**EDR-DSSAD: Comparison table**

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| --- | --- | --- | --- | --- |
| **Items** | | **EDR for conventional vehicles** | **EDR for ADs** | **DSSAD**  **(L3-L4)** |
| **Scope**  **(categories of vehicles in the text)** | | Step1: Passenger cars and light duty vehicles (Vehicle categories according to R.E.3: M1, N1)  Step 2: [Heavy duty vehicles (Vehicle categories according to R.E.3: M2,M3,N2, N3)] | | Step1: Passenger cars and light duty vehicles of automation level 3 or 4 with ALKS  Step 2: Heavy duty vehicles |
| **System** |  |  | |  |
| **Purpose**  (why do the contracting parties want to introduce this function into the vehicle?) | Accident analysis | | Research, monitoring, reliability, legal responsibility |
| **What the system should not do** | * Detecting who is driving * Identifying the owner/holder of the vehicle on the basis of the stored data. * [Allowing for the tracking of the owner/the user/the holder of the vehicle] * Providing information about the surroundings of the vehicle | | * Providing data that are already available in the EDR * Identifying the user/owner/holder of the vehicle * [Allowing for the tracking of the owner/the user/the holder of the vehicle] |
| **Recording period** | [X s] before event / [X ms] after event | May be longer for AD system than for conventional vehicles | As long as ALKS is engaged/stand-by. |
| **System storage capabilities** | At least [1 to 3] events | | * Several months (relevant figure TBD) anticipated, or * several thousands of interactions anticipated,   whichever is achieved first. |
| **Capability to record data during a crash event** | Resistance to high deceleration and mechanical stress of a severe impact | | TBD |
| **Data survivability after a crash event** | Resistance to high deceleration and mechanical stress of a severe impact | | |
| **Trigger to initiate the data storage** | “Event” (e.g. crash): physical occurrence that causes the trigger threshold to be met | | “Interaction”:   * change in the system operation status, or * demand for a change in the system operation status |
| **Battery restitution** | All data mandatory per the table of EDR parameters must be stored after an event. | | Final requirement to be aligned on demand from ACSF informal group |
| **Environmental robustness** (vibrations, etc.) | Out of scope: the vehicle is crashed when data are stored, and not subject to any specific vibrations or other environmental aggression | | Requirements fully linked to those of DSSAD |
| **Malfunction detection** | NA\*  \*EDR malfunction is not detrimental to occupant safety | | Requirements fully linked to those of ALKS.  DSSAD will self-diagnose via ALKS |
| **PTI** | TBD | | TBD |
| **Data technique** |  |  | |  |
| **Where to store (in the vehicle vs. the cloud)** | Technology neutral provisions; the request is that “data are available and retrievable” | | |
| **Data format** | The final authorized user (will be defined by national legislation) must get the data in a comprehensive format, without any risk of corruption. | | |
| **Data element** | TBD | | TBD |
| **Storing duration** | Not less than 10 days after EDR is triggered | | Several months if EDR is not triggered (to be determined according to storage capacity)  Not less than 10 days after EDR is triggered (same as EDR) |
| **Retrieval means** | Technical regulation is technology neutral | | |
| **Accuracy** | According to the table of EDR parameters | | * Accuracy relevant for the purpose (research, monitoring, reliability, legal responsibility) * The “data elements” must be stored in the order of occurrence. |
| **Access means** | Technical regulation is technology neutral | | |
| **Erasing means** | FIFO type, when the memory is full, by overwriting | | |
| **Sampling rate** | About 100 Hz, depending on the parameter | | NA |
| **Data identification (this data really belongs to that vehicle)** | * VIN incorporated in data set if data are stored outboard * VIN optional in data set if data are stored inboard | | |
| **Triggering parameter** | Examples: high deceleration, airbag inflation, AEBS activation, ESF activation, etc. | | Significant interactions between the ALKS and the human driver, when ALKS is engaged or in standby mode, and significant system changes or malfunctions. |