

Overview of the Test



Japan Automobile Research Institute (JARI)

World-famous JARI was established in April 1969 to engage in general research on automobiles. They do test-research, consultation, joint study etc. related to automobiles and have been expanding into a wider field of industrial activity. They work for the Japanese government including Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure, Transport and Tourism etc. (more than 100 cases annually), and for automobile manufacturers, parts manufacturers and their associations, as well as for other industries not necessarily related to automobiles (more than 400 cases annually).



Testing Model

Air protector Vest

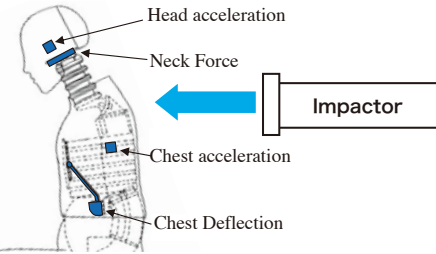


Testing Method

In the back impact test the target impact speed was set at 5.6 m/s (20 km/h). The airbag jacket was manually inflated before each test round.

Dummy(Hybrid-III)

This study was conducted using a front crash Hybrid-III dummy fitted with an airbag vest. The dummy has stature of an average U.S. male adult (height 175 cm, weight 78 kg) and characteristics resembling the human body in structure, shape, weight, and the motion ranges of joints.



Impactor



*Impactor having an impact face diameter of 152 mm
*Impactor a mass of 23.3 kg

1. The back impact test



Impact speed : 4.2m/s (15 km/h)
Pressure of the airbag : 20 kpa



Non-airbag-1



Longitudinal acceleration of chest(G)

165.3G

Non-airbag-2



Longitudinal acceleration of chest(G)

177.1G

Airbag wearing



Longitudinal acceleration of chest(G)

78.0 G

Pressure of the airbag : 20kpa

It was found that the airbag reduces the longitudinal acceleration of chest(G) by more than 55.9% and effectiveness of the airbag is now verified.