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**Motorcycles — Test and analysis  
procedures for research evaluation of  
rider crash protective devices fitted to  
motorcycles —**

Part 7:

**Standardized procedures for  
performing computer simulations of  
motorcycle impact tests**

**AMENDMENT 2: Correlation factors**

*Motorcycles — Méthodes d'essai et d'analyse de l'évaluation par  
la recherche des dispositifs, montés sur les motocycles, visant à la  
protection des motocyclistes contre les collisions —*

*Partie 7: Méthodes normalisées de simulation par ordinateur d'essais  
de choc sur motocycles*

*AMENDEMENT 2: Facteurs de corrélation*



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This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 38, *Motorcycle and mopeds*.

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# Motorcycles — Test and analysis procedures for research evaluation of rider crash protective devices fitted to motorcycles —

Part 7:

## Standardized procedures for performing computer simulations of motorcycle impact tests

### AMENDMENT 2: Correlation factors

4.5.4

*Add the following paragraphs before Table 4.*

Regarding variables of helmet centroid and hip target displacement defined in Table 4, if the maximum value of FST is less than  $\pm 3$  cm, these parameters may be excluded from the average calculation of correlation factors (see Annex C).

The parameters and correlation factors (see Annex C) which are excluded from average calculation shall be documented in accordance with ISO 13232-8:2005, B.6.3.4.1 along with the fact that they have been excluded.

*Annex C*

*Add the following annex.*

## Annex C (informative)

### Correlation factor

There is a problem regarding the full-scale test (FST) comparisons during simulation calibration specified in 4.5.4; the correlation factor with the simulated variable may become unreasonably low. This may become obvious when the FST variable (displacement defined in Table 4), which is obtained by high-speed camera image analysis, is small.

To solve the problem, it is allowed to exclude parameters which correspond to small FST variables from the average calculation of correlation factors. Such parameters do not substantially affect the actual correlation.

When determining the acceptable range of the FST variable to exclude the parameter, ISO 13232-6:2005, 4.5.2 serves as a reference: when comparing the pre-test set up photographs with the pre-impact photographs, the positions of the dummy helmet centroid point and of the dummy joint locations, with respect to the motorcycle, shall agree to within  $\pm 3$  cm.

The same range ( $\pm 3$  cm) can also be applied in this context.