

Vehicle Dimensions and Mass Limits

Land Transport Rule

Vehicle Dimensions & Mass 2002

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Purpose of rule

- To enable vehicles to fit safely on the road network and not unduly damage it.
- To enable roads to be uniformly designed to cater for traffic within the expected economic life of pavements and bridges.

Application of rule

- The rule applies to all vehicles using public roads from pedal cycle through to a heavy combination vehicle effective 1 July 2002.
- It includes the provisions and operating conditions for overdimension and overweight vehicles.

Ancestral rights

Existing vehicles may continue to operate except some must meet:

- Static roll threshold (SRT)
- Trailer truck mass ratio
- Overdimension operating conditions

Rule improves safety & efficiency

- By simplifying the requirements.
- By rationalising & consolidating previous requirements.
- By checking all requirements under a suite of performance measures.

Maximum limits remain at:

- 20 metres overall combination length.
- 44 tonne gross mass.

But, more vehicles will have access to the maximum limits due to rationalisation.

Measures to reduce the truck crash rate

- Static roll threshold (SRT) = 0.35 g min.
- Trailer truck mass ratio (TTMR) of 1.5:1.
- 20% min gross mass on front axle.

Static roll threshold (SRT)

- Max steady turning acceleration without rollover. Target value is 0.35 g.
- NC trucks (over 12 t) must meet target by 1 January 2003.
- TD trailers (over 10 t) must be certified if load height exceeds 2.8 m, by 1st CoF renewal after 1 Jan 2003 for new trailers and 1 July for existing trailers.

Effect of SRT on crash risk

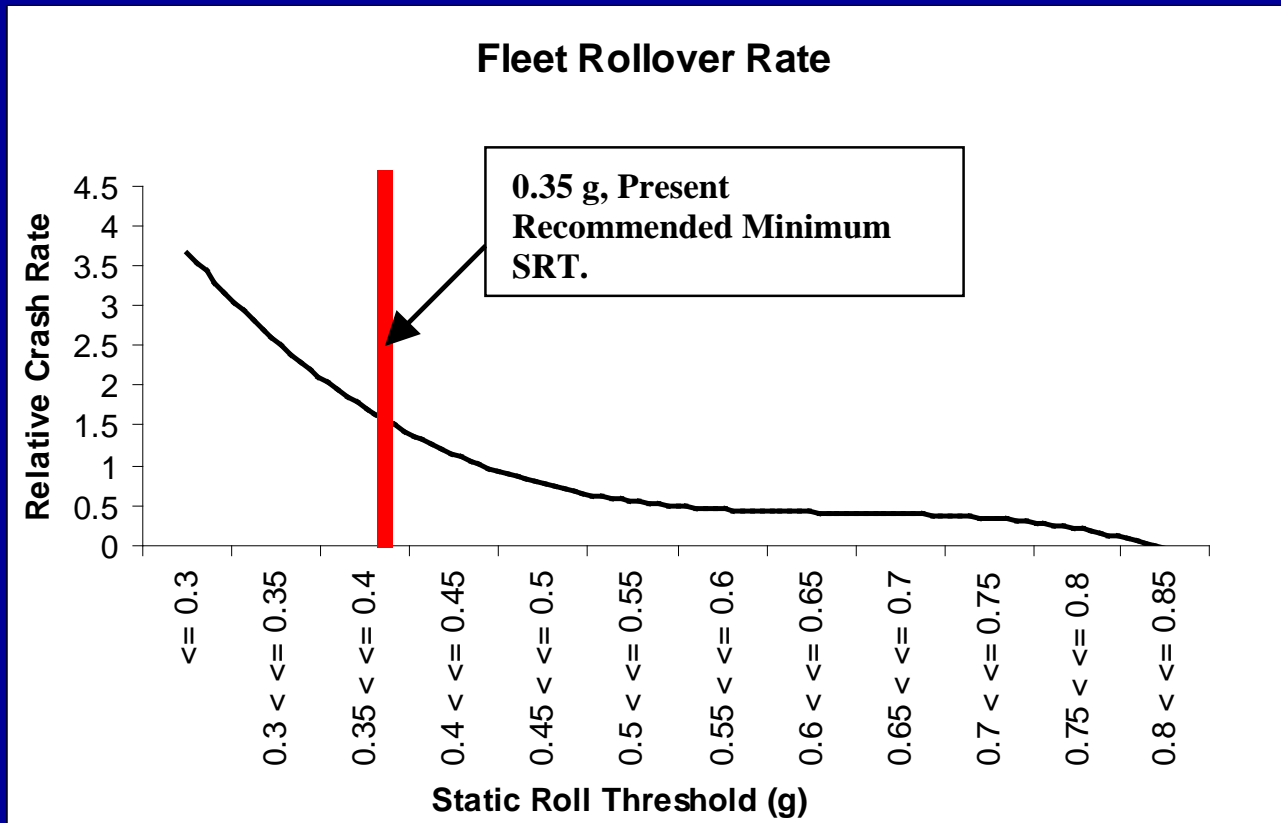


Figure 1. Relative Crash Rate of Fleet, SRT.

Example of traditional stability test to determine SRT



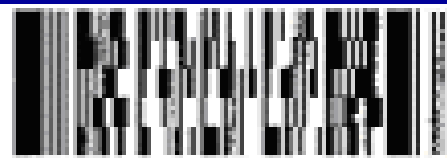
SRT Calculator

- SRT Calculator uses a set of equations to determine the likelihood of a vehicle rolling over.
- It is on the LTSA web site www.ltsa.govt.nz
- About to commence training of certifiers.

SRT on trailer CoL

**LAND TRANSPORT
SAFETY AUTHORITY**

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Axle Group Rating – Front **08325** Axle Group Rating – Rear **16550**
Axle Spacing (mm) **F 4660 – 1290 R**
Wheelbase (m) **4300**

Occupants **002**

Static Roll Threshold **0.35g** **0.00m/00t** **00t / 0.00m**

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