

JRC Presentation

- Amendment to

COMMISSION IMPLEMENTING REGULATION (EU) 2016/799

of 18 March 2016

implementing Regulation (EU) No 165/2014 of the European Parliament and of the Council laying down the requirements for the construction, testing, installation, operation and repair of tachographs and their components.

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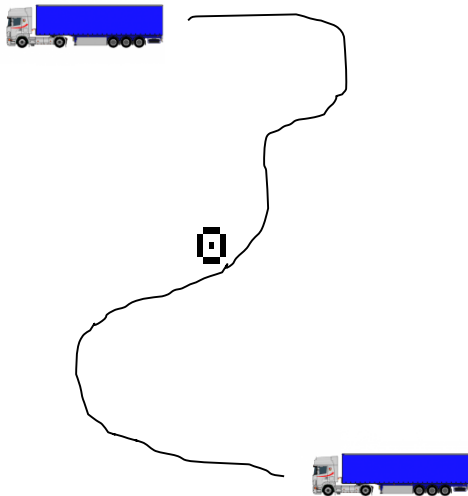
DG Joint Research Centre - European Commission

Summary of changes

- Accumulated driving time
- Events & faults
- Automatic time adjustments
- Data download
- ITS interface
- Daily work period begin/end
- Minor fixes and light changes

Accumulated driving time

Issue



According to Regulation (EU) 165/2014, the position of the vehicle shall be recorded automatically every three hours of accumulated driving time.

Current Annex1C considers that 'accumulated driving time' actually means the same that 'continuous driving time'. So the position of the vehicle will be recorded every time the 'continuous driving time' of the driver reaches three hours. But the driver's continuous driving time is reset after 45 minutes break.

This is not what was intended in Regulation (EU) No 165/2014.

'Accumulated driving time' should be a free running count of all driving times of a particular vehicle.

In addition, the odometer value is not recorded in driver cards, along with the vehicle position.

Accumulated driving time

Solving the issue



New definition added in Annex 1C (ggg):

'Accumulated driving time' now defined as a free running count of all driving times of a particular vehicle.

Updated text in Annex 1C, Appendix 1 (Data dictionary), 'continuous driving' replaced with 'accumulated driving'

New pictogram added in Appendix 3 (Pictograms):

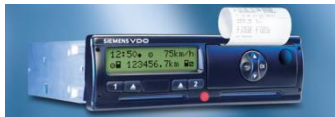
 position after 3 hours continuous driving time

Update of data elements in Appendix 1 and printouts format in Appendix 4 (Printouts): odometer value now always recorded and printed with vehicle positions (in VU memory, in cards).

Events and faults

Issue

Events and faults description is not always clear in Annex 1C and Appendixes, because different wording is used for the same event/fault, at different places.



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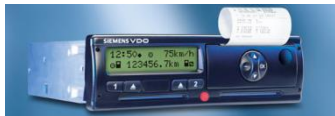
Example: "External GNSS communication fault", instead of "Communication error with the external GNSS event"...



Some events definition are not completely clear, or missing ("ITS interface fault", "External GNSS facility certificate expired", "External GNSS facility authentication error")

Events and faults

Solving the issue



In Annex 1C: updated list of recording equipment self tests and faults, updated table of events data

In Appendix 1 (Data Dictionary): updated definition for the “EventFaultType” data element.

In Appendix 12 (Positioning based on GNSS): updated description of GNSS related events

In Appendix 13 (ITS Interface): updated tables of events/faults data available without driver consent, updated ASN.1 specification of events

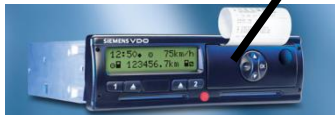
In Appendix 14 (Remote communication function): updated table describing the Tachograph payload (Sensor Fault), updated definition of communication error with the remote communication facility event.

Automatic time adjustment

Issue



≠ 1 min



There is a confusion between:

- Time conflict events (which are stored when the VU detects a discrepancy of more than 1 minute between its internal time and the GNSS time)
- Time adjustment records (which may be performed automatically when a time conflict event is detected, or by a workshop, outside the frame of a regular calibration)

Automatic time adjustment

Solving the issue

Automatic time adjustments data are now stored in the time conflict events, and time adjustment performed in calibration mode outside the frame of a regular calibration are stored in the time adjustment records.



In Annex 1C:

New definition of "time adjustment" (may be automatic or performed in calibration mode)

Updated definition of "time conflict" event (not triggered if no valid GNSS signal has been detected for 30 days or more)

Updated definition of storage rules for "time conflict" event

Updated definition of automatic time adjustments (happen every 12 hours)

In Appendix 3 (Pictograms):

!  Time conflict pictogram explicitly defined

In Appendix 7 (Data Download):

In Events and Faults data: VuTimeAdjustmentGNSSRecordArray suppressed

Data download

Issue

Gen1 VU



Gen2 VU



It is not easy for data analysis tools to distinguish between data downloaded from a Gen1 VU memory and data downloaded from a Gen2 VU memory. This is because data identifiers used in the download protocol are the same.

What is exactly requested when a Gen2 driver card inserted in a VU needs to be downloaded is not perfectly clear.

What is exactly requested in the case of drivers control by non EU countries is not perfectly clear.

Data download

Solving the issue

Appendix 15 (Migration):

Updated requirements for data download from tachograph memory (inside EU and outside EU)

Appendix 7 (Data downloading protocol):

Updated scope:

- to explain the 2 possible types of data download from the VU memory: "Gen2" type, "Gen1" type
- to explain the 2 possible types of Gen2 cards download (when they are inserted in a VU): "Gen2" type, "Gen1" type

"Gen1" type only intended to be used by non-EU control authorities

Updated message types table and description for VU memory data download (due to the use of new identifiers for Gen2 data)

Data download

Solving the issue



Gen2 VU



Appendix 7 (Data downloading protocol):

Updated response message contents (due to the use of new identifiers for Gen2 data).

Card downloading protocol, updated text to detail all the steps needed for downloading Gen1 or Gen2 driver cards inserted in a VU (for control purpose by an EU or a non-EU authority).

Updated storage format for card data (due to the use of new tags, allowing to distinguish data between Gen1 and Gen2 zone of the card).

ITS interface

Issue

```
280     vrn OCTET STRING (SIZE(13)),
281   },
282   tachographNextMandatoryDownloadDate Date,
283   ...
284 }
285
286 PersonalTachyDataSheet ::= SEQUENCE{
287   tachographVehicleSpeed INTEGER (0..250.996), --increment 1/256km/h--
288   driver1WorkingState INTEGER (2 UNION 12 UNION 102 UNION 112 UNION 1002 UNION
289   11012...),
290   driver2WorkingState INTEGER (2 UNION 12 UNION 102 UNION 112 UNION 1002 UNION
291   11012...),
292   driver1TimeRelatedStates INTEGER(2 UNION 12 UNION 102 UNION 112 UNION
293   1002 UNION
294   10002 UNION 10012 UNION
295   1012 UNION 1102 UNION 1112 UNION
296   10002 UNION 10012 UNION
297   10102 UNION 10112 UNION 11002 UNION
298   11012...),
299   driver2TimeRelatedStates INTEGER(2 UNION 12 UNION 102 UNION 112 UNION
300   1002 UNION
301   10002 UNION 10012 UNION
302   1012 UNION 1102 UNION 1112 UNION
303   10102 UNION 10112 UNION 11002 UNION
304   11012...),
```

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There are typographical errors in the ISO16844 standard, which have been unfortunately incorporated in Appendix 13 (ITS interface)

The ASN.1 description of tachograph data available through the ITS interface is therefore not understandable for an application developer.

ITS interface

Solving the issue

Typographical errors in Appendix 13 (ITS interface) are corrected.

```
285
286 PersonalTachyDataSheet ::= SEQUENCE{
287   tachographVehicleSpeed INTEGER (0..250.996), --increment 1/256km/h--
288   driver1WorkingState BIT STRING ('000'B UNION '001'B UNION '010'B UNION
289   '011'B UNION '100'B UNION '101'B ...),
290   driver2WorkingState BIT STRING ('000'B UNION '001'B UNION '010'B UNION
291   '011'B UNION '100'B UNION '101'B ...),
292
293   driver1TimeRelatedStates BIT STRING ('0000'B UNION '0001'B
294   UNION '0010'B UNION '0011'B UNION '0100'B UNION '0101'B UNION
295   '0110'B UNION '0111'B UNION '1000'B UNION '1001'B UNION '1010'B
296   UNION '1011'B UNION '1100'B UNION '1101'B ...),
297
298   driver2TimeRelatedStates BIT STRING ('0000'B UNION '0001'B
299   UNION '0010'B UNION '0011'B UNION '0100'B UNION '0101'B UNION
300   '0110'B UNION '0111'B UNION '1000'B UNION '1001'B UNION '1010'B
301   UNION '1011'B UNION '1100'B UNION '1101'B ...),
302
303
304
```

The ASN.1 description of tachograph data is now understandable for an application developer.



Daily work period begin/end

Issue

The VU allows drivers to enter a temporary place where the daily work period ends, at card withdrawal.

But the management of the temporary place entered is unclear and can lead to inconsistencies between data from successive downloads from the VU.



Daily work period begin/end

Solving the issue

Updated requirement in Annex 1C:

The rules for overwriting and validating the temporary place for end of the daily work period entered at card withdrawal are now detailed, thus avoiding any risk of inconsistency.



Examples of light changes 1/2

Typo errors in Annex 1C

Example: Submitted for approval for <date> → Submitted for approval **on** <date>

Clearer wording

Example: 6.2 Check of new or repaired instruments → 6.2 Check of new or repaired **components**

“Component” is defined in the legislation while “instrument” is not.

Clarifications/explanations

Example: Note that there are four GSA sentences for the four satellite systems and Satellite-Based Augmentation System (SBAS). **The recording order is: Galileo, GPS, GLONASS, Beidou.**

Errors corrections

Example: ... signature the card holder reference taken from ... → ...signature the **certificate** holder reference taken from ...

Publication of seal standard

(398a) The seals mentioned above shall be certified according to the standard EN 16882:2016.

Examples of light changes 2/2

Extension of Company card validity to 5 years (back to previous validity)

Missing records added in some appendixes (correctly described in the annex 1C but forgotten in the data model)

Missing abbreviations added

Forgotten internal reminders suppressed

Wrong references corrected

Some corrections in the logic of operations (mainly mutual authentication) and cryptographic mechanisms

All light changes documented and explained with a clear rationale
in an ordered table for quick review



Thank you for your attention.

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<https://ec.europa.eu/jrc>

