SIDE DOOR INTRUSION TEST

How strong a side door of a passenger car have to be is specified in the Australian Design Rule no. 29 as a way to reduce intrusion into the passenger compartment as a result of a side impact.

The load during the test shall be applied such that the travel rate of the loading device does not exceed 13mm per second until the loading device has been displaced either 460mm or at least 310mm. The test shall also be completed within 120 seconds.

The crash resistance shall not be less then:
- 10kn or 0.83 times the unladen weight of the vehicle, whichever which is the lesser figure for the initial crush resistance.
- 15.5kn or 1.3 times the unladen weight of the vehicle, whichever is the lesser figure for the intermediate crush resistance.
- 31kn or 2times the unladen weight of the vehicle, whichever is the lesser figure for the peak crush resistance.

From the results that are recorded during the test a curve of load versus displacement will be plotted and crash distance specified. The quantities divided by the specific crush distances represents the average forces required to deflect the door over these distances.

At ASE we follow the ADRs that are specified above, we can also certify your doors and if your door for some reason doesn’t pass the test you will receive reports on what and why it happened.