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testing to perfection

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Car Door Closing Energy Tester

Specification

When shutting car doors, users need to apply a certain force to initiate the movement and ensure a complete closure. To find out the minimal door closing energy value, the car manufacturer requires a portable system capable of following the specification given below:

- Preload 22N on closed doors
- Open the door with various forces - starting from high to low - in order to reach the closed position with the minimum force.

As the released force would need to be changed in small increments, the force measuring instrument must be capable of storing a maximum amount of values.

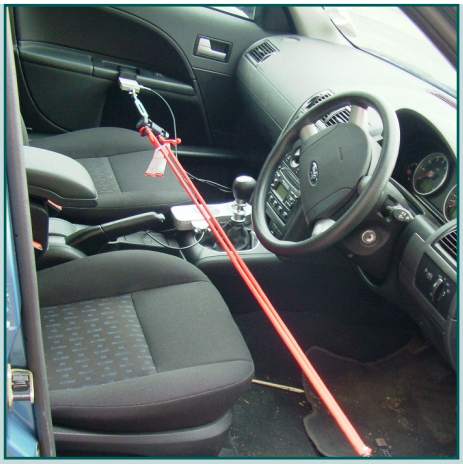
Solution

As the test was to take place inside a car, Mecmesin developed a system using an advanced indicator (AFTI type) which could be connected to a sensor, such as the S-Beam 500N.

With a combination of 2 universal hooks and a spring gauge attached via a nylon shock cord, the system is fixed onto the front or rear-arm rests.

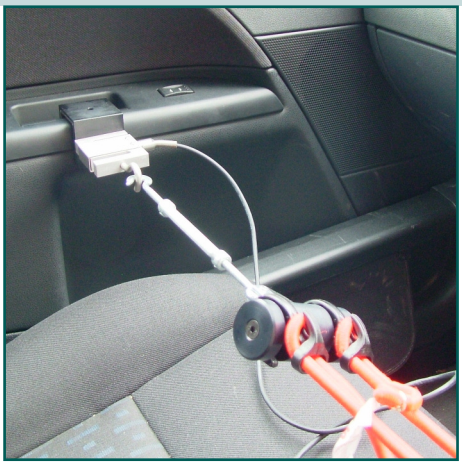
The S-Beam 500N is fastened between one hook and straining screws, which enables the operator to apply a 22N load at the first stage of the test procedure.

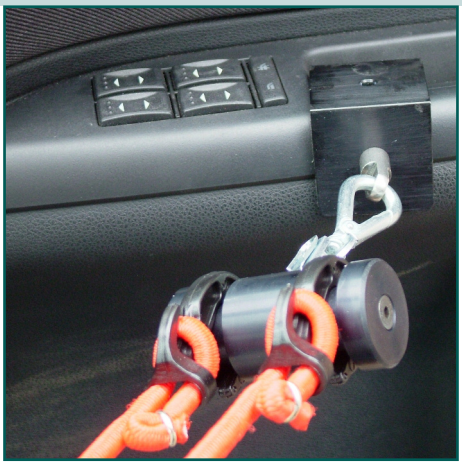
The AFTI memorises up to 100 values and offers the operator the possibility to download the statistical data to a PC or printer after a full test.



System

- 1 x AFTI
- 1 x S-Beam
- 1 x PV4047-Door pull arm rest & spring gauge fixture





Solution

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