

Proposal for amendments to document EDR-DSSAD-01-03

The modifications to the existing text of the draft Regulation (see EDR-DSSAD-01-03) are marked in bold for new or strikethrough for deleted characters.

I. Proposal

Paragraph 5.5, amend to read:

5.5 Data retrieval tools

~~Each manufacturer of a motor vehicle equipped with a EDR shall ensure by licensing agreement or other means that a tool(s) is available that is capable of accessing and retrieving the data stored in the EDR that are required by this regulation. The tool(s) shall be available not later than when the Type Approval is granted.~~

5.5.1 General requirements

After event, data recorded by EDR shall be retrieved and be protected from tampering or deletion.

5.5.2 Data retrieval port

EDR data retrieval port shall be in compliance with the port definition in ISO 15031-3.

5.5.3 Data retrieval protocol

5.5.3.1 Data retrieval based on controller area network (CAN)

5.5.3.1.1 11-bit CAN identifier

5.5.3.1.1.1 Functional addressing

In case of functional addressing, the EDR data retrieval tool shall use the 2^{216} “ReadDataByIdentifier” service in 11.2 of ISO14229-1:2020 for data retrieval. Table X specifies the definition of 11-bit CAN identifier.

Table X Definition of 11-bit CAN Identifier in Function Addressing

CAN ID	Description
$7DF_{16}$	EDR data retrieval tool sends CAN identifier of the function addressing request information
$7XX_{16}$	ECU recording EDR data sends CAN identifier of the physical response information to EDR data retrieval tool
$7XX_{16}-8_{16}$	EDR data retrieval tool sends CAN identifier of the physical request information to ECU recording EDR data

Note: For physical response ID of ECU recording EDR data reply, EDR data retrieval tool uses the principle of ID minus 8 to send the physical request information.

Note: The amount of remaining CF depends on the length of the ECU recording EDR data sending EDR response data to EDR data retrieval tool.

5.5.3.1.1.2 Physical addressing

In case of physical addressing, the EDR data retrieval tool shall use the 2^{216} “ReadDataByIdentifier” service in 11.2 of ISO14229-1:2020 for data retrieval. Table X+1 specifies the definition of 11-bit CAN identifier.

Table X+1 Definition of 11-bit CAN Identifier in Physical Addressing

CAN ID	Description
7F1 ₁₆	EDR data retrieval tool sends CAN identifier of the physical request information to ECU recording EDR data
7F9 ₁₆	ECU recording EDR data sends CAN identifier of the physical response information to EDR data retrieval tool

5.5.3.1.2 29-bit CAN identifier read data

The EDR data retrieval tool shall use the 22₁₆ “ReadDataByIdentifier” service in 11.2 of ISO14229-1:2020 for data retrieval. TableX+2 specifies the definition of the 29-bit CAN identifier, Table X+3 specifies the definition of the 29-bit conventional fixed addressing CAN identifier format, Table X+4 specifies the definition of the 29-bit Physical Addressing CAN Identifier format.

Table X+2 Definition of the 29-bit CAN Identifier

CAN ID	Description
18 ₁₆ DB ₁₆ FF ₁₆ F1 ₁₆	EDR data retrieval tool sends CAN identifier of the function addressing request information to ECU recording EDR data (FF ₁₆)
18 ₁₆ DA ₁₆ F1 ₁₆ XX ₁₆	ECU recording EDR data (XX ₁₆) sends CAN identifier of the physical response information to EDR data retrieval tool
18 ₁₆ DA ₁₆ XX ₁₆ F1 ₁₆	EDR data retrieval tool sends CAN identifier of the physical request information to ECU recording EDR data (XX ₁₆)
Note 1: ECU recording EDR data (FF ₁₆) is ECU recording EDR data diagnostic address for function addressing. Note 2: F1 ₁₆ is EDR data retrieval tool SA. Note 3: ECU recording EDR data (XX ₁₆) is ECU recording EDR data diagnostic address for physical address. Note 4: Refer to Table 8 for the definition of ECU recording EDR data (XX ₁₆).	

Table X+3 Definition of the 29-bit Conventional Fixed Addressing CAN Identifier

CAN ID	28..24	23..16	15..8	7..0	CAN data field
CAN identifier for function addressing	18 ₁₆	DB ₁₆	TA	SA	N_PCI, N_Data
CAN identifier for physical address	18 ₁₆	DA ₁₆	TA	SA	N_PCI, N_Data

Table X+4 Definition for 29-bit Physical Addressing CAN Identifier

ECU recording EDR data (XX ₁₆)	Description
00 ₁₆ -32 ₁₆	To be customized by manufacturer
34 ₁₆ -EF ₁₆	To be customized by manufacturer

Note: The amount of remaining CF depends on the length of the ECU recording EDR data sending EDR response data to EDR data retrieval tool.

5.5.3.2 Data retrieval based on K-Line

The application layer shall be in compliance with the requirements of “Read data through public identifier” 22₁₆ service in 7.2 of ISO 14230.3-201X.

5.5.4 Data Identifier(DID) for data retrieval

5.5.4.1 DID based on CAN

DID used for EDR data retrieval based on CAN shall be FA13₁₆, FA14₁₆ and FA15₁₆ respectively. Where, FA13₁₆ is the identifier for the most recent event, 0xFA14 is the identifier for the second event from the bottom, FA15₁₆ is identifier for the third event from the bottom.

5.5.4.2 DID base on K-Line

DID used for EDR data retrieval based on K-Line shall be:

—FA10₁₆ is identifier for the public data;

—FA21₁₆, FA31₁₆ and FA41₁₆ are the identifiers for the most recent event;

—FA22₁₆, FA32₁₆ and FA42₁₆ are the identifiers for the second event from the bottom;

—FA23₁₆, FA33₁₆ and FA43₁₆ are identifiers for the third event from the bottom.

5.5.5 Data format

The data format and data arrangement of EDR shall be standardized.
