Airbag protector vest Evaluation Test -2 : Landing test

Smaller G measured by an acceleration sensor means that the extent of the shock absorbed is more.

Date of test : June 29, 2012

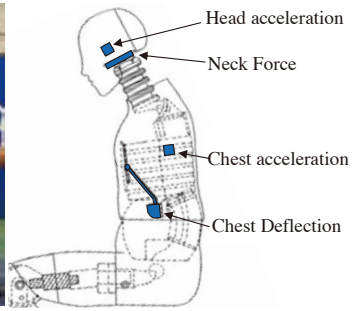
Testing Model

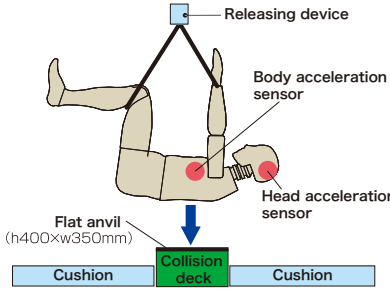
Air protector Vest

Before After

Testing Method

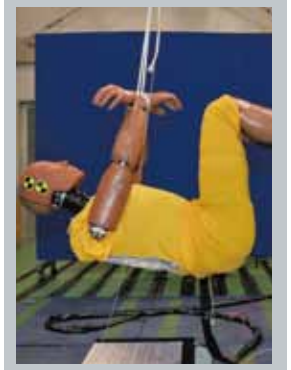
The dummy was suspended from a certain height by a rope tied around its limbs and was dropped onto the collision deck by a releasing device incorporating an electromagnetic mechanism.
Neck and chest accelerations were measured by acceleration sensors.





2. Back side landing test

The maximum body acceleration value obtained from the back side landing of the airbag wearing dummy and non-airbag dummy were compared.

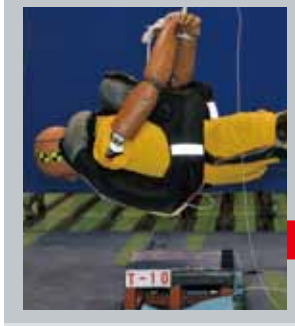
Non-airbag	Airbag wearing
	
Neck 25.9 G	Neck **10.7** G
Body 68.5 G	Body **7.2** G

Pressure of the airbag : 22kpa

It was found that the airbag reduces the neck acceleration by more than 58% and the body acceleration to 89.4% and effectiveness of the airbag is now verified.

3. Front side landing test (Chest)

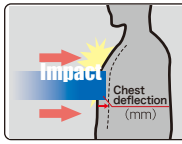
The maximum body acceleration value obtained from the front side landing of the airbag wearing dummy and non-airbag dummy were compared.
Values of maximum chest deflection obtained from the landing on the front of a dummy wearing a airbag.

Non-airbag	Airbag wearing
	
Neck 15.4 G	Neck **7.7** G
Chest 10.8 G	Chest **7.9** G
Chest deflection (mm) 34.6 mm	Chest deflection (mm) **16.5 mm**
AIS 3 probability (%) 11.2 %	AIS 3 probability (%) **5.1** %

Pressure of the airbag : 23kpa

It was found that the airbag reduces the neck acceleration by more than 50% and the body acceleration to 26.8% and effectiveness of the airbag is now verified.

18.1mm (52.3%) was reduced compared to the non-mounted



What is Chest deflection?

The extent of a dent of the chest caused by a shock or pressure. Such a dent may injure the internal organs.

AIS 3

The probabilities of generating a serious AIS 3 injury to the chest (i.e., fracture of at least 3 ribs) as derived from chest deflection measurements.

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