

Proposed wording by Japan for the preamble on the headform (damped) accelerometer issue:

Insert under

IV discussion of issues addressed by the gtr

- (f) Test conditions
- (i) Head protection

“Accelerometer

It is recommended to use a damped accelerometer (as specified in INF GR / PS / 133) in the adult / child headform impactor. As explained in INF GR / PS / 96, a research program in 2002 using the J-NCAP headform test with undamped accelerometers, abnormal acceleration signals with high HIC values were recorded frequently in windshield impacts and also in bonnet impacts.

It was estimated that this was due to the resonance vibration of the undamped accelerometer, which would occur if the spectrum of the impact waveform was near to the resonance frequency of the accelerometer.

Once a high resonance, over the CAC setting level, occurs, it has a high chance to deform the acceleration waveform, i.e. one cannot obtain a correct acceleration waveform from the undamped accelerometer.”