Proposal for EDR data capture

The modifications to the existing text of the draft Regulation are marked in bold for new or strikethrough for deleted characters.

 I. Proposal

*Item 2.46.,* amendto read:

2.46 “Trigger threshold” means **the conditions to record an EDR record.**

*Insert new item 2.52.,* to read:

 **“Locked event” means an EDR record that meets the locking condition. It shall not be overwritten by subsequent events.**

*Insert new item 2.53.,* to read:

 **“Unlocked event” means an EDR record that does not meet the locking condition. It may be overwritten by subsequent events.**

*Item 3.3.,* amendto read:

3.3.0 Data capture

 ~~The data elements for every event shall be captured and recorded by the EDR, as specified in section 3.1 in accordance with the following conditions and circumstances.~~

 Remark: The language has a problem with the facts.

*Item 3.3.0.,* amendto read:

3.3.0 Conditions for triggering

3.3.0.1 When vehicle reaches the following trigger threshold conditions, the event shall be recorded:

-For vehicles that record “delta-V, longitudinal” only, trigger threshold means a change in vehicle velocity in the X-axis direction that is not less than 8km/h within a 150ms interval.

-For vehicles that record “delta-V, lateral” also, trigger threshold means a change in vehicle velocity in either the X-axis or Y-axis direction that is not less than 8km/h within a 150ms interval.

3.3.0.2 For both cases above, if the event is less than 150 ms in duration, when a change in vehicle velocity is not less than 8 km/h, that is, the trigger threshold is reached.

3.3.0.3 When the manufacturer sets other trigger thresholds, the requirements of 3.3.0.1 and 3.3.0.2 shall also be met.

*Item 3.3.1.,* amendto read:

3.3.1 Locking of recording

3.3.1.1 In the following cases, the memory for the event shall be locked to prevent any future overwriting of the data:

-In all the cases where a non-reversible occupant restraint system is deployed.

-In the case of a frontal impact, if the vehicle is not equipped with a non-reversible restraint system for front impact, when the vehicle’s velocity change in x-axis direction exceeds 25 km/h within 150ms interval.

3.3.1.3. In case of rear impact, the vehicle manufacturer shall set other lock conditions.

3.3.1.4. In cases other than the ones described in paragraph 3.3.1.1. ,3.3.1.2 and 3.3.1.3. above, the vehicle manufacturer may choose to lock the memory.

**3.3.X The EDR system should have the capability to record at least three consecutive event data if there is no locked event happened before.**

*Item 3.3.3.,* amendto read:

3.3.3. Overwriting

3.3.3.1 If no further space is available for EDR to record an event, the unlocked event data shall be overwritten by the current event data in chronological order. But the locked event data shall not be overwritten by subsequent event data.

3.3.3.2 For unlocked events, manufacturer can specify other event overwritten condition.

3.3.4. Power failure

3.3.3.1 During the collision, if the the vehicle battery failed to provide the power supply for the EDR system due to the collision event cutting off the power circuit, the EDR system shall have backup power supply independently. In the collision of a single direction which all relevant firing loops (if available) are fully deployed within (150±10) ms after power failure (or cut-off) , the backup power supply shall be enough for the EDR system to record all the data before T0 and the data from T0 to (150 ± 10) ms after power off at least. And this requirement shall be validated though bench test.