Informal Group on GTR9 Phase2
Bumper Area Task Force
(IG GTR9-PH2/TF-BTA)
2nd Meeting

J-NCAP Test Data for TF-BTA Activity (Updated)

December 5, 2012

Japan Automobile Standards Internationalization Center (JASIC)

1. Back ground

- At the 1st TF-BTA meeting, TF-BTA chairperson requested Japanese delegations to provide J-NCAP test data relating TF-BTA activity.
- Japanese delegations therefore brought back the request to Japan, then they discussed that with NASVA/J-MLIT (J-NCAP conductors).
- As a result, NASVA/J-MLIT agreed to provide J-NCAP test data relating TF-BTA activity to enhance TF-BTA discussions.

2. J-NCAP protocol regarding Impact Points

3.1.8 Determination of Impact Points

3.1.8.1 Impact Points for Assessment (First Candidate Impact Points)

(1) The impact area shall be identical to the test area as determined in Paragraph 3.1.7.4. The NASVA selects three impact points from the L1, L2 and L3 areas, and selects a single impact point from each sub test area. The selected impact points are assumed by the NASVA to be the most dangerous impact points for a pedestrian leg in each sub test area.

(2) If two of the selected impact points are symmetrical in the longitudinal vertical plane intersecting the vehicle center and are assumed to have the same internal structure, the NASVA may apply one side test result to the other side.

(3) If there are structures outboard of the bumper corners which are deemed to be more injurious than locations in the adjacent third, the NASVA may perform a test for those structures for use in the final vehicle assessment. These tests will be limited to locations between the two outermost ends of the bumper beam/lower rails/cross beam structures. Points selected outside of the bumper corner will be applied to the outermost sub-sub area L1A and/or L3B in the vehicle rating.

(4) The distance between impact points must be more than 132 mm (in straight-line distance between the two points), if the impact points are intended to conduct test actually. If this spacing requirement prevents a test from being performed for a sub-sub test area, the area will be assigned the score from the most appropriate adjacent sub-sub test area (assumed to have equivalent bumper performance) located in the same sub test area or symmetrical sub-sub test area in the longitudinal vertical planes intersecting the vehicle center.

(5) The impact points selected by the NASVA shall be described in Appendix 2-1.

Provided by NASVA/J-MLIT

3. J-NCAP Pedestrian Leg Protection Test in 2011

- Existence: Test for outboard of the bumper corners -

Maker	Name	Test for outboard of the bumper corners
Nissan	LEAF	No
Daihatsu	Mira e:S	No
Suzuki/Nissan	MR Wagon/Moco	No
Toyota	Vitz	No
Fiat	500	No
Suzuki/Mitsubishi	Solio/Delica D:2	No
Suzuki	Splash	**Yes**
Toyota/Subaru	Ractis/Trezia	No
Audi	A1	No
Lexus	CT200h	No
Toyota	Prius Alpha	No
BMW	X1	No
Subaru	Legacy	No
Nissan	ELGRAND	No

← 1 car in 14 car tests

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3. J-NCAP Pedestrian Leg Protection Test in 2011

- Car Information: Test for outboard of the bumper corners -

(1) outer view (front)

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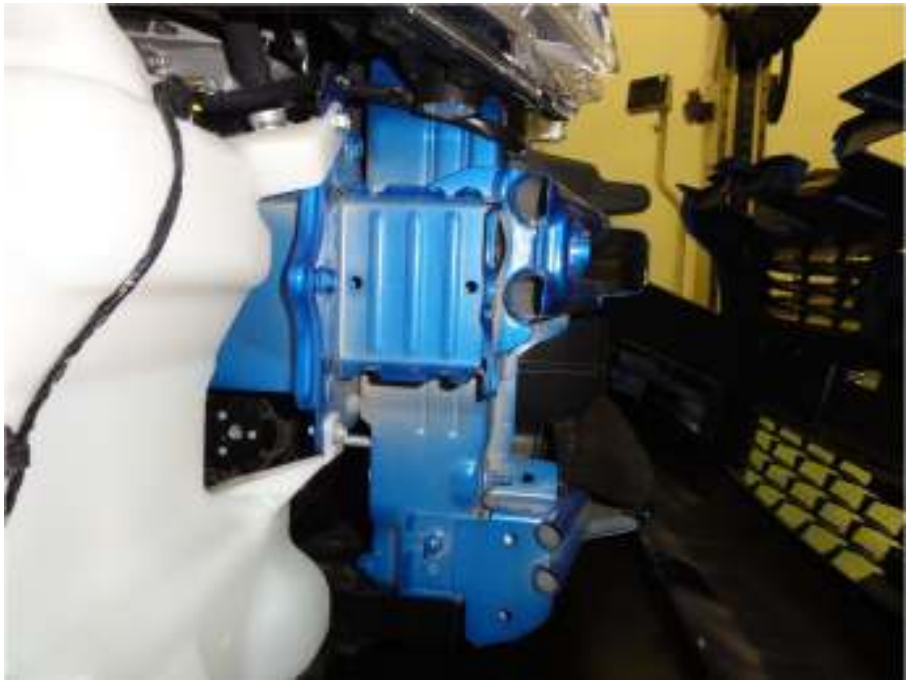
(2) inner view (front-side-top)

3. J-NCAP Pedestrian Leg Protection Test in 2011

- Car Information: Test for outboard of the bumper corners -

(3) inner view (side)



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(4) inner view (side-front)

3. J-NCAP Pedestrian Leg Protection Test in 2011
- Car Information: Asymmetry Construction-

(5.1) inner view (Right Side)

Base for towing hook

(5.2) inner view (Left Side)

No Base for towing hook

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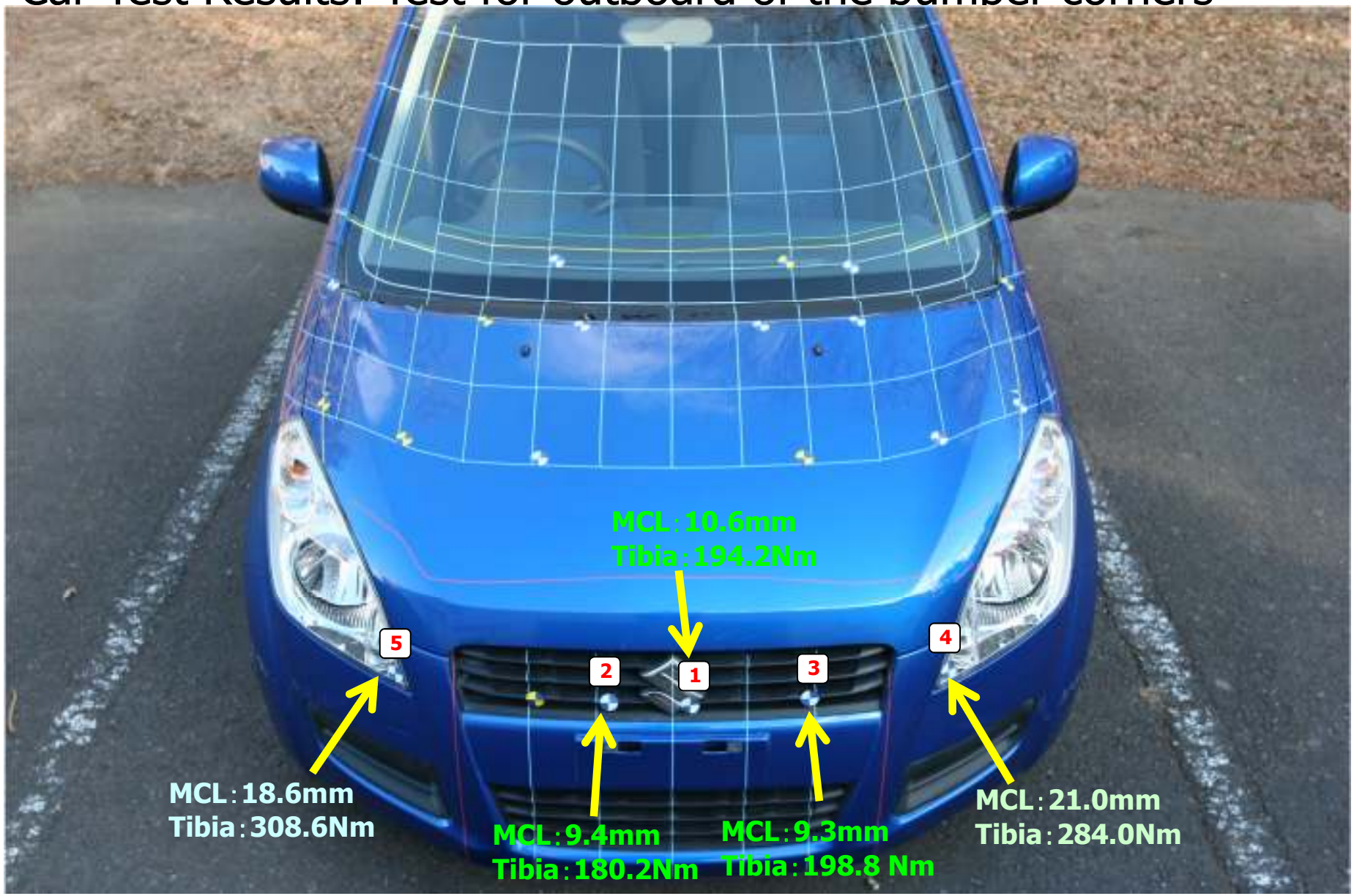
3. J-NCAP Pedestrian Leg Protection Test in 2011

- Car Test Results: Test for outboard of the bumper corners -



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3. J-NCAP Pedestrian Leg Protection Test in 2011

- Impactor Kinematics: Test for outboard of the bumper corners -

Test ID: 4

turn = 0 deg.

turn = around 30 deg.

turn = around 90 deg.

turn = around 180 deg.

Test ID: 5

turn = 0 deg.

turn = around 30 deg.

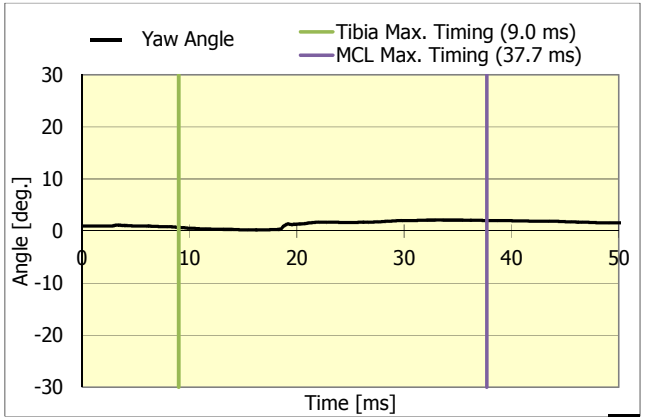
turn = around 90 deg.

turn = around 180 deg.

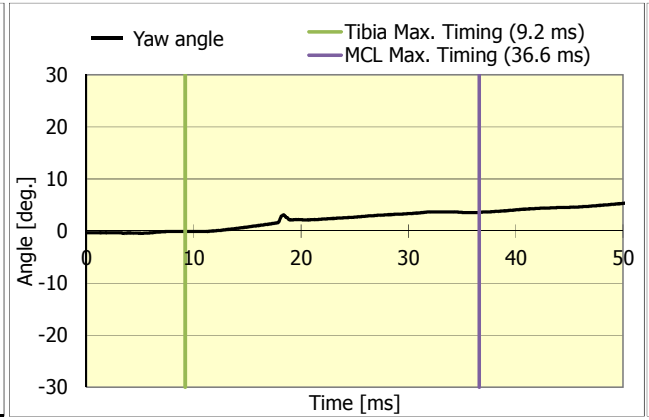
Provided by NASVA/J-MLIT

3. J-NCAP Pedestrian Leg Protection Test in 2011
- Relationship between Tibia/MCL Max. timing and Yaw Angle -

Test ID: 2



Test ID: 1



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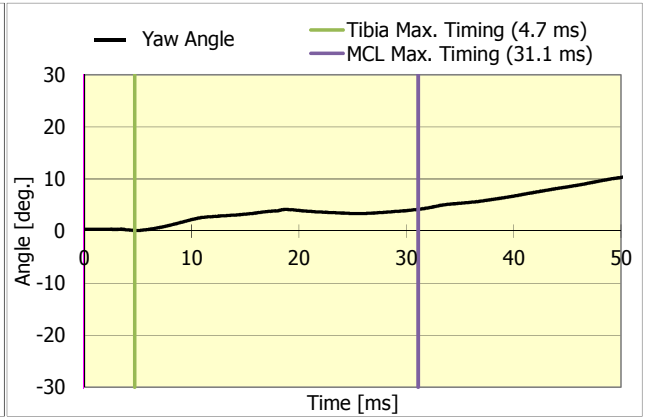

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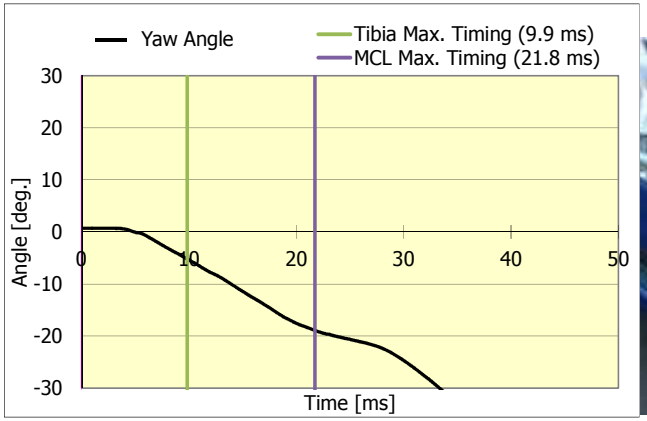
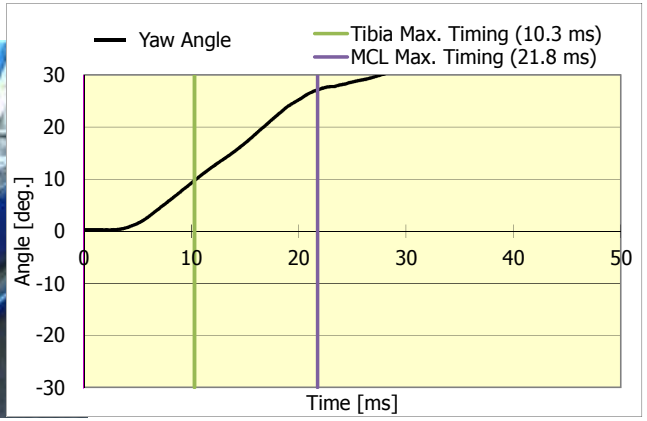


Test ID: 4



Provided by NASVA/J-MLIT