Safety barrier crash test

At a glance

The location

- The crash test was filmed under controlled conditions on the Midland Highway in Tatura
- Midland Highway has two lanes in each direction, with a centre-line barrier down the median strip
- This is typical of high-speed regional roads in Victoria with tress, open paddocks, power poles and other roadside hazards along its length

The vehicle

- A 2240kg Ford Territory was chosen for the test to:
    - Dispel misconceptions that 4WD vehicles flip when they hit safety barriers.
    - Demonstrate that safety barriers work to stop/slow heavy vehicles.
    - Use a common vehicle type in Victoria - SUVs comprise 43% of new vehicle sales
- The vehicle was fitted with a roll cage, three cameras and an accelerometer to help capture data of the forces involved in the crash.

The driver

- The test replicates a common fatigue crash. The driver starts in the left-hand lane travelling at 100km/h. As they fall into a micro sleep they slowly veer toward the barrier at a 7-degree angle and their speed reduces to 90km/h.
- The stunt driver was instructed not to brake or steer actively for two seconds after first contacting the barrier, representing the minimum time taken for a fatigued driver to wake up and take action.
- The stunt driver only had one take to execute the crash, and practised run-throughs for a day and a half beforehand.

The physics

- The vehicle is estimated to have slowed from 90 km/h to 58 km/h in six metres after hitting the barrier
- The vehicle hit 17 posts, each spaced two metres apart, covering 34 metres of the barrier.
- Safety barriers are strong enough to help stop trucks, buses, SUVs and 4WDs.
- Flexible barriers can withstand being hit by passenger vehicles weighing up to 2000kg at 100km/h and larger vehicles weighing up to 8000kg at 80km/h.