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# Technical Bulletin

## **Hybrid III Low Speed Thorax Certification Test & Potentiometer Calibration**

**Version 1.0**

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**TB 005**

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# Hybrid III Low speed thorax certification test

## Background

Since approximately 2002 Euro NCAP has been aware of Hybrid III dummy variability in the chest region. Data supplied by the Euro NCAP test laboratories was reviewed and the following findings were made:

- Dummy characteristics under low speed test conditions are different to normal speed calibration test conditions.
- Dummy response is not linear with respect to impact velocity.
- Dummies that tend to be stiffer in normal calibration tests are not necessarily stiff at lower impact speeds.
- Variation of chest deflection seems to be significantly higher at low speed impacts.
- The influence of temperature is high.
- Chest deflection is dependant on impact energy and not only impact speed.
- The chest deflection is sensitive to the seat belt position.
- Dummy certification procedure does not reflect crash test loading conditions.

In order to more tightly control the variability of the thorax response the Euro NCAP TWG agreed to the following change regarding Hybrid III dummy certification:

**The Hybrid III dummy should meet both the low speed thorax test as prescribed by SAE J2779, as well as the full certification test in CFR572 for future Euro NCAP testing.**

## Implementation date:

Application date for this additional certification test – **immediate, all results published from and including August 2008 will comply with this procedure.**

## Chest Potentiometer calibration

In order to linearise the response from the chest potentiometer the Euro NCAP Technical Working Group also agreed that the dummies should meet the chest pot procedure prescribed by SAE J2517.

## Implementation date:

Application date for this additional calibration test – **immediate, all results published from and including August 2008 will comply with this procedure.**