Defining Thresholds for Your Fleet

Link: https://help.responsiblefleet.com/best-practice/defining-thresholds-for-your-fleet/ Last Updated: July 18th, 2017

Identifying the data you want to track is a pivotal step in creating and maintaining a fleet safety program that works for your fleet. Measure what matters to you and your fleet by configuring thresholds on your devices. Sounds simple enough, right? But wait! You have a range of vehicles, so uniform thresholds cannot be applied to the entire fleet. Did this just get complicated? Not for you!

We are here to help!

The following thresholds can be applied to PNP-3000 devices by utilizing the Device Configuration Page in the Portal:

- Rapid acceleration
- Harsh braking
- Hard left/right turning
- Idling
- Speeding

How are Thresholds Measured?

Definition: G-force, ("G" as in gravitational) is not really a force; it is a felt weight based on acceleration or deceleration. Acceleration is the increase in rate of velocity/speed; deceleration is the decrease of rate of velocity/speed. The measurement involves location, speed, and time.

Here are some real-world g-force examples:

- Decent rollercoasters reach between 3-6g.
- Top fuel dragsters reach an average of 4g.
- Formula One cars during extreme braking maneuvers reach 5g.
- A high performance sports car jamming 0-60 in 2.5 seconds, only reaches 1.5g.
- DOT defines harsh (not dangerous) braking as .45g (Think of your average NYC cab driver).
- >25g means probable death or serious injury.

Tip! Pro and Enterprise Only: Still unsure about what g-force is? See the How Do I Detect A Crash? article.

Recommended G-Force Thresholds

We've done the research for you and here are some recommended default thresholds (in g-force) based on types of vehicles by weight class*:

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Weight Class	Recommended Thresholds
Class 1 6,000 lbs or less	Rapid Acceleration 0.37g Harsh Braking 0.38g Hard Turning Events 0.38g
Class 2 6,001 – 10,000 lbs	Rapid Acceleration 0.35g Harsh Braking 0.36g Hard Turning Events 0.35g
Class 3 10,001 – 14,000 lbs	Rapid Acceleration 0.33g Harsh Braking 0.34g Hard Turning Events 0.33g
Class 4 14,001 – 16,000 lbs	Rapid Acceleration 0.30g Harsh Braking 0.31g Hard Turning Events 0.30g
Class 5 16,001 – 19,500 lbs	Rapid Acceleration 0.28g Harsh Braking 0.29g Hard Turning Events 0.28g

Note. *The above threshold settings are estimates and should be used as a starting point. You'll need to adjust these settings to gather data that really works for your fleet. In addition, please note that the thresholds for a truck at empty or full cargo status (i.e., a delivery truck at the beginning of the day and at the end of the day) may significantly differ and it's important to understand which violations you want to catch.