

Region of Peel Fleet Services

Automatic Vehicle Location (AVL) System

AVL Overview

Region of Peel have a fleet of approximately **500 vehicles** equipped with AVL which can be used to track vehicles and generate reports for the fleet. Fleet Idling, Fuel Consumption, Travel & Location are some of the reports that can be generated using AVL data.

The AVL device utilizes a SIM card and GSM technology to track and save data.

Region of Peel and Ferno Canada

- Criteria of selection was based on requirements and cost
- Region of Peel chose Ferno Canada(Acetech Brand) in 2016 as their Fleet Telematics partner

ACETECH

Each vehicle is equipped with a Black Box which collects and sends data to generate Telematics

Black Box Technology



Telematics



Cost

One-time Cost	Recurring Cost
\$400-500 per install	\$15-\$20 per vehicle per month

- Estimated figures based on current hardware and technologies used.
- Initial charges for installation of hardware like black box, antenna wiring and activation.
- Recurring charges cover SIM costs and Telematics data.
- Once a vehicle with AVL is marked for disposal the system can be removed and reused on the replacement vehicle.

Technical

Control Box is ACETECH AVL Gen 3.0

- GPS & Cellular
- Accelerometer
- OEM CAN Bus Enabled
- Built-in Sensors



ACETECH™ | INCONTROL CONNECT

Remote Configuration

ACETECH™ AVI 3.0

- Connected control system with remote diagnostic and configuration

Hardware Specs

ACETECH™ AVI 3.0

- Native CAN bus interface to chassis
- Reduced wiring by CAN bus multiplexing
- Telematics enabled
- IoT sensors equipped

INCONTROL CONNECT benefits:

- Full Vehicle Connectivity
- Remotely Configurable
- Remote Diagnostics
- Predict client's future fleet requirements



Location Map

The screenshot displays the ACETECH Location Map interface. At the top, a navigation bar includes icons for DASHBOARD, MAP (selected), REPLAY, REPORTS, FLEET, ADMIN, and SETTINGS. On the right side of the navigation bar, there are links for 'Contact Support' and 'Log out', along with the 'Region of Peel' logo.

The main area is a map of the Region of Peel, showing various municipalities including Grand Valley, Amaranth Station, Fraxa Junction, Speersville, Caledon, Richmond Hill, Vaughan, Markham, North York, Toronto, and Etobicoke. Numerous vehicle icons are scattered across the map, each labeled with a vehicle ID number. A sidebar on the left side of the map lists vehicles, with columns for 'Vehicles', 'Address', and a list of vehicle IDs. The sidebar is currently showing 'All Vehicles (492)'.

At the bottom right of the map, there are standard map controls: a full-screen button, a zoom-in button, a zoom-out button, and a map data attribution for Google.

Live Map View & Detail View

The screenshot displays the ACETECH fleet management software interface. At the top, there is a navigation bar with icons for MAP, REPLAY, REPORTS, FLEET, ADMIN, and SETTINGS. The main area is a map showing the location of several vehicles. A detailed popup window for vehicle 12-17430 is open, displaying the following information:

Status	Online	Battery	14.25 V
Fuel Level	82 %	Ignition	On
Speed	81	Moving	15min
Odometer	121729 km		

Location: HURONTARIO STREET, City of Mississauga, Last Update: 25/02/2021 12:43:12
Geofence: No Zone
Start Location: DIXIE ROAD, City of Mississauga, Station: WC30103
Vehicle Information

Live Map

Location & Street Name

Fuel & Odometer (OEM)

Speed & Speed Limit

Battery Levels

Status: Moving / Idling / Off

GeoFence Location

Colour Coded

Comprehensive Suite of Reports

The screenshot displays the ACETECH Reports Module interface. At the top, a dark navigation bar features the ACETECH logo on the left and icons for MAP, REPLAY, REPORTS (highlighted with a red border), FLEET, ADMIN, and SETTINGS on the right. A 'Log out' button is also present in the top right corner. On the left side, a vertical sidebar menu lists various report categories, each with a red highlight: Fleet Journey, Vehicle Journey, Multi-Vehicle Replay, Fleet Overspeed, Vehicle Overspeed, Fleet Duration, Fleet Idling, Vehicle Idling, Fleet Fuel Usage, Fuel Consumption, Vehicle Fuel Consumption, Fleet Geofence, Current Fleet Battery, Vehicle Battery Level, Fleet Connection, and Health Check. The main content area is titled 'Welcome to the Reports Module' in red text. Below the title, there are three paragraphs of text: 'Here you can request and run multiple detailed reports based on all your needs.', 'From Journey Reports to Battery Reports, we provide everything you need to view the information you want to view.', and 'All reports are located on the side menu to your left. Each report will have a brief description when selected. If you have any issues or questions about any of the reports please contact support@acotech.com for more information.' To the right of the text, there is an illustration of a desktop monitor, a laptop, and a tablet, all displaying the ACETECH software interface with maps and data visualizations.

ACETECH™

MAP REPLAY **REPORTS** FLEET ADMIN SETTINGS Log out

Hide All

- Fleet Journey
- Vehicle Journey
- Multi-Vehicle Replay
- Fleet Overspeed
- Vehicle Overspeed
- Fleet Duration
- Fleet Idling
- Vehicle Idling
- Fleet Fuel Usage
- Fuel Consumption
- Vehicle Fuel Consumption
- Fleet Geofence
- Current Fleet Battery
- Vehicle Battery Level
- Fleet Connection
- Health Check

Welcome to the Reports Module

Here you can request and run multiple detailed reports based on all your needs.

From Journey Reports to Battery Reports, we provide everything you need to view the information you want to view.

All reports are located on the side menu to your left.

Each report will have a brief description when selected.

If you have any issues or questions about any of the reports please contact support@acotech.com for more information.

Historical Route Replay

Tracking Vehicle

Status: **Moving**
Speed: **109**
Odometer: **32712 km**
Battery: **14.54**
Fuel Level: **58 %**

Vehicle: **18-19593**
Location: **HIGHWAY 427 COLLECTOR, City of Toronto,**
Time: **February 25, 2021 06:10:08**

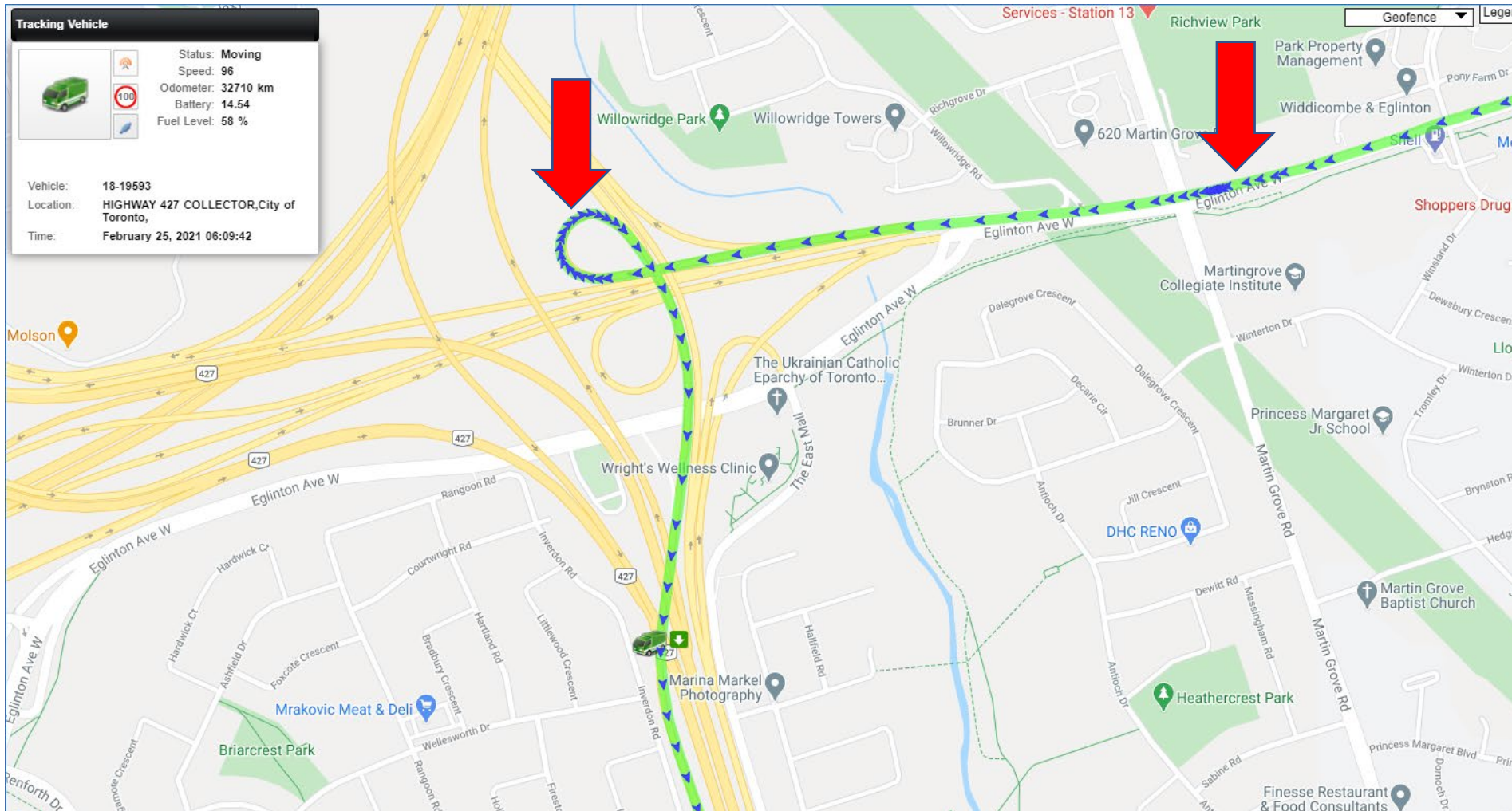
Map controls: Map, Satellite, Geofence, Legend (Emergency, Idle, Moving, Parked, Offline, Arrive)

Map data ©2021 Google | Terms of Use | Report a map error

Map navigation: KML, CSV, PDF, Print

Map playback controls: Show Breadcrumbs, Show Event Durations, Posted Speed Limit

Historical Route Replay – Detailed



Extremely Detailed

Blue Arrow = Data Point

See On Ramp to 427

System Automatically sends more frequent bursts of data to server based on:

- **Change in Speed**
- **Change in Direction**

Updates every second

Play, Pause Complete Route

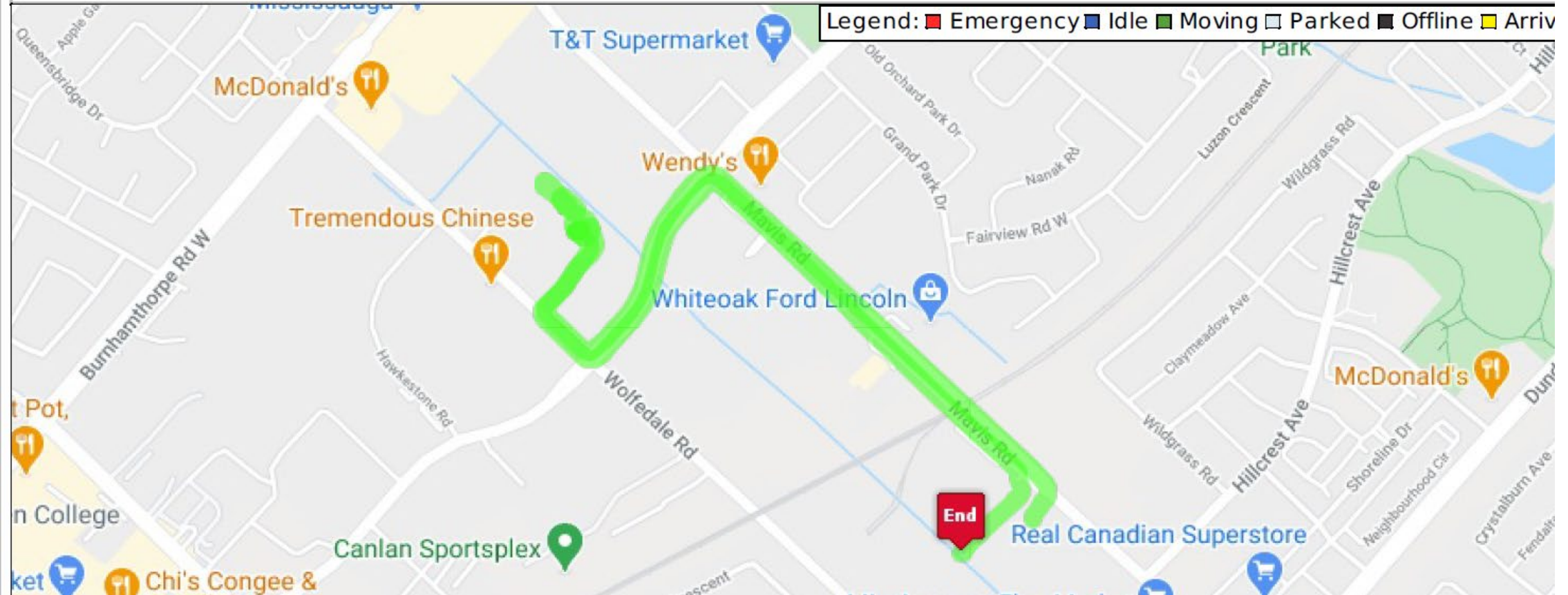
All Data can be Exported

Peel Region – Vehicle Journey Replay

Vehicle #11-12358

Start Date: 2020-12-02 04:19:52

End Date: 2020-12-02 16:19:39



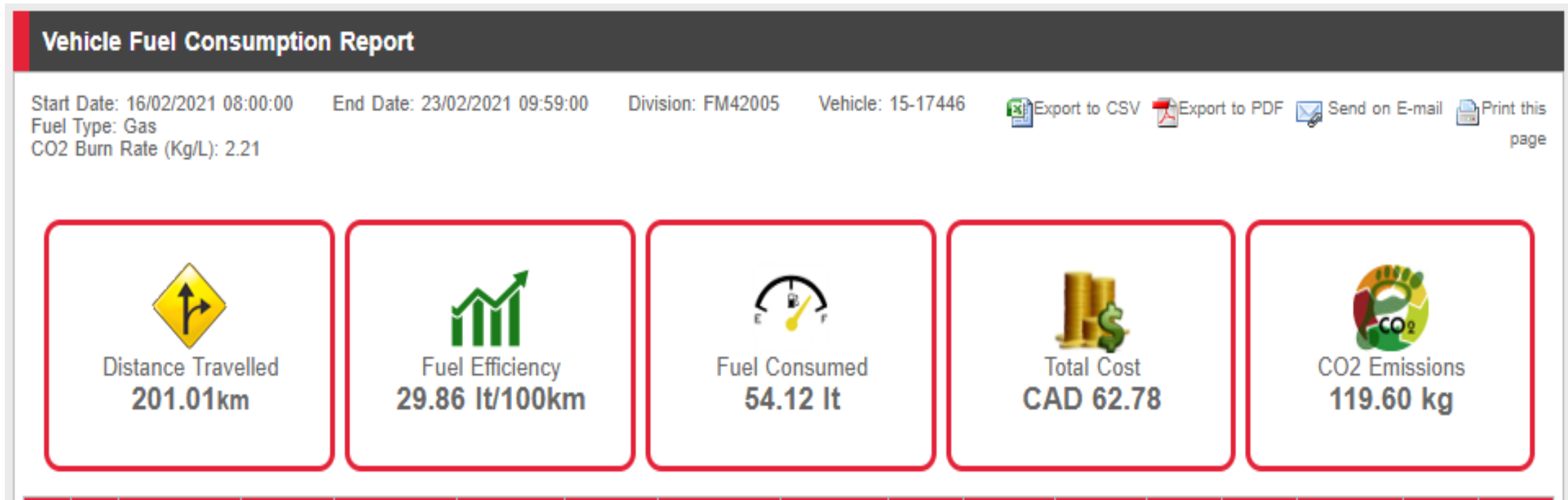
Peel Region – Vehicle Journey Replay

Historical data of vehicle 11-12358 involved in an accident. As shown in the previous slide the start date and time of vehicle. During travel AVL records every second, acceleration, battery level, rpm , fuel level, speed, g force etc. End of the event data and few minutes and seconds before can be compiled to analyze how the accident took place, the speed at which driver was travelling, how was braking and turning etc.

December 02, 2020 14:50:51	Moving	MAVIS ROAD,City of Mississauga,	20	896 RPM
December 02, 2020 14:50:52	Moving	MAVIS ROAD,City of Mississauga,	0	609 RPM
December 02, 2020 14:50:52	Main Battery Level	MAVIS ROAD,City of Mississauga,	0	14.344 V
December 02, 2020 14:50:53	Main Battery Level	MAVIS ROAD,City of Mississauga,	0	14.587 V
December 02, 2020 14:50:54	Moving	MAVIS ROAD,City of Mississauga,	0	588 RPM
December 02, 2020	G-Force Level 1			
14:50:56	ON	MAVIS ROAD,City of Mississauga,	0	Acceleration
December 02, 2020 14:50:57	G-Force Level 1 OFF	MAVIS ROAD,City of Mississauga,	1	Acceleration
December 02, 2020 14:50:57	Idle ON / [Stop On]	MAVIS ROAD,City of Mississauga,	-	-
December 02, 2020 14:51:22	Fuel Level	MAVIS ROAD,City of Mississauga,	0	35 %
December 02, 2020 14:55:22	Fuel Level	MAVIS ROAD,City of Mississauga,	0	35 %
December 02, 2020 14:56:39	Main Battery Level	MAVIS ROAD,City of Mississauga,	0	13.734 V
December 02, 2020 14:56:45	Idle OFF / [Stop Off]	MAVIS ROAD,City of Mississauga,	-	-
December 02, 2020 14:56:45	Main Battery Level	MAVIS ROAD,City of Mississauga,	0	13.606 V
December 02, 2020 14:56:45	Ignition OFF	MAVIS ROAD,City of Mississauga,	0	-

Fuel Consumption Report

- Fuel Report based on OEM Fuel %
- CAN Bus Fuel Usage every time Ignition Off
- Low Fuel Warnings/Alerts (Fuel below 15%)



Fleet Idling Report

Fleet Idling Report

Start Date: 16/02/2021 08:00:00

End Date: 23/02/2021 09:59:00

Division: All

Group: All company vehicles

Fuel Price: CAD 1.16 per litre



Export to CSV



Export to PDF

to PDF



Send on E-mail



Print this page



Excessive Idling
2488h 12m 4s



Excessive Fuel Used
4,557.36lt



Potential ECO-Run Cost
Savings
CAD 5,286.54



Potential ECO-Run CO2
Savings
16,768.48kg

Fleet Overspeed Report

- Hide All
- Fleet Journey
- Vehicle Journey
- Multi-Vehicle Replay
- Fleet Overspeed
- Vehicle Overspeed**
- Fleet Duration
- Fleet Idling
- Vehicle Idling
- Fleet Fuel Usage
- Fuel Consumption
- Vehicle Fuel Consumption
- Fleet Geofence
- Current Fleet Battery
- Vehicle Battery Level
- Fleet Connection
- Health Check

Fleet Overspeed Report

Schedule >> ?

Select a Division: All Select a Vehicle Group: All Vehicles Thresholds: Posted Threshold: All Filter By: All

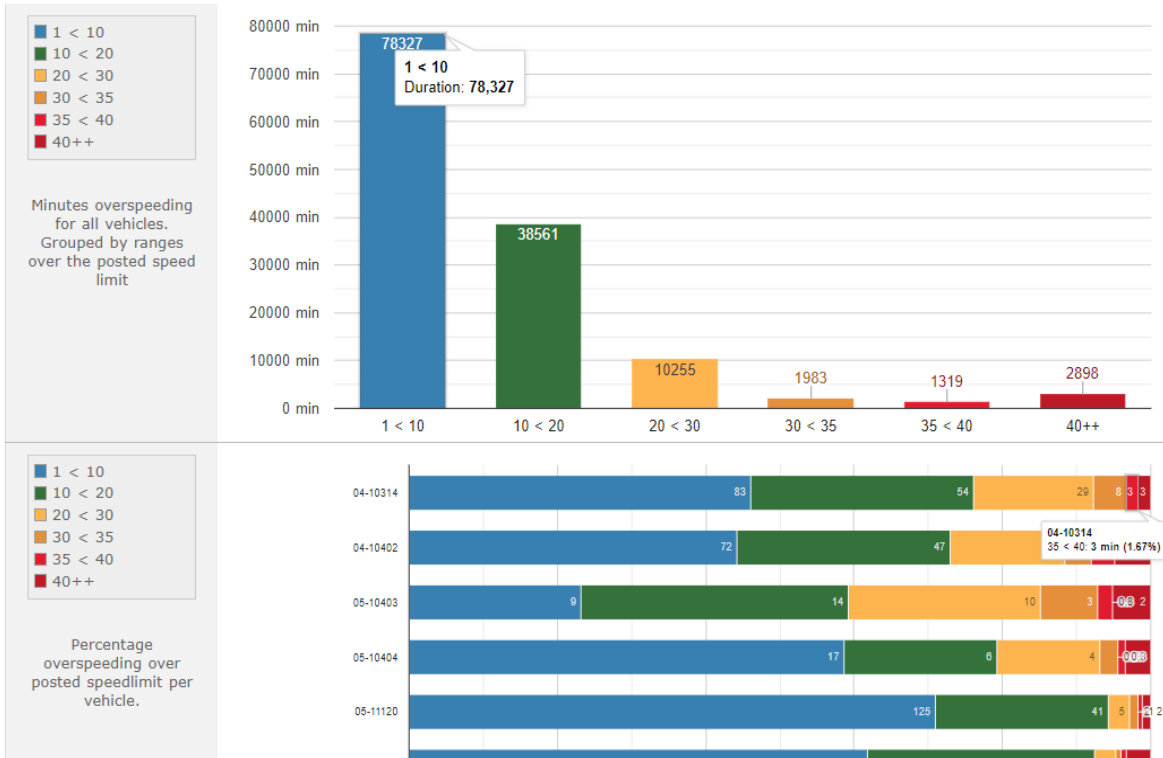
From: Hour: 00 : 00 2021-03-01 To: Hour: 23 : 59 2021-03-31

CREATE REPORT

Fleet Overspeed Report

Start Date: 2021-03-01 00:00:00 End Date: 2021-03-31 23:59:00 Division: All Group: All company vehicles Threshold: Posted All

Export to CSV Export to PDF Send on E-mail Print this page



Fleet Connection Report – 30 days

- Hide All
- Fleet Journey
- Vehicle Journey
- Multi-Vehicle Replay
- Fleet Overspeed
- Vehicle Overspeed
- Fleet Duration
- Fleet Idling
- Vehicle Idling
- Fleet Fuel Usage
- Fuel Consumption
- Vehicle Fuel Consumption
- Fleet Geofence
- Current Fleet Battery
- Vehicle Battery Level
- Fleet Connection
- Health Check

Fleet Connection Report

Schedule >> ?

Select a Division: Select a Vehicle Group: Min Duration: Days: Hr: Min:

CREATE REPORT

Fleet Connection Report

All vehicles are currently online

Odometer/ Engine Hours - Fleet Management

Vehicle	Registration	Type	Station	Make	Model	Odometer	Last odometer update ▼	Status
19-11232	BB68546	PICKUP, 1/2 TON EXT CAB SHORT BOX	-	DODGE	RAM 1500 RTR	129725 km	25/02/2021 13:26:24	In Service
18-17403	CFVA822	SPORT UTILITY, COMPACT HYBRID 4X4	WC30103	TOYOTA	RAV 4 HYBRID XLE HV4	18697 km	25/02/2021 13:26:23	In Service
11-19586	AY76296	VAN, 3/4 TON CARGO	WP62011	CHVRL	EXPRESS CARGO 2500	112170 km	25/02/2021 13:26:18	In Service
20-19599	BD23304	VAN, 1 TON HIGH ROOF	-	FORD	TRANSIT	1707 km	25/02/2021 13:26:11	In Service
20-18015	BE19487	PICKUP, 1 TON EXT CAB LONG BOX 4X4	-	FORD	F-450 (2020)	2360 km	25/02/2021 13:26:07	In Service
17-11136	AR49657	PICKUP, 1/2 TON EXT CAB SHORT BOX	WP62011	DODGE	RAM 1500	23803 km	25/02/2021 13:26:06	In Service
19-12314	AY28403	PICKUP, 3/4 TON EXT CAB 2WD	WP90001	CHVRL	SILVERADO 2500 2 CN	32430 km	25/02/2021 13:26:00	In Service

Region of Peel- Geofence









Geofences are colour coded for different addresses: as shown below in light green highlighted area is for 3515 Wolfedale rd Mississauga.

Name	Type	
Copper Yard	COPPER	
Wolfedale Yard	WOLFEDALE	
Victoria Yard	VICTORIA	
Advance Blvd	General	
Pearson International Airport	General	
Highland Trail	General	
Baptist Church	General	
E Waste 106 Orenda rd	Waste Management	
PIWMF 7795 Torbram rd	Waste Management	
Brampton Chrysler	General	
Bolton Recycling Centre	General	
The Davis Centre	General	
Brampton CRC 395 chrysler dr	Waste Management	
Miller wood 332 Clarence street	Waste Management	
Triple M 331 Intermodel dr.	Waste Management	

Region of Peel – Scheduling Reports

- Change Settings
- Change Password
- Alert Notifications
- Scheduled Reports**

Scheduled Reports

Report name	Details	PDF	CSV	Frequency	E-mail	Created At	Report time	Send empty	Edit	Delete
Fleet Connection	Vehicle Group: All company vehicles Min Duration: 7days	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Weekly	Bhopinder.singh@peelregion.ca	2019-10-24 07:53:40	00:00	<input checked="" type="checkbox"/>		
Fleet Journey		<input checked="" type="checkbox"/>	<input type="checkbox"/>	Daily	Bhopinder.singh@peelregion.ca	2019-05-01 07:18:58	06:00	<input checked="" type="checkbox"/>		
Fleet Journey		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Monthly	Bhopinder.singh@peelregion.ca	2019-04-03 12:32:33	00:00	<input checked="" type="checkbox"/>		
Fleet Idling		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Monthly	Bhopinder.singh@peelregion.ca	2019-04-03 12:26:05	00:00	<input checked="" type="checkbox"/>		

Region of Peel Fleet Services

Any Questions?

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