



EZSLAM

INSTALLATION/SOFTWARE/USAGE

Q: Question

Why does "Spring Output" increase when detaching a check or opening the opposite side of the door?

A: Answer

The spring effect can be caused by two physical components:

- 1) The check itself that can act as a spring.
- 2) The sheet metal of the door that can be twisted between the upper and lower hinge, creating a 'leaf spring'.

The values measured are 'net' result (to the best capabilities).

When the check is removed, it is quite normal to see a big change in spring energy as the check is the major contributor. It is confirmed as it drops from 0.45 to near 0.

The open-door situation requires some more reflection. As the cabin pressure generally builds up during the last 300 mm of the travel, it generates an unknown energy loss component. However, it would result in a decrease in spring energy. Results indicate the opposite.

Keep in mind that the values are all less than 0.5J, so especially on the topic of friction and spring, we are approaching the sensitivity of the system (estimated at 5% to 10% of total closing energy 10J). We will need to do more experiments if we want to understand the dynamics going on and see if a secondary effect is influencing the outcome.