

Comments to

Technical Bulletin

Data format and Injury Criteria Calculation

Version 1.1

June 2015

TB021

1.1.1.1 ISO-MME 1.6

The <testnumber>.CHN file in the <Channel> subdirectory is missing.

-> changed

The <testnumber>.MII file in the <Movie> subdirectory is missing.

-> discussion

The <Object> subdirectory is not mandatory in MME 1.6 and for the object information files no definition exists.

-> changed

The <testnumber>.PHO file in the <Photo> subdirectory is missing.

-> discussion

The naming of all Comment files is changed by inserting the <testnumber>.

-> discussion

1.1.2.1 List with type and subtype of the test

-> discussion

EuroNCAP test	Type of Test	Subtype of test	Type of the Test	Subtype of the test
Frontal ODB	Frontal	ODB	Frontal Impact	ODB Leftside
Frontal FW	Frontal	FW	Frontal Impact	0 Degree Active
Side MDB	Side	MDB	Side Impact Leftside	Barrier 90 Degree
Side Pole	Side	Pole	Side Impact Leftside	Pole 75 Degree
Whiplash	Whiplash	Low	Rear Sled Test	Whiplash-LowPulse
		Medium		Whiplash-MediumPulse
		High		Whiplash-HighPulse
Pedestrian	Pedestrian	Headform	Pedestrian Protection	Adult Headform To Windscreen
				Adult Headform To Bonnet
				Child Headform To Windscreen
				Child Headform To Bonnet
		Upper Legform		Upper Legform To Bumper
		Lower Legform		Upper Legform To Bonnet
				Lower Legform To Bumper

Reasons for the differences:

- The view of the MME-TaskForce is not restricted to the 6 test procedures of EuroNCAP and should cover the complete safety test scenarios.
- For asymmetric tests the information about the main impact zone is important for the preparation process. The connection of the side information to the testtype or to the testsubtype is arbitrary to balance the list length.
- Crash tests and Crash simulations on a sled can be named 'Frontal', 'Side' and 'Rear' -> Decision between Impact and Sled Test. For example: Frontal Impact and Rear Sled Test.
- Whiplash is seen as a specific kind of sled test
- EuroNCAP makes no difference between Adult and Child headforms
- EuroNCAP makes no difference between the targets Windscreen, Bonnet and Bumper

1.2.1 Hybrid III 50% Male

Pelvis Accelerations with CFC 600 are in conflict to SAE J211 with CFC 1000.

-> new found

1.2.1.1 Hybrid III 5% Female

Pelvis Accelerations with CFC 600 are in conflict to SAE J211 with CFC 1000.

-> new found

Lumbar Spine Forces and Moments with CFC 180 are in conflict to SAE J211 with CFC 600. -> changed

Iliac Forces and Moments with CFC 180 are in conflict to SAE J211 with CFC 600. -> discussion

1.2.1.2 WorldSID 50% Male

-> new

The Injury Calculation column has been changed:

Peak acceleration and *Peak force* has been deleted for T12, Pelvis and Femoral Neck.

Displacements for Shoulder, Thorax and Abdomen with CFC 180 are in conflict to

SAE J211 with CFC 600 for Deflections.

-> new found

1.2.1.4 Q1½

-> new

1.2.1.5 Q3

-> new

The Injury Calculation column has been changed:

Peak resultant acceleration Resultant(+ve) 3msec exceedance has been deleted for Neck Moments and Chest Deflection.

Peak acceleration has been changed to *Resultant 3ms exceedance*.

2. INJURY CRITERIA CALCULATION

-> new

The following comment was added:

For all of the calculations and for all of the dummies used (except for the Q1.5 and Q3), only the loading phase of the crash is considered.

2.3.2 Lateral Shoulder Rib Displacement

-> changed

2.4.3 Lateral Thoracic Rib Displacement

-> changed

2.5.2 Lateral Abdominal Rib Displacement

-> changed

Use $D_y(t) = L_t \sin(\beta_t) - L_0 \sin(\beta_0)$ with β starting at the dummy X-axis instead of

$D_y(t) = L_t \cos(\alpha_t) - L_0 \cos(\alpha_0)$ with α starting at the dummy negative Y-axis

➔ Content of the angle channels have to be discussed

Coding for the rib deflection channels has to be changed from WSDS0 to WSDC0.

2.6.1 Iliac Force Drop

-> new

The formula has been changed:

$IFD(t) = F_{iliac}(t) - F_{iliac}(t - 0.001)$ was changed to $IFD(t) = F_{iliac}(t + 0.001) - F_{iliac}(t)$

Legend:

-> changed : has been changed from V1.0 to 1.1 as proposed by MME-TF

-> discussion : has not been changed from V1.0 to 1.1

-> new : has been changed from V1.0 to 1.1

-> new found : not discussed up to now