED CARD
Driving & Rest periods / Activities
DURING ROADSIDE CHECKS

DRIVERS HAVE TO PRODUCE:
Where the driver drives a vehicle fitted with recording equipment in conformity with Annex I, he must be able to produce, whenever an inspecting officer so requests:

- the record sheets for the current week and, in any event, the sheet for the last day on which he drove during the previous week,
- the driver card if he holds one, and
- print-outs from the recording equipment defined in Annex IB relating to the periods of time indicated in paragraph 3, second indent, (a), (b), (c) and (d) if he drove a vehicle fitted with such recording equipment during the period referred to in the first indent of this paragraph.

Where the driver drives a vehicle fitted with recording equipment in conformity with Annex IB, he must be able to produce, whenever an inspecting officer so requests:

- the driver card of which he is the holder,
- the record sheets corresponding to the same period as the one referred to in the first indent of the previous subparagraph during which he drove a vehicle fitted with recording equipment in conformity with Annex I.
Speed limiter

The ways to get access to the data

- To download VU’s and driver card’s data to any laptop. A control card is needed.
- To print the data from both the VU and the driver card. No need to have a control card but without a control card, there are restrictions to the access of the VU’s data.
- To display the data on the VU’s screen (quite difficult)

<table>
<thead>
<tr>
<th></th>
<th>No Card</th>
<th>Driver Card</th>
<th>Control Card</th>
<th>Company Card</th>
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<tr>
<td><strong>Print Display</strong></td>
<td>All data with personal identifiers blinded</td>
<td>All own data + Idem No Card</td>
<td>All data</td>
<td>All data except for periods locked by other companies + Idem No Card</td>
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<tr>
<td><strong>Download</strong></td>
<td>Forbidden</td>
<td>Forbidden</td>
<td>All data</td>
<td>All data except for periods locked by other companies</td>
</tr>
</tbody>
</table>

Website: www.eu-digitaltachograph.org
E-mail: secretariah@eu-digitaltachograph.org
Monitoring of the Implementation of Digital Tachograph
Importance of Downloading both VU & Cards

Downloading the data from the VU and the DC is the most efficient way for enforcement officers.

Driver card trace: Card removal 14:45

VU Trace for same period:

VU Trace shows driving of vehicle without a card from 14:45 to 15:50 and 17:25 onwards

Who drove?
VU Data Downloading Physical Elements

IDE
Cable
Connector
Company card
Control card or Workshop card

VU
Connection of IDE to a CAN connector,
Remote download from company premises (GSM based for example)

⇒ Company card in IDE
⇒ Allow VU to be “Multi-User”: one user using standard MMI and one user (company only) connected through back connector
⇒ Security principles can remain the same
VU & DC Data Downloading

Downloadkey

LEDs für Speicherkapazität
Status

Download Interface

6-pin Stecker

USB interface

Website: www.eu-digitaltachograph.org
E-mail: secretariat@eu-digitaltachograph.org
Language configuration
- Language: English
- File name format: Rest of Europe

Data blocks
- Complete Mass Memory
- Selection
  - Overview data
  - Detailed Speed
  - Events and Faults
  - Technical Data
  - Activities
  - Card Download
  - Siemens VDO Download

Period
- Since last download
- From
- Last: 22 days

Apply
VU Data Downloading correspondence
VU Data storage - Download Messages

**Equipment Identification**
- VU:
  - Manufacturer Name, Address, Part number, Serial number,
  - Manufacturer, model number, Vehicle Identification
  - Manufacturer, model number, Vehicle Identification

**Drivers Identification**
- Per insertion/withdrawal cycle:
  - Driver name, first name,
  - Card number, nation, expiry date, insertion date & time, slot, odometer,
  - Previously used vehicle:
    - VRN & Nation
    - Withdrawal date & time,
    - Withdrawal date & time, odometer.

**Events**
- Per event:
  - Dr. and Co-Dr. Card numbers at start and end,
  - Date & time start and end,
  - Nr of similar events this day.

**Time adjustments**
- Per event:
  - Workshop card number,
  - Date & time old and new settings.

**Activity data**
- Per activity:
  - Card inserted (Yes/No), Slot (Driver/Co-Driver), Crew (Yes/No), Activity code Dr/Wk/Aw/Rc, Date & time start or duration.

**Location**
- Driver card number, date & time, Country, region, Odometer

**Midnight Odometer**
- Date, Odometer

**Overspeed**
- Date of last speed control,
- Date of first event and Nr of events since,
- Per longest event on a day:
  - Card numbers,
  - Date & time start and end,
  - Maximum and average speeds,
  - Nr of similar events this day.

**Faults**
- Per fault:
  - Dr. and Co-Dr. card numbers at start and end,
  - Date & time start, end.

**Download control**
- Last download date and time,
- Company identification:
  - Name, Card number, Download software version.

**Repair**
- Company data locks:
  - Date & time, In Out
  - Company Card number, Name, Address

**Speed (24 hours)**
- per second

**Control activity**
- Date & time, Control card number, Type

**Company data locks**
- Date & time, In Out
- Company Card number, Name, Address

**Security elements**
EQUIPMENT & SOFTWARE

Die Datenübernahme erfolgt u.a. vom Schaublattleser,
vom handelsüblichen Scanner,
von auf CD archivierte Daten,
für Stichproben durch Auslesen des, per Funk oder Downloadkabel verbundenen, digitalen Kontrollgerätes,
mittels Kartenlesegerät,
durch Datenübernahme mittels Downloadkey,
oder vom PDA = Personal Digital Assistant als einfache, kleine Lösung für den operativen Einsatz in der Fahrzeugkontrolle
oder direkt vom Tagesausdruck des digitalen Kontrollgerätes

Verarbeitung:
- Datenübernahme
- Kontrolle Lenk- und Ruhezeiten
- Kontrolle Geschwindigkeit
- Verstoßbearbeitungsliste
- Bußgeldberechnungsvorschlag
- Datenexport zur Weiterverarbeitung, z.B. E-Mail

Zentrale Weiterverarbeitung z.B. in der Bußgeldstelle
EQUIPMENT & SOFTWARE
Für das gewählte Tag / Schaublatt haben Sie alle notwendigen Informationen auf einen Blick inhaltlich und strukturell in unterschiedliche Register unterteilt.

Unabhängig vom Medium der Datenbereitstellung werden die Daten in gleicher Weise verwaltet und gespeichert.

Für die Informationsdarstellung haben Sie verschiedene Möglichkeiten in Registern strukturiert zur Auswahl.

In den verschiedenen Registern stehen Ihnen komfortable Bearbeitungsfunktionen zur Verfügung.

Die Ereignisanzeige erfolgt in Form:
- einer Tabelle
- als Zeitsstrahlgrafik
- als Schaublattgrafik
- als Geschwindigkeitsprofil.

Zusätzlich haben Sie die Möglichkeiten, ergänzend zu den Arbeitszeitverstößen, auch formelle Verstöße zum Kontrollvorgang bzw. zum Schaublatt auszuwählen.


Zur Einschätzung des Fahrverhaltens bietet Ihnen ZAMIK eine Lenkzeitgrafik mit den durchschnittlichen Fahrgeschwindigkeiten.
Mit dieser Funktion erfolgt die Überprüfung der gespeicherten Daten mit den Sozialvorschriften für den Straßenverkehr und die Feststellung der Abweichungen von gesetzlichen Normen als Verstoß.

Individuelle Toleranzen werden entsprechend Ihrer Vorgaben berücksichtigt.

Bei notwendiger Verfolgung dieser Verstöße werden diese in ein Aktenzeichen überführt und für die Bußgeldberechnung im ZAK bzw. für den Export an ein weiterverarbeitendes Programm zur Verfügung gestellt.

In drei einfachen Schritten kommen Sie zu einer Verstoß-Auswertung:

2. Starten Sie die Prüfung
3. Drucken Sie die Verstoßliste
4. optional: Überführung in ein Aktenzeichen

Bei Bedarf können die Ereignisse bzw. die Verstöße sofort nach der Prüfung exportiert werden, als Formate stehen u.a. CSV, XLS, DBF, TXT zur Verfügung.
EQUIPMENT & SOFTWARE
Dieses Programm bietet die detaillierte Überprüfung von Fahrtabläufen im Vergleich zwischen den gespeicherten Daten und einer mittels Routenplaner erstellten Vergleichsroute.

Auch für die Überprüfung der Fahrt bei Verdachtsmomenten, im Hinblick auf mögliche Manipulationen am EG-Kontrollgerät bzw. an den Schaubildern, ist der Einsatz der Routenkontrolle sinnvoll.

Anhand der gespeicherten Informationen werden die Abfahrts-, Halte- und Ankunftspunkte unter Nutzung von MAP Point hinterlegt.

Nach Ermittlung der Routendaten erfolgt die Gegenüberstellung der Fahrzeiten und Kilometer.

Die Wegstrecke des Schaubildes wird durch das MAP-Programm im Detail ausgewertet und angezeigt. Die Routenstrecke kann transparent ausgedruckt werden.

**Wichtig**
Im Lieferumfang von ZAMIK ist das Interface zu M3 - MAPPOINT enthalten. Die Lizenz für M3 - MP ist nicht Bestandteil des Lieferumfangs. Beachten Sie auch die erweiterten Systemvoraussetzungen durch M3 - MP bedingt.

(17" Monitor, CD-LW und erhöhter Speicherbedarf auf der Festplatte)
EQUIPMENT 
& SOFTWARE
**Equipment & Software**

---

**Monitoring of the Implementation of Digital Tachograph**

**NIDT**

---

English text about monitoring and implementation of digital tachographs.

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**Website**: [www.eu-digitaltachograph.org](http://www.eu-digitaltachograph.org)

**E-mail**: secretariah@eu-digitaltachograph.org

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**Anzeige Muster I**

**Musterstadt, 15.07.2006**

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<th>Handelsregister</th>
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**Verkehrskorridore**

**Richtlinien**

**Anlage**

---

**Verletzte Vorschriften**

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**Arbeitsplätze**

**Gesetzliche Vorschriften**

---

**Arbeitsplatzverordnung**

**Einsatz des Verfahrens - siehe Bedienungsanleitung**

---

**Anzeigepersonen**

**KBA-Anlage verursacht an**

---

**Datum**: 06.06.7894

**Geburtsdatum**: 06.06.7894

---

**Amtes**: ...
### Contrôle en entreprise

**Contrôleur:** M. Guy  
**Lieu:** Bureau

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<td>E 30 GL 14/02/2006</td>
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**Date du contrôle:** 14/02/2006 16:30  
**Début de la période contrôlée:** 10/02/2006

**Entreprise**

**Résumé**

- Nombre de conducteurs: 0  
- Nombre de véhicules: 2  
- Nombre de journées:  
- Nombre d'infractions: 0
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<td>08/10/2004 14:35</td>
<td>08/10/2004 14:35</td>
<td>Anomalie</td>
<td>(00) - Absence d'informations complémentaires</td>
</tr>
</tbody>
</table>
THE PRINTOUTS
<table>
<thead>
<tr>
<th>People</th>
<th>Equipment</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Driver slot</td>
<td>Available</td>
</tr>
<tr>
<td>Controller</td>
<td>Co-driver slot</td>
<td>Driving</td>
</tr>
<tr>
<td>Driver</td>
<td>Card</td>
<td>Rest</td>
</tr>
<tr>
<td>Workshop/test station</td>
<td>Display</td>
<td>Work</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>External storage</td>
<td>Break</td>
</tr>
<tr>
<td></td>
<td>Power supply</td>
<td>Unknown</td>
</tr>
<tr>
<td></td>
<td>Printer/printout</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sensor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tyre size</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vehicle/vehicle unit</td>
<td></td>
</tr>
</tbody>
</table>

**BASIC PICTOGRAMS:** 38  
**PICTOGRAM COMBINATIONS:** 46
# Basic Pictograms

<table>
<thead>
<tr>
<th>People</th>
<th>Actions</th>
<th>Modes of operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Control</td>
<td>Company mode</td>
</tr>
<tr>
<td>Controller</td>
<td>Driver</td>
<td>Control mode</td>
</tr>
<tr>
<td>Driver</td>
<td>Inspection/calibration</td>
<td>Operational mode</td>
</tr>
<tr>
<td>Workshop/test station</td>
<td></td>
<td>Calibration mode</td>
</tr>
<tr>
<td>Manufacturer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available</td>
<td>Current availability period</td>
</tr>
<tr>
<td>Driving</td>
<td>Continuous driving time</td>
</tr>
<tr>
<td>Rest</td>
<td>Current rest period</td>
</tr>
<tr>
<td>Work</td>
<td>Current work period</td>
</tr>
<tr>
<td>Break</td>
<td>Cumulative break time</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver slot</td>
<td>Displaying</td>
</tr>
<tr>
<td>Co-driver slot</td>
<td>Downloading</td>
</tr>
<tr>
<td>Card</td>
<td></td>
</tr>
<tr>
<td>Clock</td>
<td>Printing</td>
</tr>
<tr>
<td>Display</td>
<td></td>
</tr>
<tr>
<td>External storage</td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td></td>
</tr>
<tr>
<td>Printer/printout</td>
<td></td>
</tr>
<tr>
<td>Sensor</td>
<td></td>
</tr>
<tr>
<td>Tyre size</td>
<td></td>
</tr>
<tr>
<td>Vehicle/vehicle unit</td>
<td></td>
</tr>
</tbody>
</table>

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## Basic Pictograms

### Specific Conditions

- OUT
  - Out of scope
  - Ferry/train crossing

### Miscellaneous

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>Events</td>
</tr>
<tr>
<td>⊲</td>
<td>Start of daily work period</td>
</tr>
<tr>
<td>♦</td>
<td>Location</td>
</tr>
<tr>
<td>☠</td>
<td>Security</td>
</tr>
<tr>
<td>☑</td>
<td>Time</td>
</tr>
<tr>
<td>✗</td>
<td>Faults</td>
</tr>
<tr>
<td>⬠</td>
<td>End of daily work period</td>
</tr>
<tr>
<td>⌚</td>
<td>Manual entry of driver activities</td>
</tr>
<tr>
<td>🍤</td>
<td>Speed</td>
</tr>
<tr>
<td>❌</td>
<td>Total/summary</td>
</tr>
</tbody>
</table>

### Qualifiers

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>24h</td>
<td>Daily</td>
</tr>
<tr>
<td></td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>Two weeks</td>
</tr>
<tr>
<td></td>
<td>From or to</td>
</tr>
</tbody>
</table>
## PICTOGRAM COMBINATIONS

### Miscellaneous

<table>
<thead>
<tr>
<th>pictogram</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✶ ✶</td>
<td>Location end of daily work period</td>
</tr>
<tr>
<td>✶</td>
<td>Location start of daily work period</td>
</tr>
<tr>
<td>✶ ✶ ✶</td>
<td>To time</td>
</tr>
<tr>
<td>✶ ✶ ✶ ✶</td>
<td>From time</td>
</tr>
<tr>
<td>✶ ✶ ✶ ✶ ✶</td>
<td>From vehicle</td>
</tr>
<tr>
<td>✶ ✶ ✶ ✶ ✶ ✶</td>
<td>Out of scope begin</td>
</tr>
<tr>
<td>✶ ✶ ✶ ✶ ✶ ✶</td>
<td>Out of scope end</td>
</tr>
</tbody>
</table>

### Cards

<table>
<thead>
<tr>
<th>pictogram</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✶</td>
<td>Driver card</td>
</tr>
<tr>
<td>✶ ✶</td>
<td>Company card</td>
</tr>
<tr>
<td>✶ ✶ ✶</td>
<td>Control card</td>
</tr>
<tr>
<td>✶ ✶ ✶ ✶</td>
<td>Workshop card</td>
</tr>
<tr>
<td>✶ ✶ ✶ ✶ ✶</td>
<td>No card</td>
</tr>
</tbody>
</table>

### Driving

<table>
<thead>
<tr>
<th>pictogram</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✶ ✶</td>
<td>Crew driving</td>
</tr>
<tr>
<td>✶ ✶ ✶</td>
<td>Driving time for one week</td>
</tr>
<tr>
<td>✶ ✶ ✶ ✶</td>
<td>Driving time for two weeks</td>
</tr>
</tbody>
</table>

### Printouts

<table>
<thead>
<tr>
<th>pictogram</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>24h</td>
<td>Driver activities from card daily printout</td>
</tr>
<tr>
<td>24h ✶</td>
<td>Driver activities from VU daily printout</td>
</tr>
<tr>
<td>✶ ✶ ✶</td>
<td>Events and faults from card printout</td>
</tr>
<tr>
<td>✶ ✶ ✶ ✶</td>
<td>Events and faults from VU printout</td>
</tr>
<tr>
<td>✶ ✶ ✶ ✶ ✶</td>
<td>Technical data printout</td>
</tr>
<tr>
<td>✶ ✶ ✶ ✶ ✶ ✶</td>
<td>Over speeding printout</td>
</tr>
</tbody>
</table>
PICTOGRAM COMBINATIONS

Events
- Insertion of a non valid card
- Card conflict
- Time overlap
- Driving without an appropriate card
- Card insertion while driving
- Last card session not correctly closed
- Over speeding
- Power supply interruption
- Motion data error
- Security breach
- Time adjustment (by workshop)
- Over speeding control

Faults
- Card fault (driver slot)
- Card fault (co-driver slot)
- Display fault
- Downloading fault
- Printer fault
- Sensor fault
- VU internal fault

Manual entries procedure
- ???: Still same daily work period?
- ???: End of previous work period?
- ??: Confirm or enter location of end of work period
- ????? Enter start time
- ????? Enter location of start of work period.

Note: Additional pictogram combinations to form printout block or record identifiers are defined in Appendix 4.
DEFAULT DISPLAY

Activities
- Available
- Driving
- Rest
- Work
- Break
- Unknown

People
- Company
- Controller
- Driver
- Workshop/test station
- Manufacturer

Default display

<table>
<thead>
<tr>
<th>Local time</th>
<th>hh:mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode of operation</td>
<td>0</td>
</tr>
<tr>
<td>Information related to the driver</td>
<td>1 Dhhmm 1h3hmm</td>
</tr>
<tr>
<td>Information related to the co-driver</td>
<td>2 Dhhmm</td>
</tr>
<tr>
<td>Out of scope condition opened</td>
<td>OUT</td>
</tr>
</tbody>
</table>
DISPLAY DURING DRIVING

- Driver's continuous driving time and cumulative break time
- Information related to the co-driver
- Exceeding continuous driving time
DISPLAY DURING DRIVING

- **10:30**
  - VU not activated.

- **12:10**
  - Out of scope

- **12:10**
  - Not enough power supply during driving

---

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MAIN MENU OF THE TACHOGRAPH

Driver 1/2:
- Daily printout / Events (by chosen day)
- Vehicle:
- Daily printout / Events / Speed (by chosen day)
- Technical data

Driver 1/2:
- Location Start & End
- Vehicle:
- Driving out of scope
- Transfer Ferryboat / Train
- Changing local time
- Adjusting UTC time

Driver 1/2:
- Daily printout / Events (by chosen day) / Driving time
- Vehicle:
- Daily printout / Events / Speed (by chosen day)
- Technical data
- Company logged in
PRINTOUTS

Printouts are only possible if:

- the vehicle doesn’t drive.
- the contact key is turned on,
- there is enough paper available

Where the vehicle is fitted with recording equipment in conformity with Annex IB, the employer and the driver shall ensure that, taking into account the length of the period of service, the printing on request referred to in Annex IB can be carried out correctly in the event of an inspection.
DIFFERENT PRINTOUTS (from 00:00 to 24:00)

There are 6 types of printouts:

- 2 relate to drivers’ activities: one comes from the VU, the other one from the driver card;

- 2 relate to events and faults: one from the VU, the other one from the driver card;

- 1 concerns technical data (vehicle, VU, etc…)

- 1 concerns over speeding.
DIFFERENT PRINTOUTS (from 00:00 to 24:00)

Printouts:
- Driver activities from card daily printout
- Driver activities from VU daily printout
- Events and faults from card printout
- Events and faults from VU printout
- Technical data printout
- Over speeding printout
PRINTOUTS – BLOCK IDENTIFIER

- Type of printout
- Card holder identification (inserted during the printout)
- Card holder identification
- Vehicle identification
- VU identification
- Last calibration of the recording equipment
- Last control (by a control officer)
- Driver activities stored on a card in order of occurrence
PRINTOUTS – UTC
(Universal Time Coordinated)

21.07.2005 10:09 (UTC)

EU-15
EWR
AETR-Staaten

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Figure published by Siemens VDO
DAILY PRINTOUT from the DC

Date and time (UTC) at which the document is printed:
08.04.2005 13:51 (UTC)

Type of printout:
BLOCK identifier „printout”

Driver activities from card daily printout:

24h

BLOCK identifier „control officer” / Card holder identification:
Card holder surname / first name(s) (if any)
Card identification (watch the index)
Card expiry date (if any)

Conducteur

BLOCK identifier „driver” / Card holder identification:
Card holder surname / first name(s) (if any)
Card identification (watch the index)
Card expiry date (if any)

ABC67123456349876

BLOCK identifier „vehicle”:
(VIN)
Registering Member State and VRN:

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Monitoring of the Implementation of Digital Tachograph
**DAILY PRINTOUT from the DC**

- **BLOCK identifier „VU“**
  - VU manufacturer's name
  - VU part number

- **BLOCK identifier „workshop“**
  - Workshop name
  - Workshop card identification
  - Date of the (last) calibration

- **BLOCK identifier „control officer“ (Last control)**
  - Controller's card identification
  - Control date, time and type
  - Type of the control: Up to four pictograms. The type can be (a combination) of: Card downloading, VU downloading, printing, Displaying

- **BLOCK identifier „driver“**
  - Driver activities stored on a card in order of occurrence

- **Enquiry date (calendar day subject of the printout)**
  - + Daily card presence counter

- **Period during which the card was not inserted**

- **Activity manually entered**
  - Activity pictogram, start and end time (included), duration

---

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Monitoring of the Implementation of Digital Tachograph
When, as a result of **being away from the vehicle**, a driver is unable to use the equipment fitted into the vehicle, the periods of time indicated in paragraph 3, second indent (b), (c) and (d) below shall be entered on the sheet, either manually, by automatic recording or other means, legibly and without dirtying the sheet.

*(see also amendment new 3820)*
MANUAL ENTRY OF ACTIVITIES
BY DRIVERS (1360/2002 - 50 / 50bis)

Last withdrawal of the card (22.02.06 15:34)

End of the previous shift

Begin of a new shift

Insertion of the card (27.02.06 18:28)

Last withdrawal
22.02.06 15:34

M entry addition?

Begin country
27.02.18:28 UK

Manual entry of the end of the previous shift (26.02.06 21:02)

Manual entry of the end of the previous shift (26.02.06 23:20)

M confirm entry?

Insertion of the card (28.02.06 10:05)
DAILY PRINTOUT from the DC

<table>
<thead>
<tr>
<th>BLOCK identifier</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VU</td>
<td>VU manufacturer's name</td>
</tr>
<tr>
<td></td>
<td>VU part number</td>
</tr>
<tr>
<td>workshop</td>
<td>Workshop name</td>
</tr>
<tr>
<td></td>
<td>Workshop card identification</td>
</tr>
<tr>
<td></td>
<td>Date of the (last) calibration</td>
</tr>
<tr>
<td>control officer</td>
<td>Controller's card identification</td>
</tr>
<tr>
<td></td>
<td>Control date, time and type</td>
</tr>
<tr>
<td></td>
<td>Type of the control: Up to four pictograms. The type can be (a combination) of: Card downloading, VU downloading, printing, Displaying</td>
</tr>
<tr>
<td></td>
<td>Driver activities stored on a card in order of occurrence</td>
</tr>
<tr>
<td></td>
<td>Enquiry date (calendar day subject of the printout) + Daily card presence counter</td>
</tr>
<tr>
<td></td>
<td>Period during which the card was not inserted</td>
</tr>
<tr>
<td></td>
<td>Activity manually entered</td>
</tr>
</tbody>
</table>

Fabricant XYZ
2357.23344565723

Atelier XY
98765432164729 23

13.03.2005

90897867564534 23

05.04.2005 10:52

07.04.2005 157

? 00:00 05:00 05h00

05:00 05:12 00h12
DAILY PRINTOUT from the DC

--- 1 ---

AD /K-MD 337
1 272 km

05:12 05:34 00h22
05:34 06:01 00h27
06:01 07:35 01h34
07:35 07:45 00h10
1 364 km; 92 km

? 07:45 08:03 00h18

--- 2 ---

AD /K-MD 337
1 364 km

08:03 10:24 02h21
10:24 11:03 00h39
1 364 km;

Card insertion in slot 1 / Record identifier
Vehicle registering Member State and VRN
Vehicle odometer at card insertion
Activity pictogram, start and end time (included), duration,
crew status (crew pictogram if CREW, blanks if SINGLE),
Card withdrawal (or End of "No Card" period)
Vehicle odometer at card withdrawal or at end of "no card" period and distance travelled since insertion, or since beginning of the "No Card" period
Period during which the card was not inserted
Card insertion in slot 2 / Record identifier;
2 = Slot pictogram
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>00h07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:10</td>
<td>11:10</td>
<td>02h30</td>
</tr>
<tr>
<td>13:40</td>
<td>13:40</td>
<td>01h17</td>
</tr>
<tr>
<td>15:18</td>
<td>15:18</td>
<td>00h21</td>
</tr>
<tr>
<td>16:10</td>
<td>16:10</td>
<td>00h52</td>
</tr>
<tr>
<td>17:38</td>
<td>17:38</td>
<td>01h28</td>
</tr>
</tbody>
</table>

**5 157 km**

**5 408 km; 251 km**

Period during which the card was not inserted; (changing from vehicle K-MD 337 to K-SL 182)

Activity pictogram, start and end time (included), duration; rest periods of at least one hour are tagged with a star.*
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>05:00</td>
<td>Begin</td>
<td>1,272 km</td>
</tr>
<tr>
<td>07:45</td>
<td>Begin</td>
<td>1,364 km</td>
</tr>
<tr>
<td>08:03</td>
<td>End</td>
<td>1,364 km</td>
</tr>
<tr>
<td>11:03</td>
<td>Begin</td>
<td>1,364 km</td>
</tr>
<tr>
<td>11:10</td>
<td>End</td>
<td>5,157 km</td>
</tr>
<tr>
<td>17:38</td>
<td>Begin</td>
<td>5,408 km</td>
</tr>
<tr>
<td>05:53</td>
<td>343 km</td>
<td></td>
</tr>
<tr>
<td>00:12</td>
<td>03h10</td>
<td></td>
</tr>
<tr>
<td>02:58</td>
<td>11h47</td>
<td></td>
</tr>
<tr>
<td>05:11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activity Totals (from a card):**
- Total driving duration, distance travelled
- Total working and availability duration
- Total resting and unknown duration
- Total duration of crew activities
### Daily Printout from the DC

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event Code</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.01.2005</td>
<td>08:23</td>
<td></td>
<td>Power supply interruption</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Date: 13.01.2005, Time: 08:23, Record identifier: /K-LG 6212</td>
</tr>
<tr>
<td>05.02.2005</td>
<td>12:43</td>
<td></td>
<td>Security breach</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Date: 05.02.2005, Time: 12:43, Additional event code: 16, Duration: 00h01</td>
</tr>
<tr>
<td>04.03.2005</td>
<td>13:58</td>
<td></td>
<td>Card insertion while driving</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Date: 04.03.2005, Time: 13:58, Record identifier: /K-LG 6212</td>
</tr>
<tr>
<td>10.03.2005</td>
<td>16:03</td>
<td></td>
<td>Card fault (driver slot)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Date: 10.03.2005, Time: 16:03, Record identifier: /K-LG 6212</td>
</tr>
</tbody>
</table>
DAILY PRINTOUT from the DC

- Event/fault pictogram „Security breach“, date time of start: 23.03.2005 08:13
- BLOCK identifier last 5 ”Events and Faults“ from VU: 16 01h02
- Event/fault pictogram „Over speeding“, date time of start: 03.02.2005 14:08 00h12
- No card: 04.02.2005 10:15 00h04
- Event/fault pictogram „Card fault (driver slot)“, date time of start: 04.02.2005 10:15 00h04
- Event/fault pictogram „Card insertion while driving“, date time of start: 15.03.2005 07:42 00h54
- Number of similar events during that day: (1)
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event/Fault Pictogram</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.03.2005</td>
<td>16:53</td>
<td>(2) 00h02</td>
<td>Fault downloading, date time of start</td>
</tr>
<tr>
<td>02.04.2005</td>
<td>21:30</td>
<td>(16) 00h35</td>
<td>Over speeding, date time of start</td>
</tr>
</tbody>
</table>

Hand-written information:
- Control Place
- Controller's signature
- Driver's signature
GETTING DATA VIA DISPLAY

Printout data are also readable (in the cabin of the vehicle) two lines by two lines (one line printout = two line display), in the same order than the way they are shown on the various printouts.

- The evaluation of that data is quite difficult (see impossible)
- It can not be used as evidence for prosecuting

SO THIS SOLUTION WOULD REALLY NOT BE AN ISSUE FOR ENFORCEMENT
Conclusions of the Content of a complete AETR roadside check:

- **Recording equipment / Control device** (Visual or technical check: Approval, Installation plaque/calibration, seals, manipulations...) - *(Need of a Control card for an effective check)*
- **Status of the WS card (lost, stolen...)* - *(Need for an access to TACHOnet)*

- **Identification of the driver** (against the used Driver card and/or the printouts)
- **Status of the DC (lost, stolen...)* - *(Need for an access to TACHOnet)*

- **Driving and rest periods / Activities** *(Need of the record sheets / DC / printouts for the current week and the last day of the previous week...)*

**Data from the Vehicle unit (VU) (Daily activities, Events, Speed (Speed limiter), Technical data)**

- By download *(Need of a control card and equipment (Download interface, PC, Software)*
- By printout *(Need of a control card to get all identities / or a DC for the identification of that driver)*

**Data from the Driver card (DC) (Daily activities... / Events)**

- By download through the VU *(Need of a control card and equipment (Download interface, PC, Software)*
- By download from a card reader *(Need of equipment (Card reader, PC, Software)*
- By printout through the VU *(need of a control card to get all other identities)*

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