**DRIVER SAFETY SCORECARD by DRIVER and VEHICLE VERSION 3.0**

The Driver Safety Scorecard by Vehicle Version 2.2 is the most complicated report currently in Geotab. The current report has reached its limits imposed by Geotab.

* The number of rules is set at six. As of now, RailWorks needs 13.
* The report must be run by either Vehicle or Driver. By Vehicle includes all trips, but without the driver listed. By Driver excludes any trip with Unassigned Driver.
* Rules are incomplete. Backing Up When Leaving does not have the ability to start with an ignition change from off to on.

The next scorecard is Driver Safety Scorecard by Driver and Vehicle Version 3.0. This version will include:

* 100% of trips, regardless of whether a driver is assigned, or whether a trip has Unassigned Driver.
* The driver name and username.
* As of now, 13 rules instead of 6.

The ability to schedule an email to be sent with an attachment of the report with the proper data access to the proper RailWorks recipients, may be dependent on the Groups Relations Table due to be released, by Geotab, on ~~February 28~~, ~~March 15~~, March 31, 2022.

Below are the deliverables to the customer, and the major processes to achieve for each deliverable.

DELIVERABLE 1:

Report to be emailed to customers that contains:

* 1. Accurate calculations.
  2. Scores for drivers and vehicle.
     1. Driver score includes all trips for which the username is the assigned driver.
     2. Vehicle score includes all trips that include Unassigned Driver.
  3. Expand to 12 rules from six rules.

- Delete Vehicle Hard Acceleration

-  Delete Vehicle Hard Braking

-  Delete Vehicle Hard Cornering

-  Add Harsh Acceleration Heavy

-  Add Harsh Braking Heavy

-  Add Harsh Cornering Heavy

-  Add Harsh Acceleration Medium

-  Add Harsh Braking Medium

-  Add Harsh Cornering Medium

-  Add Harsh Acceleration Light

-  Add Harsh Braking Light

-  Add Harsh Cornering Light

* 1. The Excel output of the report is formatted to the existing scorecard to include:
     1. Leading zeroes are maintained.
     2. Naming: File, worksheets, headers & labels.
     3. Column Width
     4. Cell type (text, date, number w decimals, etc.).
     5. Font size, bold, etc.
     6. Colors
  2. Report reflects recipient’s data access clearance.
  3. Report is emailed as an Excel file attachment to an email.

DELIVERABLE 2:

Create a new rule in SQL for Backing Up When Leaving AFTER Ignition:

-  Geotab created the existing rule named, Backing Up When Leaving.

-  That rule captures all movement when gear is in Reverse:

-1 Reverse

0 Neutral

126 Park

127 Drive

129 Intermediate.

-  New rule should add change in ignition status from Off (0) to On (1) before the gear is in Reverse.

-  Geotab has no plans to create that rule due to the limits of the system.

-  Geotab has suggested to start with all existing Backing Up When Leaving exceptions.

-  Then, using SQL, join the Ignition-On event, and program that into a new rule in SQL.

-  Test the rule with three vehicles that have rear-facing cameras installed, and from data in the SQL database.

109344 726 Bala/Uxbridge (Rosco camera)

109346 726 Oakville Track (Rosco camera)

110217 726 Uxbridge Signals (Lytx).

Add rule to SQL scrip.

Deploy new Scorecard.

DELIVERABLE 3:

Create an Add-In for Geotab DRIVE app and a Driver-Specific scorecard and send it to the Add-In for the DRIVER to review daily:

Create an Add-in the Geotab DRIVE app.

Produce a report that lists the score for a single driver from the SQL Scorecard.

Formatted for a screen the size of an iPhone 4.

Lists drivers score in the center of the screen.

Lists the top driver for that Business Unit at the top of the screen.

Lists the bottom driver for that Business Unit at the bottom of the screen.

Export above report to Geotab DRIVE app.

Example:

Graphical user interface, application

Description automatically generated

This allows the driver to see their score daily/weekly/monthly without requiring management to schedule an appointment.

DELIVERABLE 4:

Produce “Forgiveness” feature of Driver Score:

-  Sometimes, an exception is viewed as incorrect or insignificant by RailWorks.

-  That individual exception should be able to be removed from the calculation of the driver’s score.

-  The ability to “Forgive” an event should be limited to the driver’s management and RailWorks fleet managers.

-  If a mistake is made to “forgive” the wrong exception, or the decision is reversed, then the individual exception must be able to be returned to the calculation.

-  The “forgiven” exceptions cause a “permanent” change in the driver’s score, and that score is used in any additional calculations or reports.

DELIVERABLE 5:

Create a “What-If” capability for the driver:

             -  Allow driver to remove specific exceptions, then recalculate the score. “What if I didn’t have this event?”

-  This allows the driver to see the effect individual events have on their score.

-  Drivers can self-coach without management or Fleet Team training.

-  All changes are temporary. The driver does not have the ability to change their “permanent score.”

DELIVERABLE 6:

Automate the process to add / change/ remove driver to / from a trip.

-  MyGeotab has a process to add/ change / remove a driver to / from a trip.

- Use the Geotab SDK to automate the above, either in a separate process, or as part of the report.

- Recalculate the scores.

**RESOURCES:**

**CONTACT INFO**

Terry DeWald (314) 369-0867 [tdewald@gpssol.com](mailto:tdewald@gpssol.com)

Rob Weiss (314) 630-5141 [weissres@gmail.com](mailto:weissres@gmail.com)

Shashish Singh (516) 974-1481 [incharlottenow@gmail.com](mailto:incharlottenow@gmail.com)

**CUSTOMER GEOTAB ACCOUNT INFO:**

railworkscorp The name of the Geotab database for RailWorks. The database name is all lowercase (but probably doesn’t matter).

My533 The server for the railworkscorp database. This server is dedicated to railworkscorp only. This makes any patches easier as it will not affect other customers.

User (Email): Your email address.

Password: custom password you create

**GEOTAB SDK & API Adapter:**

MyGeotab SDK:

[MyGeotab SDK | The Geotab SDK (Software Development Kit) is a powerful set of tools for automating tasks and working with the data in MyGeotab. Within these documents you will find information on how to develop JavaScript and C# applications, build and integrate Add-Ins and use MyGeotab with third-party systems.](https://geotab.github.io/sdk/)

Software Technical Toolkit:

[Geotab Integrations: Software Technical Toolkit [PUB] - Google Slides](https://docs.google.com/presentation/d/1fqtMPgsdwF3CQuvhqhC8SBwdI8PZDjUtpVGEzsdDYjo/edit#slide=id.g979a4f0dd7_1_54)

MyGeotab API Adapter - Github:

[GitHub - Geotab/mygeotab-api-adapter](https://github.com/Geotab/mygeotab-api-adapter)

MyGeotab API Adapter - Solution and Implementation Guide:

[MyGeotab API Adapter — Solution and Implementation Guide [PUBLIC] - Google Docs](https://docs.google.com/document/d/12TIgTCuWVF_AYc3evsIms9VOecc1NT4P9Kn-eVg-H7k/edit)

MyGeotab API Adapter Video:

[2. The MyGeotab API Adapter - Google Drive](https://drive.google.com/file/d/1Jq0T-O5qB_FbWwm-X19EWdGu2nKjQBUC/view)

Data Optimizer – Solution and Implementation Guide:

<https://docs.google.com/document/d/1t8AunsFvW7NZtXaQ_9Q85qi5dR1GTfVVTYIcwXoRG1E/edit>

Data Optimizer Github:

<https://github.com/Geotab/mygeotab-api-adapter#data-optimizer---taking-the-adapter-to-the-next-level>

Geotab Community:

[Geotab Community](https://community.geotab.com/s/?language=en_US)

(Geotab employee, reseller, partner and customer knowledge base. Choose customer and use your credentials to login).

**CUSTOMER INFO:**

RailWorks Corp the ‘W’ in the customer name is always capitalized.

[www.railworks.com](http://www.railworks.com) Company website

Manhattan, NY Corporate Headquarters

Lakeville, MN Fleet Team Headquarters (southern suburb of Minneapolis, MN)

railworkscorp The name of the Geotab database for RailWorks. The database name is all lowercase (but probably doesn’t matter).

**GEOTAB INFO:**

Geotab is spelled as one word. The “G” is capitalized. All other letters are lower-case. The “T” is lower-case.

[www.geotab.com](http://www.geotab.com) Company Website

<https://www.youtube.com/c/Geotab> Geotab’s Youtube channel.

<https://my.geotab.com/> Customer login link. You can also navigate to this site by starting at the above link. Then, click the LOGIN link in the upper right corner. A new page opens. Click the LOGIN link on the left side of the page.

YouTube channel: <https://www.youtube.com/c/Geotab>

In the Geotab Youtube Channel, here are some good search terms to find videos on their programming:

Data

SDK

Add-In

Bootcamp

SQL

AI

Data Science