

# How do I create a safety scorecard?

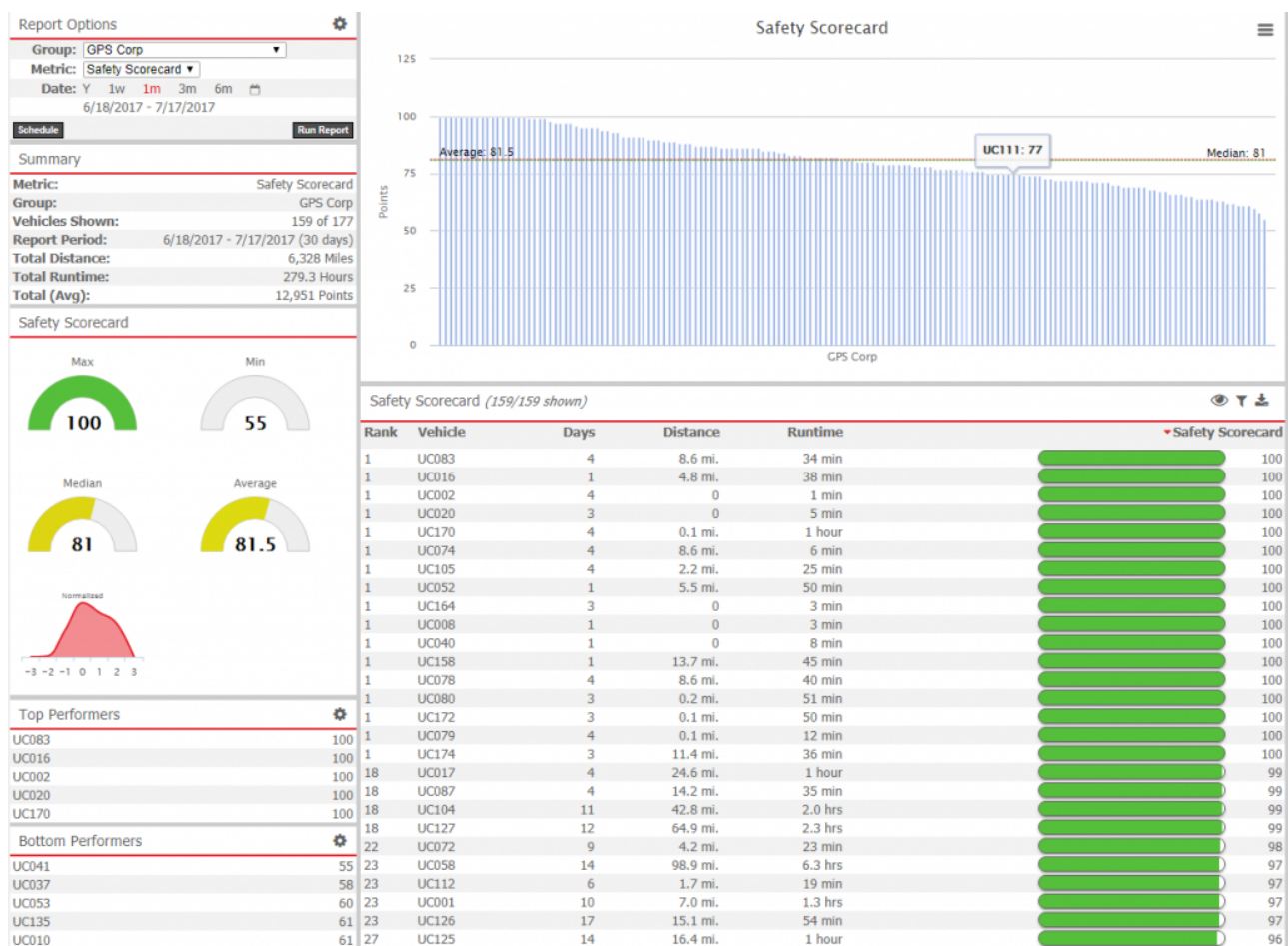
Link: <https://help.gpsinsight.com/deep-dive/how-do-i-create-a-safety-scorecard/> Last Updated: February 6th, 2017

## QUESTION:

Custom metrics has so many options that I am not sure where to start. Do you offer a template for a simple scorecard that focuses on basic safety goals that are common to almost any type of fleet?

**Custom vehicle metrics** is very powerful because it allows you to determine which key performance indicators to count, measure, score, compare and calculate. However, if you're not yet sure *how* you want to measure fleet performance, it can be overwhelming to know which metrics to start with and what thresholds to use.

## Safety Scorecard



The Safety Scorecard is a type of report based on the Sum Scorecard metric, which is designed to lower the potential for fleet-related accidents and improve overall fleet safety. In order for this scorecard to universally apply to any fleet, it relies on your fleet being grouped into two classifications:

- **Light & Medium Duty** – 0 to 26,000 lbs
- **Heavy Duty** – 26,000 lbs or more

The Safety Scorecard then counts the following events for each vehicle group:

## THRESHOLD SPEED

A vehicle operating above a safe\* speed

Thresholds per vehicle group:

- Light & Medium Duty – **80+ mph**
- Heavy Duty – **67+ mph**

## POSTED SPEED

A vehicle operating above a safe\* speed

Thresholds per vehicle group:

- Light & Medium Duty – **10+ mph**
- Heavy Duty – **10+ mph & 15+ mph**

## HARSH BRAKING

A vehicle braking at an unsafe\* rate

Thresholds per vehicle group:

- Light & Medium Duty – **.45+ Gs**
- Heavy Duty – **.40+ Gs**

## RAPID ACCELERATION

A vehicle accelerating at an unsafe\* rate

Thresholds per vehicle group:

- Light & Medium Duty – **.45+ Gs**
- Heavy Duty – **.40+ Gs**

**Note.** \*The safety thresholds are defined by customer data and industry standard safety expectations.

## Setting Up the Safety Scorecard

The Safety Scorecard requires your account to have **metrics enabled**.

**Note.** There are also three varying permissions that you can give a user (or combination of) related to metrics. 1) In order to create/edit custom metrics and use scorecard configuration tools, a user must have the **Custom Metrics** item enabled in the **User Permission List**. 2) In order to run metrics reports (not *create* metrics), a user must have the **Manage Metrics** item enabled in the **Menu Access List** (Custom category). 3) In order to run a traditional metric report, a user must have the **Metrics Scorecard** item enabled in the **Menu Access List** (Report category).

### 1. Divide your fleet into Light/Medium Duty and Heavy Duty vehicle groups.

If you don't already have your vehicles separated into these **groups** or **hierarchy nodes** based on weight classification, either **export your current vehicle list**, copy the VINs, serial numbers, or vehicle label into a new update template for **Vehicle Group Membership**, add columns for the new groups, and import the

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spreadsheet.

	A	B
1	VIN	Vehicle Group
2	CA4642110151	Lt and Med Duty
3	CA4542131790	Heavy Duty
4	1FTFX1R67DFB83452	Lt and Med Duty
5	1N4AL3AP1DN433849	Lt and Med Duty
6	1N4AL3AP1DN433849	Lt and Med Duty

**-OR-**

Manually **create new vehicle groups**, and assign vehicle membership to the different groups by selecting the vehicle labels from a list and moving them to the appropriate group.

Vehicles in Lt and Med Duty	Vehicles <i>NOT</i> in Lt and Med Duty
8024-01	SANTest
8732-01	SM ES-330
AG-Juke	SN - 4230
AL Bench Test 3900I-4	SN - PNPvb
AL Bench Test 3900e	SN - PNPvb2
AL Dodge 3900i	SN - TT3000
AL Liberty	SN - Temp 4A
AL ST Battery Test	SN - Temp 4B
AL vPod2	SN - VBZ
APH PNP	SP Trailer Tracker
AVG ELD	Sales - JT
Adam 3900VB	Scion GPSI

**Remove -->** **<-- Add**

## 2. Create a Count Speeding Events metrics for Posted Speed.

1. From the portal, hover over the **More** menu, click **Manage Metrics**, and click **Manage Metrics**. The Manage Custom Metrics page opens in a new browser tab.
2. Click the plus (+) next to the **Count Speeding Events** metric. A new grid to the right appears, which allows you to set the thresholds.
3. Set the first Count Speeding Events metric properties to the following:
  - **Label:** Posted Speeding Count (10+ mph)
  - **Based On:** Over Posted Limit
  - **Threshold:** 10 mph over

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- **Tools:** None\*

### New Speeding Count Metric ✕

**Label**

**Based On** ☐ Speed Threshold ☒ Over Posted Limit

**Threshold**






*Number of times vehicle drove more than 10 mph over the limit*

**Add Scoring Tool**

**Tools**


**Note.** \*Although you can add normalization per 100 miles at the metric level, for purposes of the Safety Scorecard, we look only at raw totals for individual events and then normalize the total for all events. It results in a more simplified scorecard.

4. Click **Save**. The new metric will be listed in the Active Custom Metrics grid. You filter the grid by Metric Type if you have a long list of metrics.
5. Locate the metric, and click the **Make Available to Dashlets and Reports** icon.

Posted Speeding Count (10+ mph) <sup>+</sup>	1/6/2017	2/6/2017					
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**Note.** Certain safety programs may request that you create another Count Speeding Event metric for 15 mph over. For purposes of the base Safety Scorecard, we limit it to one metric.

## 3. Create a Sum Scorecard metric for Light Duty events.

1. From the Dashboard, click **Change User Preferences** (.
2. In the Available Speeds List, type “67,80” in the box. Separate multiple speeds by a comma if other speeds already exist.

**Available Speeds List (in mph)**

3. Click **Apply**.
4. From the Manage Custom Metrics page (**More > Manage Metrics > Manage Metrics**), click the plus (+) next to the **Sum Scorecard** metric.
5. Set the Sum Scorecard metric properties to the following:
  - **Label:** Light Duty Safety Scorecard

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## Acceleration Count

- **Label:** Acceleration Count (LMD .45+ G)
- **Violation:** .45 Gs
- **Landmark:** N/A
- **Hours:** none

---

## Deceleration Count

- **Label:** Deceleration Count (LMD .45+ G)
- **Violation:** .45 Gs
- **Landmark:** N/A
- **Hours:** none

---

## Speeding Count

- **Label:** Speeding Count (LMD 80+ mph)
- **Based on:** Speed Threshold
- **Violation:** Over 80 Mph\*

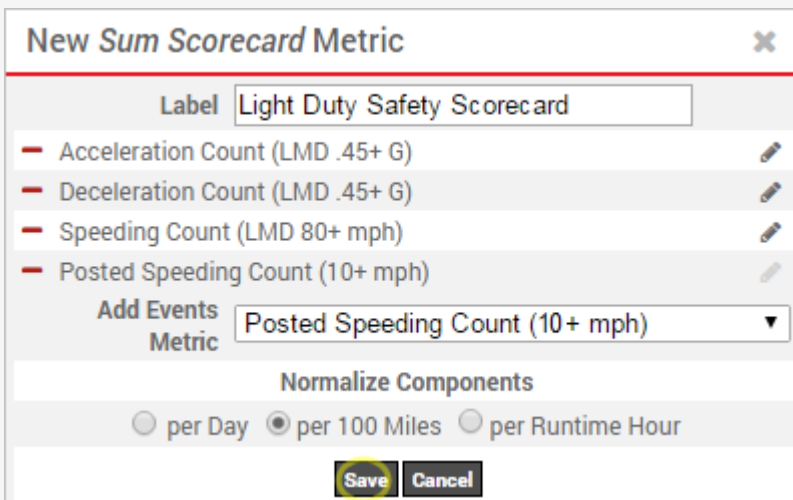
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**Add Events Metric:** Posted Speeding Count (10 mph+)

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**Normalize Components:** per 100 Miles\*

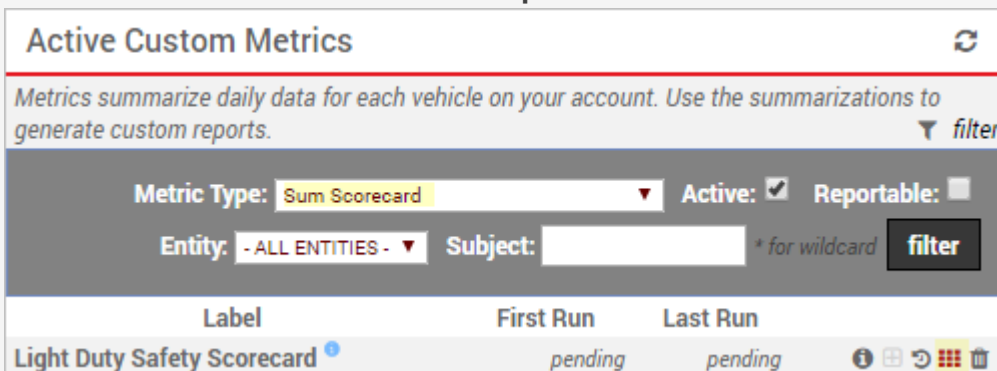
**Note.** Regardless of normalization component you choose, the scorecard still results in two metrics per event: One will be created to count the raw number of events AND a second metric will be created to count the number of events per normalization component. At the report level, we'll choose which of these metrics to turn on/off in the display.



6. Click **Save**.

The new Sum Scorecard metric AND each metric within that metric will be listed in the Active Custom Metrics grid.

7. Filter the grid by Metric Type (Sum Scorecard) to find the Light Duty Safety Scorecard, and click the **Make Available to Dashlets and Reports** icon.



## 4. Create a Sum Scorecard metric for Heavy Duty events.

1. From the Manage Custom Metrics page, click the plus (+) next to the **Sum Scorecard** metric. A new grid to the right appears, which allows you to set the thresholds.

2. Set the Sum Scorecard metric properties to the following:

- **Label:** Heavy Duty Safety Scorecard

---

## Acceleration Count

- **Label:** Acceleration Count (HD .40+ G)
- **Violation:** .40 Gs
- **Landmark:** N/A
- **Hours:** none

---

## Deceleration Count

- **Label:** Deceleration Count (HD .40+ G)
- **Violation:** .40 Gs
- **Landmark:** N/A
- **Hours:** none

---

## Speeding Count

- **Label:** Speeding Count (HD .67+ mph)
- **Based on:** Speed Threshold
- **Violation:** Over 67 Mph

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**Add Events Metric:** Posted Speeding Count (10 mph+)

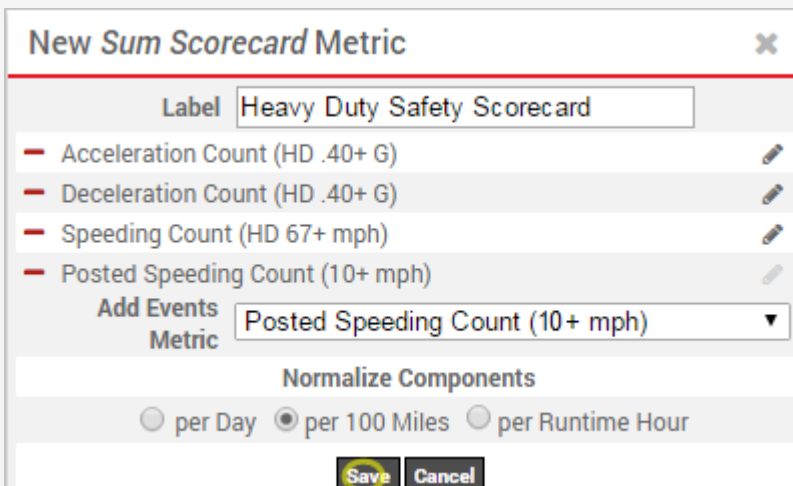
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**Normalize Components:** per 100 Miles\*

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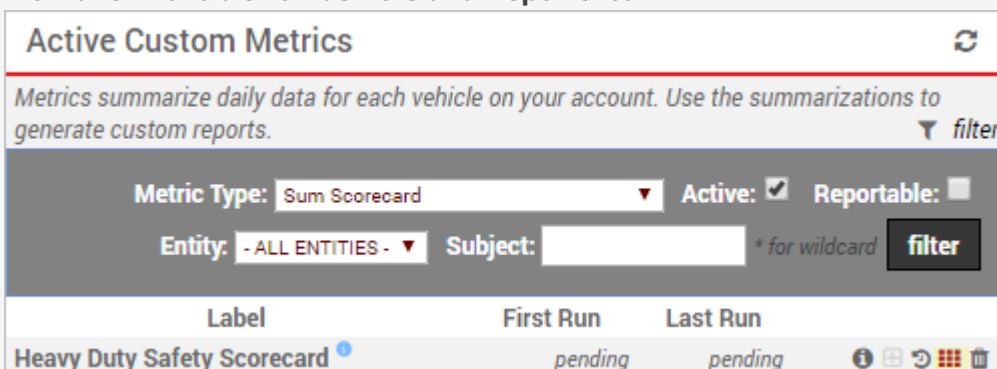
**Note.** Regardless of normalization component you choose, the scorecard still results in two metrics per event: One will be created to count the raw number of events AND a second metric will be created to count the number of events per normalization component. At the report level, we'll choose which of these metrics to turn on/off in the display.



The dialog box titled "New Sum Scorecard Metric" contains the following elements:

- Label:** A text field containing "Heavy Duty Safety Scorecard".
- Event Metrics:** A list of four metrics with minus signs on the left and edit icons on the right:
  - Acceleration Count (HD .40+ G)
  - Deceleration Count (HD .40+ G)
  - Speeding Count (HD 67+ mph)
  - Posted Speeding Count (10+ mph)
- Add Events Metric:** A dropdown menu currently showing "Posted Speeding Count (10+ mph)".
- Normalize Components:** Three radio buttons: "per Day", "per 100 Miles" (which is selected), and "per Runtime Hour".
- Buttons:** "Save" and "Cancel" buttons at the bottom.





- Click **Save**.  
The new Sum Scorecard metric AND each metric within that metric will be listed in the Active Custom Metrics grid.
- Filter the grid by Metric Type (Sum Scorecard) to find the Heavy Duty Safety Scorecard, and click the **Make Available to Dashlets and Reports** icon.



The "Active Custom Metrics" section includes a description: "Metrics summarize daily data for each vehicle on your account. Use the summarizations to generate custom reports." and a "filter" button.

Filtering options:

- Metric Type:** Sum Scorecard
- Active:** ☒
- Reportable:** ☐
- Entity:** - ALL ENTITIES -
- Subject:** (empty field) \* for wildcard
- filter** button

Label	First Run	Last Run	
Heavy Duty Safety Scorecard	pending	pending	   

## 5. Run the metrics reports.



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You can either manually run the report within the portal, or you can set up the report to run on a schedule to have the results automatically e-mailed to you according to the frequency you want.

1. From the portal, hover over the **More** menu, click **Manage Metrics**, and click **Metrics Reports**.

The Metrics Reports page opens in a new browser tab.

2. From the Report Options area, set the **Group** to **Lt and Med Duty**.

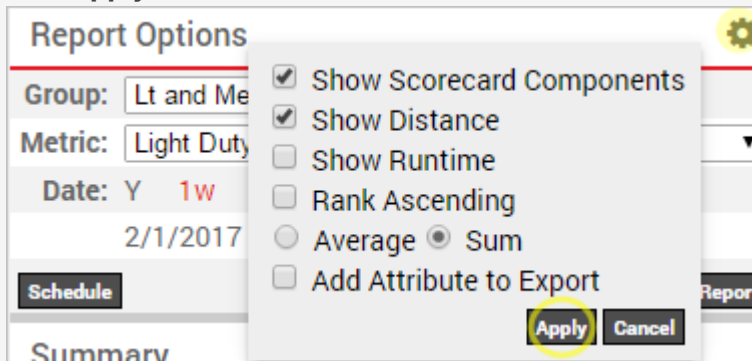
3. Set the **Metric** to **Light Duty Safety Events**.

4. Set the **Date** to **1w**.

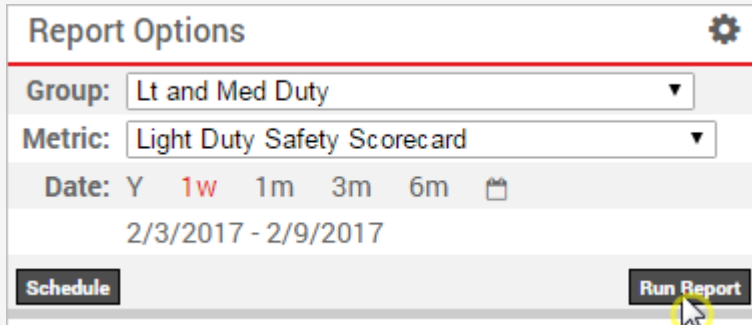
5. From the Edit Settings screen, set the following options:

- Show Scorecard Components – Yes
- Show Distance – Yes
- Sum

6. Click **Apply**.



7. Click **Run Report**.



**Note.** The report may take a few minutes the first time to backfill the data. Going forward, metrics are created daily and won't require a backfill to process.

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Report Options

Group: Lt and Med Duty

Metric: Light Duty Safety Scorecard Demo

Date: 2/16/2017

Schedule

Run Report

Summary

Metric: Light Duty Safety Scorecard Demo

Group: Lt and Med Duty

Vehicles Shown: 32 of 100

Report Period: 2/16/2017 (1 day)

Group Distance: 1,644 Miles

Group Total (Sum): 413 Events

Light Duty Safety Scorecard Demo

Max: 118

Min: 0

Median: 6

Average: 12.9

Normalized

Top Performers

JETTA - DA

118

FUL-Ray-01

37

Matt K PNP

36

8006-01

35

Jack

21

Light Duty Safety Scorecard

Events

Average: 12.9

Median: 6

Lt and Med Duty

Light Duty Safety Scorecard (32/32 shown)

Rank

Vehicle

Distance

Acceleration Count

Deceleration Count

Speeding Count

Posted Speeding Count...

Acceleration Count per...

Deceleration Count per...

Speeding Count per 10...

Posted Speeding Count...

Light Duty Safety Sco...

1

JETTA - DA

8.5 mi.

8

2

0

0

94

24

0

0

118

2

FUL-Ray-01

112.3 mi.

2

7

0

32

2

6

0

29

37

3

Matt K PNP

27.8 mi.

0

1

3

6

0

4

11

22

36

4

8006-01

92.0 mi.

6

7

1

18

7

8

1

20

35

5

Jack

14.0 mi.

0

3

0

0

21

0

0

0

21

6

8123-01

108.5 mi.

10

10

0

2

9

9

0

2

20

7

DG-370Z

10.5 mi.

2

0

0

0

19

0

0

0

19

8

MoonPatrol

58.0 mi.

4

5

0

1

7

9

0

2

17

9

8066-01

53.1 mi.

0

1

0

7

0

2

0

13

15

10

Monstro

131.4 mi.

12

4

0

0

9

3

0

0

12

11

Ryan Mac

33.7 mi.

3

1

0

0

9

3

0

0

12

12

Frank Tacoma

42.4 mi.

3

1

0

1

7

2

0

2

12

13

Chads TS4b

86.1 mi.

0

4

0

6

0

5

0

7

12

14

8057

18.0 mi.

1

1

0

0


6

6

0

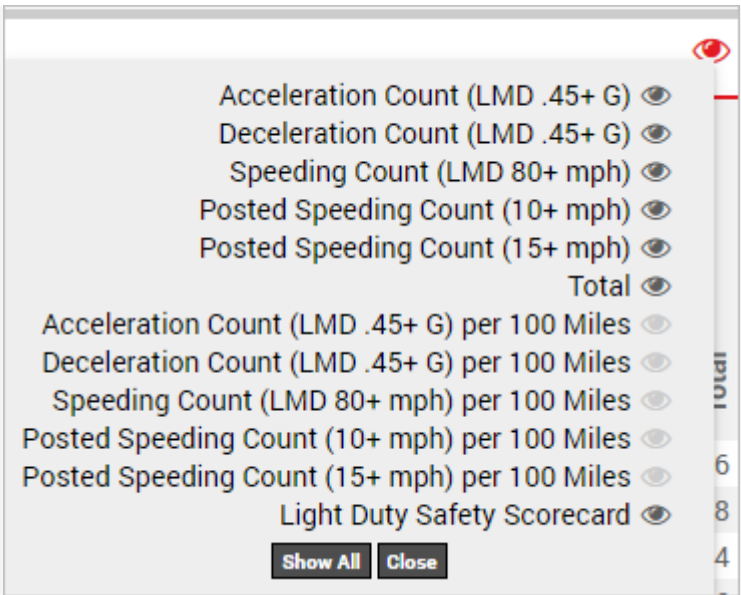
0

11

Use the Hide/Show (  ) option to hide individual safety events (normalized per 100 miles) from the report. Your show/hide selections apply to the exported report.

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Acceleration Count (LMD .45+ G)	
Deceleration Count (LMD .45+ G)	
Speeding Count (LMD 80+ mph)	
Posted Speeding Count (10+ mph)	
Posted Speeding Count (15+ mph)	
Total	
Acceleration Count (LMD .45+ G) per 100 Miles	
Deceleration Count (LMD .45+ G) per 100 Miles	
Speeding Count (LMD 80+ mph) per 100 Miles	
Posted Speeding Count (10+ mph) per 100 Miles	
Posted Speeding Count (15+ mph) per 100 Miles	
Light Duty Safety Scorecard	

**Show All** **Close**

You can sort the data to show vehicles with the most safety events in ranking order or vice versa. You can also click on an individual metric to change the graph data. By default, the graph represents the normalized column. In other words, a vehicle driving 25 miles with 50 safety violations in a week is not operating as safely as a vehicle driving 250 miles with 50 safety violations in the same week. Normalizing the data per 100 miles shows a more accurate safety measurement over time (or more accurately, distance).

1. From the Scorecard Component area, click **Export to CSV** (  ) to archive the data and/or perform additional sorting and normalization.
2. Repeat the steps for the **Heavy Duty** vehicle group and the **Heavy Duty Safety Scorecard** metric.

**Tip!** If you have never implemented a safety program before and aren't sure what to do with this data now that you have it, refer to the following article for recommendations: [How to Maintain a Fleet Safety Program](#).