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**Road vehicles — Tachograph  
systems —**

**Part 7:  
Parameters**

*Véhicules routiers — Systèmes tachygraphes —  
Partie 7: Paramètres*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 31, *Data communication*.

This third edition cancels and replaces the second edition (ISO 16844-7:2015), which has been technically revised.

The main changes are as follows:

- part 5 of this series (ISO 16844-5) has been removed due to its technical irrelevance,
- correction of the typos and mistakes in the text,
- adoption of the content according to the new version of the ISO guidelines,
- adoption of the content according to the new technical requirements,
- alignment of the content regarding to the referred standards.

A list of all parts in the ISO 16844 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

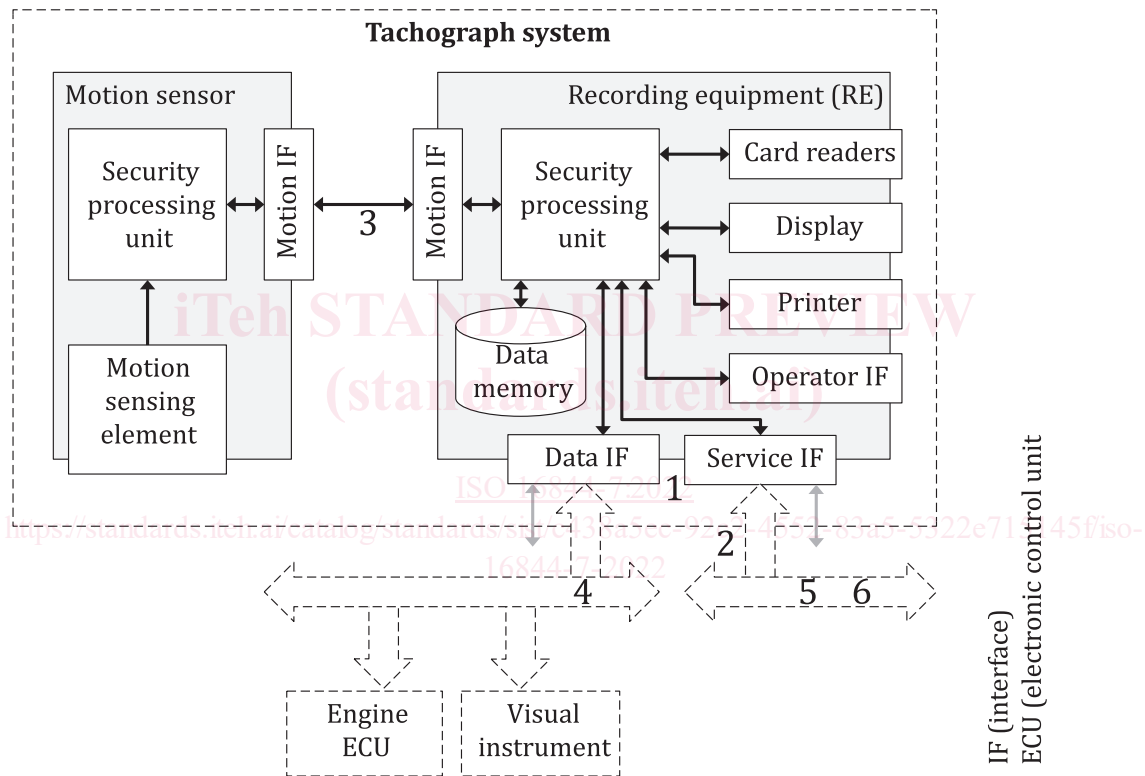
## Introduction

This document supports and facilitates the communication between electronic control units (ECUs) and a digital tachograph.

The digital tachograph concept is based upon a recording equipment storing data, related to the activities of the various drivers driving the vehicle, on which it is installed.

During the normal operational status of the recording equipment, data stored in its memory are accessible to different entities (drivers, authorities, workshops, transport companies) in different ways (displayed on a screen, printed by a printing device, downloaded to an external device). Access to stored data are controlled by a smart card inserted in the tachograph.

A typical tachograph system is shown in [Figure 1](#).



### Key

- |  |  |
|--|--|
| <p><b>1</b> data and service IF connector standardized in ISO 16844-1</p> <p><b>2</b> electrical data and service IF requirements standardized in ISO 16844-2</p> <p><b>3</b> communication interface between motion sensor and RE standardized in ISO 16844-3</p> | <p><b>4</b> CAN-based data IF including parameter groups standardized in ISO 16844-4</p> <p><b>5</b> optional CAN-based service IF standardized in ISO 16884-6</p> <p><b>6</b> data identifier (DID) specification for the optional service IF standardized in ISO 16844-7</p> |
|--|--|

**Figure 1 — Typical ISO 16844 conformant tachograph system**



# Road vehicles — Tachograph systems —

## Part 7: Parameters

### 1 Scope

This document specifies the parameters used on the service interface of the recording equipment. Some of them are specified in detail in this document, while others are given in the ISO 14299 series.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 639-1, *Codes for the representation of names of languages — Part 1: Alpha-2 code*

ISO/IEC 8859-1, *Information technology — 8-bit single-byte coded graphic character sets — Part 1: Latin alphabet No. 1*

ISO 14229-1, *Road vehicles — Unified diagnostic services (UDS) — Part 1: Application layer*

ISO 15031-6, *Road vehicles — Communication between vehicle and external equipment for emissions-related diagnostics — Part 6: Diagnostic trouble code definitions*

ISO 16844-1, *Road vehicles — Tachograph systems — Part 1: Electromechanical components*

ISO 16844-4, *Road vehicles — Tachograph systems — Part 4: Display unit communication interface*

SAE J1939-71, *Vehicle Application Layer*

SAE J1939DA, *Digital Annex*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16844-1 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

#### 3.1

##### member state

member of some supranational or international body

EXAMPLE European Union.

### 4 Symbols and abbreviated terms

For the purposes of this document, the following symbols and abbreviated terms apply.

CAN	controller area network
Cvt.	convention
DID	data identifier
DTC	diagnostic trouble code
DSRC	dedicated short range communication
FTB	failure-type-byte
ECU	electronic control unit
GNSS	global navigation satellite system
M	mandatory
n/a	not applicable
R	accessible in reading using diagnostic services
RID	routine identifier
RMS	registering member state
R/W	accessible in reading and writing, using diagnostic services
SJW	resynchronisation jump width
$t_q$	time quantum
O	optional
UTC	universal time coordinated
VIN	vehicle identification number
VRN	vehicle registration number

## 5 Identifier specification for diagnostic services

### 5.1 Data identifiers (DID)

The DIDs used in the diagnostic services ReadDataByIdentifier WriteDatatByIdentifier and InputOutputControlByIdentifier as specified in ISO 16844-6 shall be supported in accordance with [Table 1](#). The DIDs shall be implemented as specified in [Clause 6](#).

In general,

- assignment of identifiers shall comply with the definitions given in ISO 14229-1,
- undefined identifiers in the range of tachograph IDs from F900<sub>16</sub> to F9FF<sub>16</sub> shall be reserved for future use, and
- identifiers in the range of F180<sub>16</sub> to F1A0<sub>16</sub> shall be implemented as specified in ISO 14229-1 if not specified in [Clause 6](#).

Table 1 — Data identifier

Data Identifier name	Value [Hex]	Cvt.	Simplified mnemonic	Access	Specified in section
VehicleManufacturerSparePartNumber	F187	O	VMSPN	R/W	—
VehicleManufacturerECUSoftwareNumber	F188	O	VMECUSWN	R/W	—
VehicleManufacturerECUSoftwareVersionNumber	F189	O	VMECUSWVN	R/W	—
SystemSupplierIdentifier	F18A	M	SSID	R	—
ECUManufacturingDate	F18B	M	ECUMD	R	—
ECUSerialNumber	F18C	M	ECUSN	R	—
VehicleIdentificationNumber	F190	M	VIN	R/W	<a href="#">6.4.2</a>
VehicleManufacturerECUHardwareNumber	F191	M	VMECUHWN	R/W	—
SystemSupplierECUHardwareNumber	F192	M	SSECUHWN	R	—
SystemSupplierECUHardwareVersionNumber	F193	M	SSECUHWVN	R	—
SystemSupplierECUSoftwareNumber	F194	M	SSECUSWN	R	—
SystemSupplierECUSoftwareVersionNumber	F195	M	SSECUSWVN	R	—
ExhaustRegulationOrTypeApprovalNumber	F196	M	EROTAN	R	—
SystemNameOrEngineType	F197	O	SNOET	R/W	—
RepairShopCodeOrTesterSerialNumber	F198	O	RSCOTSN	R/W	—
ProgrammingDate	F199	O	PD	R/W	—
CalibrationRepairShopCodeOrCalibrationEquipmentSerialNumber	F19A	M	CRSCOCESN	R/W	—
CalibrationDate	F19B	M	CD	R/W	—
CalibrationEquipmentSWNumber	F19C	M	CESWN	R/W	—
ECUInstallationDate	F19D	M	EID	R/W	—
ODXFileIdentifier	F19E	O	OFID	R/W	—
RemoteSessionDiagnosisticSessionType	F900	M	RSDST	R/W	—
TachographVehicleSpeed	F902	M	TVS	R	<a href="#">6.4.12</a>
Driver1WorkingState	F903	M	D1WS	R	<a href="#">6.4.13</a>
Driver2WorkingState	F904	M	D2WS	R	<a href="#">6.4.14</a>
DriveRecognize	F905	M	DR	R	<a href="#">6.4.15</a>
Driver1TimeRelatedStates	F906	M	D1TRS	R	<a href="#">6.4.16</a>
Driver2TimeRelatedStates	F909	M	D2TRS	R	<a href="#">6.4.17</a>
DriverCardDriver1	F907	M	DCD1	R	<a href="#">6.4.18</a>
DriverCardDriver2	F90A	M	DCD2	R	<a href="#">6.4.19</a>
OverSpeed	F908	M	OS	R	<a href="#">6.4.20</a>
TimeDate	F90B	M	TD	R/W	<a href="#">6.4.21</a>
ResetHeartbeatMessage	F90C	M	RHM	R/W	<a href="#">6.4.22</a>
AdjustLocalMinuteOffset	F90D	M	ALMO	R/W	<a href="#">6.4.23</a>
AdjustLocalHourOffset	F90E	M	ALHO	R/W	<a href="#">6.4.24</a>
PriorityLevelOfTCO1Message	F90F	M	PLOTM	R/W	<a href="#">6.4.25</a>
HighResolutionTotalVehicleDistance	F912	M	HRTVD	R/W	<a href="#">6.4.26</a>
HighResolutionTripDistance	F913	M	HRTD	R/W	<a href="#">6.4.27</a>
ServiceComponentIdentification	F914	M	SCI	R	<a href="#">6.4.28</a>
ServiceDelayCalendarTimeBased	F915	M	SDCTB	R	<a href="#">6.4.29</a>
Driver1Identification	F916	M	D1I	R	<a href="#">6.4.30</a>

Table 1 (continued)

Data Identifier name	Value [Hex]	Cvt.	Simplified mnemonic	Access	Specified in section
Driver2Identification	F917	M	D2I	R	<a href="#">6.4.31</a>
KFactor	F918	M	KF	R/W	<a href="#">6.4.32</a>
SpeedMeasurementRange	F919	M	SMR	R	<a href="#">6.4.33</a>
NumberOfTeethOnPhonicWheel	F91A	U	NOTOPW	R/W	<a href="#">6.4.34</a>
TachographOutputShaftSpeed	F91B	M	TOSS	R	<a href="#">6.4.35</a>
LFactorTyreCircumference	F91C	M	LFTC	R/W	<a href="#">6.4.36</a>
WVehicleCharacteristicFactor	F91D	M	WVCF	R/W	<a href="#">6.4.37</a>
PulsesPerRevolutionOfOutputShaft	F91E	M	PPROOS	R/W	<a href="#">6.4.38</a>
TransmissionRepetitionRateOfTCO1Message	F920	M	TRROTM	R/W	<a href="#">6.4.39</a>
TyreSize	F921	M	TS	R/W	<a href="#">6.4.40</a>
NextCalibrationDate	F922	M	NCD	R/W	<a href="#">6.4.41</a>
Driver1ContinuousDrivingTime	F923	M	D1CDT	R	<a href="#">6.4.42</a>
Driver2ContinuousDrivingTime	F924	M	D2CDT	R	<a href="#">6.4.43</a>
Driver1CumulativeBreakTime	F925	M	D1CBT	R	<a href="#">6.4.44</a>
Driver2CumulativeBreakTime	F926	M	D2CBT	R	<a href="#">6.4.45</a>
Driver1CurrentDurationOfSelectedActivity	F927	M	D1CDOSA	R	<a href="#">6.4.46</a>
Driver2CurrentDurationOfSelectedActivity	F928	M	D2CDOSA	R	<a href="#">6.4.47</a>
SpeedAuthorised	F92C	M	SA	R/W	<a href="#">6.4.48</a>
TachographCardSlot1	F930	M	TCS1	R	<a href="#">6.4.49</a>
TachographCardSlot2	F933	M	TCS2	R	<a href="#">6.4.50</a>
Driver1Name	F931	M	D1N	R	<a href="#">6.4.51</a>
Driver2Name	F932	M	D2N	R	<a href="#">6.4.52</a>
OutOfScopeCondition	F936	M	OOSC	R	<a href="#">6.4.53</a>
ModeOfOperation	F937	M	MOO	R	<a href="#">6.4.54</a>
Driver1CumulatedDrivingTimePreviousAndCurrentWeek	F938	M	D1CDTPACW	R	<a href="#">6.4.55</a>
Driver2CumulatedDrivingTimePreviousAndCurrentWeek	F939	M	D2CDTPACW	R	<a href="#">6.4.56</a>
RealTimeSpeedPulses	F940	M	RTSP	R/W	<a href="#">6.4.57</a>
EngineSpeed	F95A	U	ES	R	<a href="#">6.4.58</a>
CalibrationInputOutput	F960	M	CIO	R	<a href="#">6.4.59</a>
SynchronizationJumpWidth	F979	M	SJW	R/W	<a href="#">6.4.60</a>
SamplePoint	F97A	M	SP	R/W	<a href="#">6.4.61</a>
TimeOutMessageErrorDelay	F97B	M	TOMED	R/W	<a href="#">6.4.62</a>
ErrorManagementInitialisationInhibition	F97C	M	EMII	R/W	<a href="#">6.4.63</a>
RegisteringMemberState	F97D	M	RMS	R/W	<a href="#">6.4.64</a>
VehicleRegistrationNumber	F97E	M	VRN	R/W	<a href="#">6.4.65</a>
VehicleRegistrationDate	F97F	M	VRD	R/W	<a href="#">6.4.66</a>
Driver1PreferredLanguage	F981	O	D1PL	R/W	<a href="#">6.4.67</a>
Driver2PreferredLanguage	F982	O	D2PL	R/W	<a href="#">6.4.68</a>
DriverCard1DownloadTimePeriod	F990	O	DC1DTP	R	<a href="#">6.4.69</a>
DriverCard2DownloadTimePeriod	F983	O	DC2DTP	R	<a href="#">6.4.70</a>
TachographDownloadTimePeriod	F991	O	TDTP	R	<a href="#">6.4.71</a>
DriversHoursRulesPreWarningTimeDelay	F992	O	DHRPWTD	R/W	<a href="#">6.4.72</a>

Table 1 (continued)

Data Identifier name	Value [Hex]	Cvt.	Simplified mnemonic	Access	Specified in section
DriverCardExpiryWarningTimeDelay	F993	0	DCEWTD	R/W	<a href="#">6.4.73</a>
NextDriverCard1DownloadWarningTimeDelay	F994	0	NDC1DWTD	R/W	<a href="#">6.4.74</a>
NextDriverCard2DownloadWarningTimeDelay	F984	0	NDC2DWTD	R/W	<a href="#">6.4.75</a>
NextTachographDownloadWarningTimeDelay	F995	0	NTDWTD	R/W	<a href="#">6.4.76</a>
NextCalibrationWarningTimeDelay	F996	0	NCWTD	R/W	<a href="#">6.4.77</a>
Driver1EndOfLastDailyRestPeriod	F997	0	D1EOLDRP	R	<a href="#">6.4.78</a>
Driver2EndOfLastDailyRestPeriod	F985	0	D2EOLDRP	R	<a href="#">6.4.79</a>
Driver1EndOfLastWeeklyRestPeriod	F998	0	D1EOLWRP	R	<a href="#">6.4.80</a>
Driver2EndOfLastWeeklyRestPeriod	F986	0	D2EOLWRP	R	<a href="#">6.4.81</a>
Driver1EndOfSecondLastWeeklyRestPeriod	F999	0	D1EOSLWRP	R	<a href="#">6.4.82</a>
Driver2EndOfSecondLastWeeklyRestPeriod	F987	0	D2EOSLWRP	R	<a href="#">6.4.83</a>
Driver1CurrentDailyDrivingTime	F99A	0	D1CDDT	R	<a href="#">6.4.84</a>
Driver2CurrentDailyDrivingTime	F988	0	D2CDDT	R	<a href="#">6.4.85</a>
Driver1CurrentWeeklyDrivingTime	F99B	0	D1CWDT	R	<a href="#">6.4.86</a>
Driver2CurrentWeeklyDrivingTime	F989	0	D2CWDT	R	<a href="#">6.4.87</a>
Driver1TimeLeftUntilNewDailyRestPeriod	F99C	0	D1TLUNDRP	R	<a href="#">6.4.88</a>
Driver2TimeLeftUntilNewDailyRestPeriod	F98A	0	D2TLUNDRP	R	<a href="#">6.4.89</a>
Driver1CardExpiryDate	F99D	0	D1CED	R	<a href="#">6.4.90</a>
Driver2CardExpiryDate	F98B	0	D2CED	R	<a href="#">6.4.91</a>
Driver1CardNextMandatoryDownloadDate	F99E	0	D1CNMDD	R	<a href="#">6.4.92</a>
Driver2CardNextMandatoryDownloadDate	F98C	0	D2CNMDD	R	<a href="#">6.4.93</a>
TachographNextMandatoryDownloadDate	F99F	0	TNMDD	R	<a href="#">6.4.94</a>
Driver1TimeLeftUntilNewWeeklyRestPeriod	F9A1	0	D1TLUNWRP	R	<a href="#">6.4.95</a>
Driver2TimeLeftUntilNewWeeklyRestPeriod	F98D	0	D2TLUNWRP	R	<a href="#">6.4.96</a>
Driver1NumberOfTimes9hDailyDrivingTimesExceeded	F9A0	0	D1NOT9HDDTE	R	<a href="#">6.4.97</a>
Driver2NumberOfTimes9hDailyDrivingTimesExceeded	F98E	0	D2NOT9HDDTE	R	<a href="#">6.4.98</a>
Driver1CumulativeUninterruptedRestTime	F9A2	0	D1CURT	R	<a href="#">6.4.99</a>
Driver2CumulativeUninterruptedRestTime	F98F	0	D2CURT	R	<a href="#">6.4.100</a>
Driver1MinimumDailyRest	F9A3	0	D1MDR	R	<a href="#">6.4.101</a>
Driver2MinimumDailyRest	F9A7	0	D2MDR	R	<a href="#">6.4.102</a>
Driver1MinimumWeeklyRest	F9A4	0	D1MWR	R	<a href="#">6.4.103</a>
Driver2MinimumWeeklyRest	F9A8	0	D2MWR	R	<a href="#">6.4.104</a>
Driver1MaximumDailyPeriod	F9A5	0	D1MDP	R	<a href="#">6.4.105</a>
Driver2MaximumDailyPeriod	F9A9	0	D2MDP	R	<a href="#">6.4.106</a>
Driver1MaximumDailyDrivingTime	F9A6	0	D1MDDT	R	<a href="#">6.4.107</a>
Driver2MaximumDailyDrivingTime	F9AA	0	D2MDDT	R	<a href="#">6.4.108</a>
Driver1NumberOfUsedReducedDailyRestPeriods	F9AB	0	D1NOURDRP	R	<a href="#">6.4.109</a>
Driver2NumberOfUsedReducedDailyRestPeriods	F9AC	0	D2NOURDRP	R	<a href="#">6.4.110</a>
Driver1RemainingCurrentDrivingTime	F9AD	0	D1RCDT	R	<a href="#">6.4.111</a>
Driver2RemainingCurrentDrivingTime	F9AE	0	D2RCDT	R	<a href="#">6.4.112</a>
Driver1RemainingDrivingTimeOnCurrentShift	F9AF	0	D1RDTOCS	R	<a href="#">6.4.113</a>
Driver2RemainingDrivingTimeOnCurrentShift	F9B0	0	D2RDTOCS	R	<a href="#">6.4.114</a>

Table 1 (continued)

Data Identifier name	Value [Hex]	Cvt.	Simplified mnemonic	Access	Specified in section
Driver1RemainingDrivingTimeOfCurrentWeek	F9B1	0	D1RDTOCW	R	<a href="#">6.4.115</a>
Driver2RemainingDrivingTimeOfCurrentWeek	F9B2	0	D2RDTOCW	R	<a href="#">6.4.116</a>
Driver1Remaining2WeeksDrivingTime	F9B3	0	D1R2WDT	R	<a href="#">6.4.117</a>
Driver2Remaining2WeeksDrivingTime	F9B4	0	D2R2WDT	R	<a href="#">6.4.118</a>
Driver1TimeLeftUntilNextDrivingPeriod	F9B5	0	D1TLUNDP	R	<a href="#">6.4.119</a>
Driver2TimeLeftUntilNextDrivingPeriod	F9B6	0	D2TLUNDP	R	<a href="#">6.4.120</a>
Driver1DurationOfNextDrivingPeriod	F9B7	0	D1DONDP	R	<a href="#">6.4.121</a>
Driver2DurationOfNextDrivingPeriod	F9B8	0	D2DONDP	R	<a href="#">6.4.122</a>
Driver1DurationOfNextBreakRest	F9B9	0	D1DONBR	R	<a href="#">6.4.123</a>
Driver2DurationOfNextBreakRest	F9BF	0	D2DONBR	R	<a href="#">6.4.124</a>
Driver1RemainingTimeOfCurrentBreakRest	F9C0	0	D1RTOCBR	R	<a href="#">6.4.125</a>
Driver2RemainingTimeOfCurrentBreakRest	F9C1	0	D2RTOCBR	R	<a href="#">6.4.126</a>
Driver1RemainingTimeUntilNextBreakOrRest	F9C2	0	D1RTUNBOR	R	<a href="#">6.4.127</a>
Driver2RemainingTimeUntilNextBreakOrRest	F9C3	0	D2RTUNBOR	R	<a href="#">6.4.128</a>
Driver1OpenCompensationInTheLastWeek	F9C7	0	D1OCITLW	R	<a href="#">6.4.129</a>
Driver2OpenCompensationInTheLastWeek	F9C8	0	D2OCITLW	R	<a href="#">6.4.130</a>
Driver1OpenCompensationInWeekBeforeLast	F9C9	0	D1OCIWBL	R	<a href="#">6.4.131</a>
Driver2OpenCompensationInWeekBeforeLast	F9CA	0	D2OCIWBL	R	<a href="#">6.4.132</a>
Driver1OpenCompensationIn2ndWeekBeforeLast	F9CB	0	D1OCI2WBL	R	<a href="#">6.4.133</a>
Driver2OpenCompensationIn2ndWeekBeforeLast	F9CC	0	D2OCI2WBL	R	<a href="#">6.4.134</a>
Driver1AdditionalInformation	F9CD	0	D1AI	R	<a href="#">6.4.135</a>
Driver2AdditionalInformation	F9CE	0	D2AI	R	<a href="#">6.4.136</a>
StandardRevision	F9CF	M	SD	R	<a href="#">6.4.1</a>
MotionSensorSerialNumber	F9D0	M	MSSN	R	<a href="#">6.4.137</a>
RemoteCommunicationFacilitySerialNumber	F9D1	M	RCFSN	R	<a href="#">6.4.138</a>
ExternalGNSSFacilitySerialNumber	F9D2	M	EGNSSFSN	R	<a href="#">6.4.139</a>
SmartTachographSealsSerialNumber	F9D3	M	STSSN	R/W	<a href="#">6.4.140</a>
VuSerialNumber	F9D4	M	VSN	R	<a href="#">6.4.141</a>
ByDefaultLoadType	F9D5	M	BDLT	R/W	<a href="#">6.4.142</a>
TachographCardsGen1Suppression	F9D6	M	TCG1S	R/W	<a href="#">6.4.143</a>
VehiclePosition	F9D7	M	VP	R	<a href="#">6.4.144</a>
CalibrationCountry	F9D8	M	CC	R	<a href="#">6.4.145</a>
Driver1TimeLastLoadUnloadOperation	F9D9	0	D1TLLUO	R	<a href="#">6.4.146</a>
Driver2TimeLastLoadUnloadOperation	F9DA	0	D2TLLUO	R	<a href="#">6.4.147</a>
DriversConsentOnPrivateData	F9DB	0	DCOPD	R	<a href="#">6.4.148</a>
FerryTrainStatus	F9DC	0	FTS	R	<a href="#">6.4.149</a>

## 5.2 Routine identifiers (RID)

The RIDs used in the diagnostic services RoutineControlByIdentifier specified in ISO 16844-6 shall be in accordance with [Table 2](#).



Table 2 — Routine identifiers

Routine identifier	Value	Cvt.	Simplified mnemonic
TimeAdjustment	0100 <sub>16</sub>	0	TA
MotionSensorVehicleUnitPairing	014F <sub>16</sub>	0	MSVUP
DisplayTest	0150 <sub>16</sub>	0	DT
LCDNegativeModeTest	0151 <sub>16</sub>	0	LNMT
PrinterTest	0152 <sub>16</sub>	0	PT
HardwareTest	0153 <sub>16</sub>	0	HT
CardReaderTest	0154 <sub>16</sub>	0	CRT
Reserved by document	0155 <sub>16</sub>	0	RBD
ButtonTestLoop	0156 <sub>16</sub>	0	BTL
CodeTest	0158 <sub>16</sub>	0	CT
RemoteTachographCardDataTransfer	0180 <sub>16</sub>	0	RTCDT

## 6 Parameters and values

### 6.1 Transmitted parameter ranges

The ranges used to determine the validity of a transmitted parameter, to denote the state of a discrete parameter as well as to denote the state of a control mode command shall be implemented as specified in SAE J1939-71.

Measured parameters have the access attribute R and status parameters have the access attribute R/W.

### 6.2 Structured parameters

When a parameter is structured, it shall be coded as specified ISO 14229-1.

### 6.3 Date and time parameter specifications

#### 6.3.1 Day

This parameter indicates the “day” of a date. The "day" parameter shall comply with the specification given in SAE J1939/71 (PG TD).

#### 6.3.2 Month

This parameter indicates the “month” of a date. The "month" parameter shall comply with the specification given in SAE J1939/71 (PG TD).

#### 6.3.3 Year

This parameter indicates the “year” of a date. The "year" parameter shall comply with the specification given in SAE J1939/71 (PG TD).

### 6.4 Parameter specifications

#### 6.4.1 Standard revision

This parameter indicates the edition of the parts of the ISO 16844 series being supported by the RE. The parameter shall be implemented as specified in [Table 3](#). If this parameter is not present, the implied values shall be 1 (first version) for all parts of the ISO 16844 series.