Proposal for amendments to document SG-EDR-01-02-EDR Working Draft-Rev3

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

I. Proposal

Item 5.2.1., amend to read:

5.2.1   In a ~~frontal or side air bag~~ deployment crash: capture and record the current deployment data, up to **three** ~~two~~ events. The memory for each air bag deployment event shall be locked to prevent any future overwriting of these data.

Item 5.2.2., amend to read:

5.2.2   ~~In a deployment event that involves another type of deployable restraint (e.g., pretensioners, knee bolsters, pedestrian protection, etc.), or~~ In a non-deployment event that meets the trigger threshold, capture and record the current non-deployment data, up to **three** ~~two~~ events, subject to the following conditions:

(1)   If an EDR non-volatile memory buffer void of previous-event data is available. the current non-deployment event data is recorded in the buffer.

(2)   If an EDR non-volatile memory buffer void of previous-event data is not available, **the non-deployment data shall be overwritten by the previous event data in turn as per time sequence.**~~the manufacturer may choose either to overwrite the previous non-deployment event data with the current non-deployment event data, or not to record the current non-deployment event data.~~

~~(3)   EDR buffers containing previous deployment event data shall not be overwritten by the current non-deployment event data.~~

(4)   In case of a frontal impact event which the vehicle's velocity change in X-axis direction exceeding than 25km/h within 150ms interval, capture and record the current event data. This event data shall be locked to prevent any future overwriting. In case of occurrence of rear-impact, it is permitted to adopt the locking condition of the control algorithm at discretion of the manufacturer as locking condition.

(5)   In case of lateral impact, if vehicle is not configured with lateral non-reversible restraint, vehicle manufacturer shall determine whether to lock.

Insert new item 5.2.3., to read:

"5.2.3.   In case of occurrence of collision, if power supply circuit of vehicle cannot supply power normally due to the impact event, the EDR system itself should have the power supply capability. This power supply capability should satisfy the EDR system shall meet at least the requirements for recording the data from T0 to (150 ± 10) ms after power failure (or cut-off) ."

Item 5.3., amend to read:

5.3   Survivability

The recorded data shall be retrievable ~~by the methodology specified by the vehicle manufacturer for not less than 10 days after a data capture event as defined in paragraph 5.3~~ **in the entire life cycle of the vehicle.**

II.Justification

1.   Learning from relevant research, 94% of the accidents will be covered when EDR records 3 events, while only 88% when EDR records 2 events.

2.   Depends on different forms or phases, an accident can be recorded as several events.

3.   Due to the popularity of the new technology, the cost is not a problem.

4.   The non-reversible restraint deployment event shall be considered a really serious accident, so it needs to be locked.

5.   The non-deployment event is a minor accident event. It is necessary to record the latest event data for investigation.

6.   It applies to the vehicle that are not equipped with the airbag and the seat belt pretensioner. The situation that the vehicle velocity change in X-axis direction is not less than 25km/h within 150ms interval shall be considered a really serious accident. The event data should be locked.

7.   There is no unified lowest requirement of the EDR power supply capability. The specification of the EDR power supply capability has been reached consensus on the power supply capability in the industry.

8.   We consider that the data shall be retrieved in long term, because the period of investigation may be longer than 10 days.

––––––––––––