

Carbody Accelerations²

Parameter	All Vehicles	Requirements
Carbody Lateral (Transient)	$\leq 0.35g$ peak-to-peak 1 sec window ³ excludes peaks < 50 msec	The peak-to-peak accelerations, measured as the algebraic difference between the two extreme values of measured acceleration in any 1-second time period, excluding any peak lasting less than 50 milliseconds, shall not exceed 0.35g for all vehicles.
Carbody Lateral (Sustained Oscillatory)	$\leq 0.10g$ RMS _t ⁴ 4 sec window ³ 4 sec sustained	Sustained oscillatory lateral acceleration of the carbody shall not exceed the prescribed (root mean squared) safety limits of 0.10g for all vehicles. Root mean squared values shall be determined over a sliding 4-second window with linear trend removed and shall be sustained for more than 4 seconds.
Carbody Vertical (Transient)	$\leq 0.45g$ peak-to-peak 1 sec window ³ excludes peaks < 50 msec	The peak-to-peak accelerations, measured as the algebraic difference between the two extreme values of measured acceleration in any one second time period, excluding any peak lasting less than 50 milliseconds, shall not exceed 0.45g for all vehicles.
Carbody Vertical (Sustained Oscillatory)	$\leq 0.16g$ RMS _t ⁴ 4 sec window ³ 4 sec sustained	Sustained oscillatory vertical acceleration of the carbody shall not exceed the prescribed (root mean squared) safety limit of 0.16g for all vehicles. Root mean squared values shall be determined over a sliding 4-second window with linear trend removed and shall be sustained for more than 4 seconds.

Bogie Lateral Acceleration⁵

Parameter	Safety Limit	Filter / Window	Requirements
Bogie Lateral Acceleration	$\leq 0.30g$ RMS _t ⁴	2 sec window ³ 2 sec sustained	Bogie hunting shall not develop below the maximum authorized speed. Bogie hunting is defined as a sustained cyclic oscillation of the bogie evidenced by lateral accelerations exceeding 0.30g root mean squared for more than 2 seconds. Root mean squared values shall be determined over a sliding 2-second window with linear trend removed.