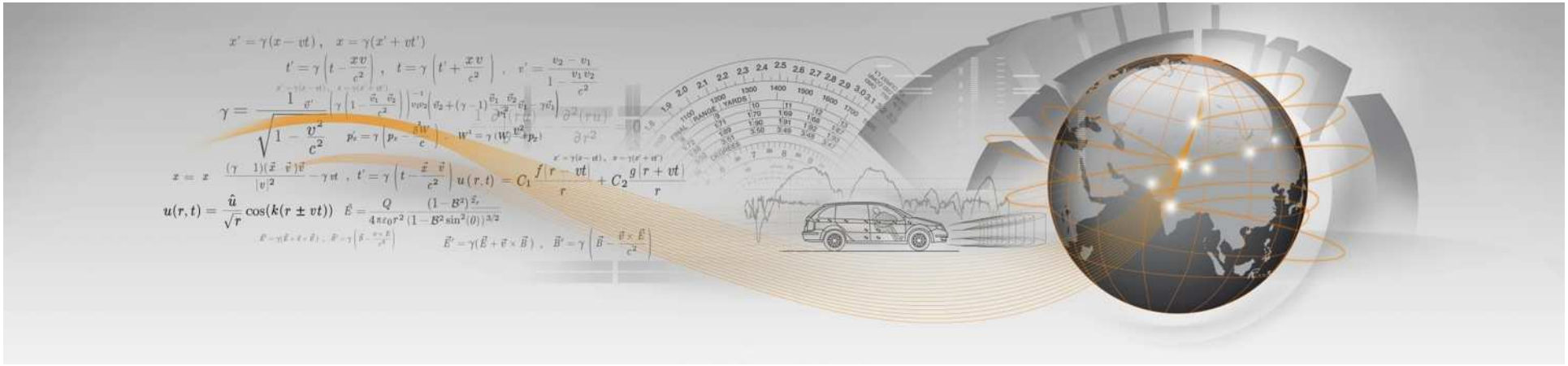

# CUM3MS NOT CONSISTENT IN R129

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# In R129:

6.6.4.3.1. Injury assessment criteria for frontal and rear impact as in Table 3.

| | | |
|---|---|---|
| **Head acceleration 3 ms** | A head 3 ms g | 75 or 80 |
| **Chest acceleration 3 ms** | A chest 3 ms g | 55 |

6.6.4.3.1. Injury assessment criteria for frontal and rear impact as in Table 3.

Table 3

| *Criterion* | *Abbreviation* | *Unit* | *Q0* | *Q1* | *Q1,5* | *Q3* | *Q6* |
|---|---|---|---|---|---|---|---|
| Head performance criterion (only in case of contact during in-vehicle testing) | HPC* (15) | | 600 | 600 | 600 | 800 | 800 |
| Head acceleration 3 ms | A head 3 ms | g | 75 | 75 | 75 | 80 | 80 |
| Upper neck tension Force | Fz | N | For monitoring purpose only** | | | | |
| Upper neck flexion moment | My | Nm | For monitoring purpose only*** | | | | |
| Chest acceleration 3 ms | A chest 3 ms | g | 55 | 55 | 55 | 55 | 55 |

* HPC: see Annex 17.
** To be reviewed within 3 years following entry into force of this Regulation.
*** To be reviewed within 3 years following entry into force of this Regulation.

# In R129:

6.6.4.5.2. Injury assessment criteria for lateral impact.

**Head acceleration 3 ms** A head 3 ms g 75 or 80

6.6.4.5.2. Additional Injury assessment criteria for lateral impact

| *Criterion* | *Abbreviation* | *Unit* | *Q0* | *Q1* | *Q1.5* | *Q3* | *Q6* |
|---|---|---|---|---|---|---|---|
| Head performance criterion | HPC (15) | | 600 | 600 | 600 | 800 | 800 |
| Head acceleration 3 ms | A head 3 ms | g | 75 | 75 | 75 | 80 | 80 |
| Upper neck tension force | Fz | N | For monitoring purpose only* | | | | |
| Upper neck flexion moment | Mx | Nm | For monitoring purpose only** | | | | |

* To be reviewed within 3 years following entry into force of this Regulation.
** To be reviewed within 3 years following entry into force of this Regulation.

# In R129:

8.1. The test report shall record the results of all tests and measurements including the following test data:

(h) The following dummy criteria: HIC, **Head acceleration 3 ms**, Upper neck tension force, Upper neck moment, Thorax chest deflection;

(h) The following dummy criteria: HIC, Head acceleration 3 ms, Upper neck tension force, Upper neck moment, Thorax chest deflection; and

# In R129:

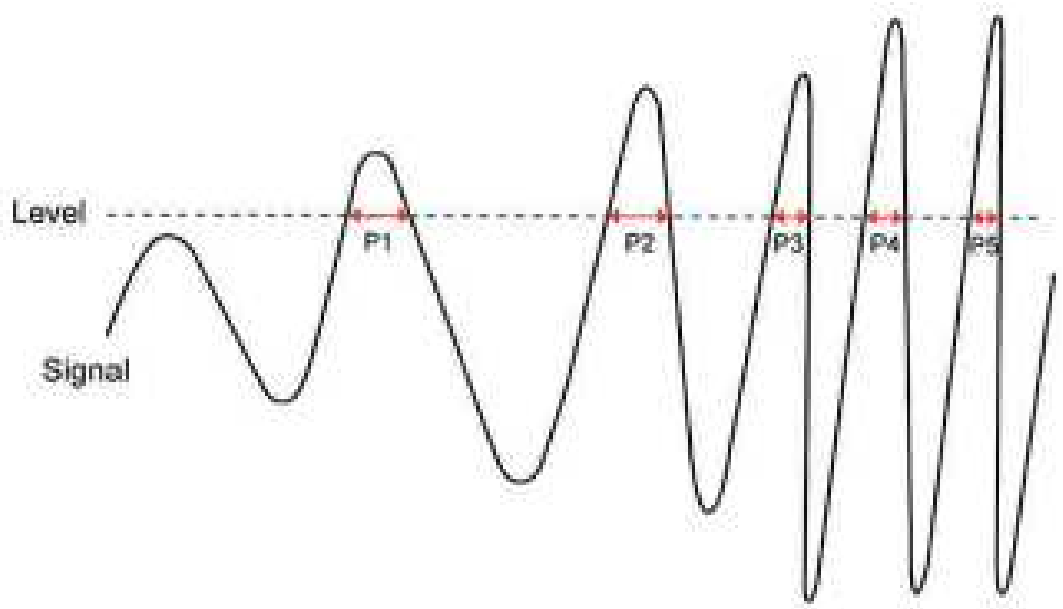
**Annex 17:**

1.3. The value of the resultant **head acceleration** during forward impact which is exceeded **for 3 ms cumulatively** is calculated from the resultant head acceleration.

1.3. The value of the resultant head acceleration during forward impact which is exceeded for 3 ms cumulatively is calculated from the resultant head acceleration.[2]

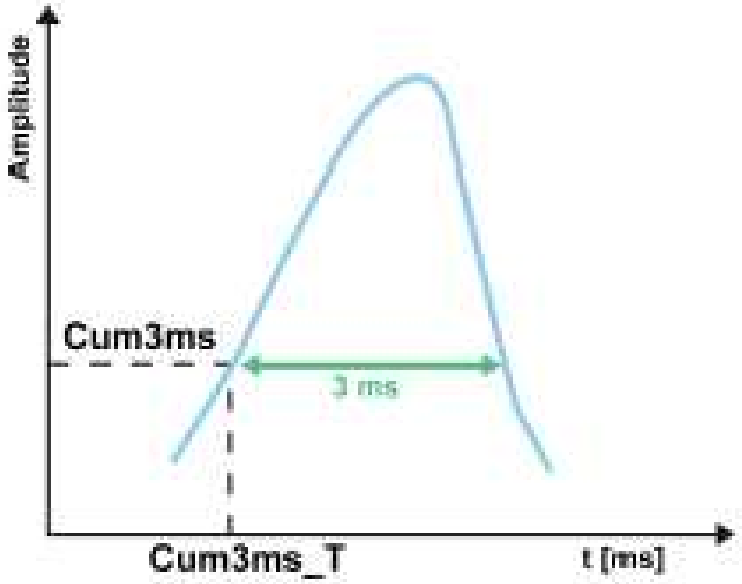
# Cum3ms:

**Function:**
This function returns the highest acceleration level with a cumulative duration of at least 3ms.



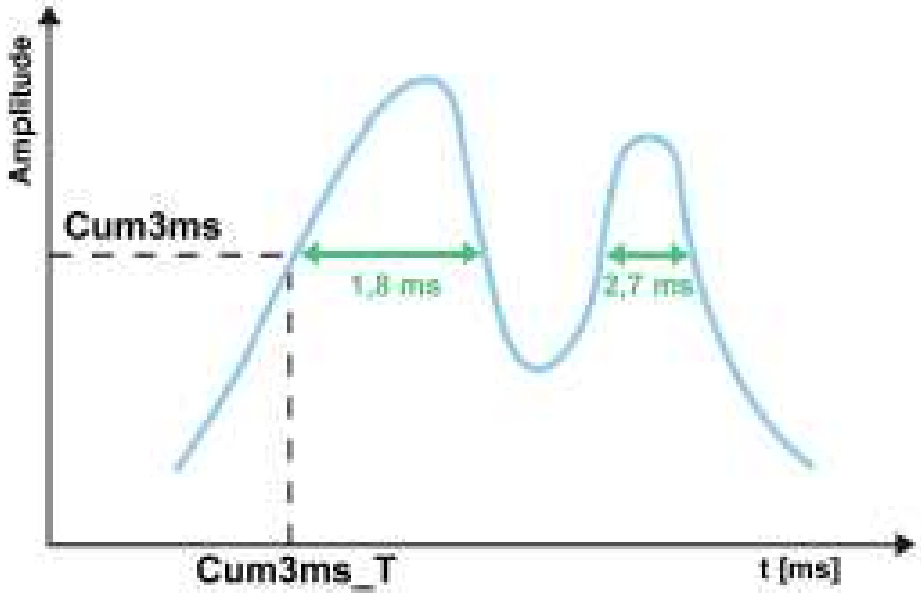
# Cum3ms options:

**Function:**
The Cum3ms can be calculated with one peak.



# Cum3ms options:

**Function:**
The Cum3ms can be calculated with several peaks.



# New Cum3ms proposal for R129:

6.6.4.3.1. Injury assessment criteria for frontal and rear impact as in Table 3.

Change *A head 3 ms* into ***A head Cum3ms***
Change *A chest 3 ms* into ***A chest Cum3ms***

6.6.4.5.2. Injury assessment criteria for lateral impact

Change *A head 3 ms* into ***A head Cum3ms***

***Add below both tables a footnote:***
***Cum3ms: This function returns the highest acceleration level with a cumulative duration of at least 3ms (several peaks).***

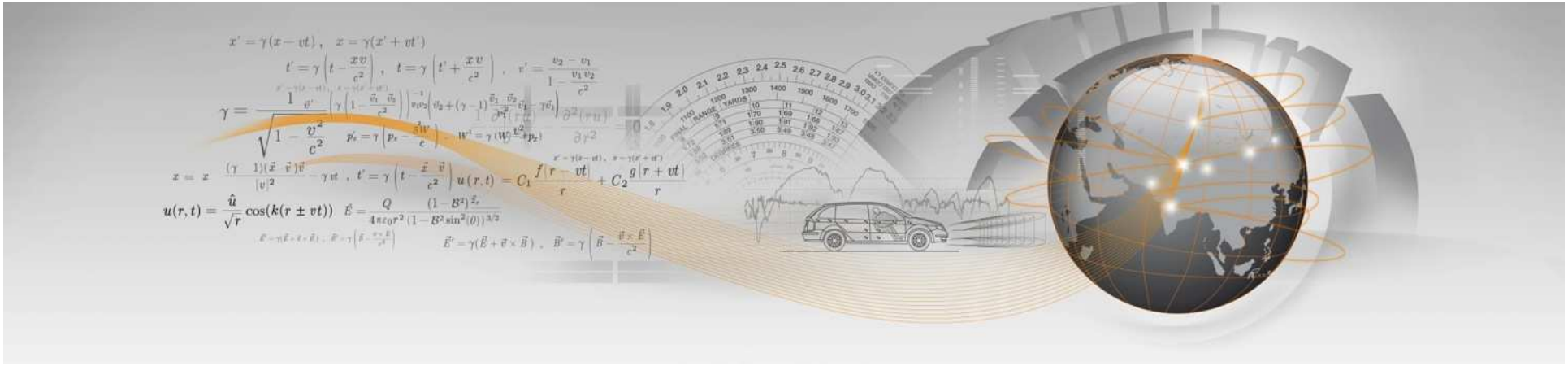
# Cum3ms proposal:

**Change 8.1.** The test report shall record the results of all tests and measurements including the following test data:

(h) The following dummy criteria: HIC, Head acceleration ***Cum3ms***, Upper neck tension force, Upper neck moment, ***Chest acceleration Cum3ms***;

**Change Annex 17:**

1.3. The value of the resultant head acceleration during ~~forward~~ ***frontal, rear, and lateral*** impact which is exceeded for 3 ms cumulatively is calculated from the resultant head acceleration.



# FOR MORE INFORMATION: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