

# GEO TAB

## Management By Measurement Pillar of Growth – Fleet



Compliance

Fleet

Safety

Productivity

# Four Growth Pillars



4 core pillars drive Geotab's ongoing innovation, which helps businesses make impactful improvements:

1. Driver Safety
2. Productivity
3. Compliance
4. Fleet Optimization

# The Value of Engine Data

- The ability to remotely gather data about the fleet without having to touch the assets
  - Related to vehicle health
    - Fault codes reduce repair costs.
  - Related to fuel economy
    - MPG data can be monitored/reduced.
  - Related to asset utilization
    - Odometer and miles driven can be used to balance leases, rearrange assets to lower mileage sites, etc.

# Not all Engine Data is the Same

- Just because a device plugs into the diagnostic port does not mean the data provided is the same
- Most OBD plug ins on the market just get power
- Few get fault codes
- Status Data is unique non-fault related data
  - Electric health (battery, alternator and starter) at rest and at work
  - CalAmp devices can't get information off of Fords

# Know what you are selling

- Engine data can be tricky and proprietary
  - Vehicle manufacturers move and hide the data regularly
  - One Ford F250 has seatbelt one way another may provide it a different way
- Firmware looks at several trips rather than just one. It may take several trips to identify how a vehicle provides- seatbelt, Odometer etc.

# Geotab - Fleet

- Odometer and VIN automatically recorded for fleet use.

Vehicle Status

Filter Search | Edit Show | Current Activity Health Reports More

Vehicle	Current Odometer (miles)	Active	Device Type	Firmware Version	Serial No.	VIN	Time Zone
SV GO6 3G	45,972	True	GO6	101.2.45	G6D120CBAE90	1FMFU17536LA92746	(UTC-05:00) Eastern Time (US & Canada)
SV1 GO6	43,420	True	GO6	101.2.45	G69520CB1C66	1FAPP31N86W245609	(UTC-05:00) Eastern Time (US & Canada)
SV3 GO6	98,982	True	GO6	101.2.45	G6AC20CB1C5F	1FTPX14517NA68276	(UTC-05:00) Eastern Time (US & Canada)



FLEET

# Geotab - Fleet

- Capture fuel consumption data.

Type or select entity from list... Options Sort by Vehicle Sort by Period Sort by Fuel Economy

## Fuel Usage Report Beta ?

### SV1 GO6

<b>SV1 GO6</b>	07/07/13 - 07/13/13	<b>26.28 mpg</b>
DISTANCE: 99 mi	FUEL USED 3.77 gallon	

### SV GO7

<b>SV GO7</b>	07/07/13 - 07/13/13	<b>29.06 mpg</b>
DISTANCE: 448 mi	FUEL USED 15.41 gallon	

### SV GO6 3G

<b>SV GO6 3G</b>	07/07/13 - 07/13/13	<b>21.33 mpg</b>
DISTANCE: 160 mi	FUEL USED 7.50 gallon	



FLEET



# Geotab - Fleet

- Simple rules can be set to monitor things like battery level, engine light on, diagnostic codes etc.

FLEET

On Off

Fleet Idling

LONGER THAN:  minutes

LOCATION: Office Everywhere

✎ ? ✉

This rule identifies preventable idling with an option to limit to specified locations (zones with the "Office" zone type). In addition to reducing wasted gas and cutting greenhouse emissions, idling is often associated unproductive drivers. The default allowed idle duration is 5 minutes. Many fleets find a significant portion of engine idle occurs within their own depots for example before the day begins while the driver is completing paperwork.

On Off

Engine Light On

✎ ? ✉

This identifies vehicles being driven with the "Check Engine" light on and can be used to schedule maintenance or prevent serious damage.

On Off

Battery Drain

✎ ? ✉

This rule triggers when a vehicle is having its battery drained. If the battery voltage drops below 11.5 volts the rule is triggered. This can prevent vehicles that have their lights on and if left wouldnt start (alert the vehicle manager) or identify vehicles with battery problems.

On Off

Unauthorized Device Removal

✎ ? ✉

This rule identifies a GO device has been unplugged and later plugged in. If the vehicle has been in for maintenance, it is safe to disregard the exception. The device will only send the notification once it has been plugged back in. The drivers could be unplugging the device in an attempt to prevent monitoring.

**NOTE:** The Watchdog Report can be used to identify assets that are currently unplugged.

On Off

Engine Abuse

✎ ? ✉

The rule identifies over rewing of the engine. This rule will be violated if the RPMs go over 7000.

On Off

Backing Up When Leaving

DISTANCE:  yd

✎ ? ✉

This rule identifies drivers who back up their vehicles when leaving a location. It is best practise to back up the vehicle when arriving. The surroundings might change between the time you arrive and the time you leave, therefore increasing the risk of an accident if you back up when leaving.





# Geotab - Fleet

- Engine Data tab is the checking point for faults and various engine levels.
- An accident level event comes through as a fault.

myGEOTAB

Filter... Viewing: All

- Getting Started & Help
- Summary
- Map
- Vehicles
- Drivers & Activity
- Engine & Maintenance**
  - Engine Data
  - Setup Engine Data...
  - Fuel Usage Report

### Engine Health Analysis

Options View Faults Dismiss Faults

**Fault Summary View**

Fault Summary View  
Fault Details View  
Status View

Type here to search for an item.

Select All/None

- Function/PU (29)
- Manager/Supervisor Name (29)
- Team (28)
- Vehicle Type (31)



FLEET

# Geotab - Fleet

- Fault Summary view summarizes New Faults as well as Exceptions.
- More details shows the last recordings.
- Click on view faults to see details.

Engine Health Analysis

Options View Faults Dismiss Faults View Exceptions Troubleshoot More Details Reports More

**Fault Summary View**

Period: Yesterday

Daren\_Van

Select All/None

Van

Device	New Faults	Faults	Exceptions	Latest Heartbeat	Last Recorded Fault	Last Recorded Engine Data
Van	2	2	98	17/07/2013 11:15:07 AM	16/07/2013 9:35:49 AM	17/07/2013 11:14:54 AM

Engine Health Analysis

Options View Faults Dismiss Faults View Exceptions Troubleshoot More Details Reports More

**Fault Details View**

Period: Yesterday

Daren\_Van

Select All/None

Van

Daren\_Van: July-16-13

Device	Time	Description	Diagnostic Code	Source	Controller	Active Fault
Van	9:34 AM	Accident level acceleration event	166	Geotab GO Device	Geotab GO Controller	True
Van	9:35 AM	**Unknown GO Diagnostic	265 265	Geotab GO Device	Geotab GO Controller	True

# Geotab – Fleet ROI

- Real time view of diagnostic fault codes; No need to go to the shop- Tighten the fuel cap.

Engine Health Analysis

Options View Faults Dismiss Faults View Exceptions Troubleshoot More Details Reports More

Time	Description	Diagnostic Code	Source	Controller
<b>VILLA: Sunday, July 7, 2013</b>				
4:33 PM	General vehicle warning light	168	Geotab GO Device	Geotab GO Controller
4:33 PM	Evaporative Emission System Leak Detected (large leak)	P0455	OBD	OBD Powertrain
4:33 PM	Evaporative Emission System Leak Detected (fuel cap loose/off)	P0457	OBD	OBD Powertrain
5:44 PM	General vehicle warning light	168	Geotab GO Device	Geotab GO Controller
5:44 PM	Evaporative Emission System Leak Detected (large leak)	P0455	OBD	OBD Powertrain
5:44 PM	Evaporative Emission System Leak Detected (fuel cap loose/off)	P0457	OBD	OBD Powertrain
<b>VILLA: Monday, July 8, 2013</b>				
6:20 AM	General vehicle warning light	168	Geotab GO Device	Geotab GO Controller
6:20 AM	Evaporative Emission System Leak Detected (large leak)	P0455	OBD	OBD Powertrain
6:20 AM	Evaporative Emission System Leak Detected (fuel cap loose/off)	P0457	OBD	OBD Powertrain
8:57 AM	General vehicle warning light	168	Geotab GO Device	Geotab GO Controller
8:57 AM	Evaporative Emission System Leak Detected (large leak)	P0455	OBD	OBD Powertrain
8:57 AM	Evaporative Emission System Leak Detected (fuel cap loose/off)	P0457	OBD	OBD Powertrain
9:18 AM	General vehicle warning light	168	Geotab GO Device	Geotab GO Controller
9:18 AM	Evaporative Emission System Leak Detected (large leak)	P0455	OBD	OBD Powertrain
9:18 AM	Evaporative Emission System Leak Detected (fuel cap loose/off)	P0457	OBD	OBD Powertrain
9:45 AM	General vehicle warning light	168	Geotab GO Device	Geotab GO Controller
9:45 AM	Evaporative Emission System Leak Detected (large leak)	P0455	OBD	OBD Powertrain
9:45 AM	Evaporative Emission System Leak Detected (fuel cap loose/off)	P0457	OBD	OBD Powertrain
10:06 AM	General vehicle warning light	168	Geotab GO Device	Geotab GO Controller

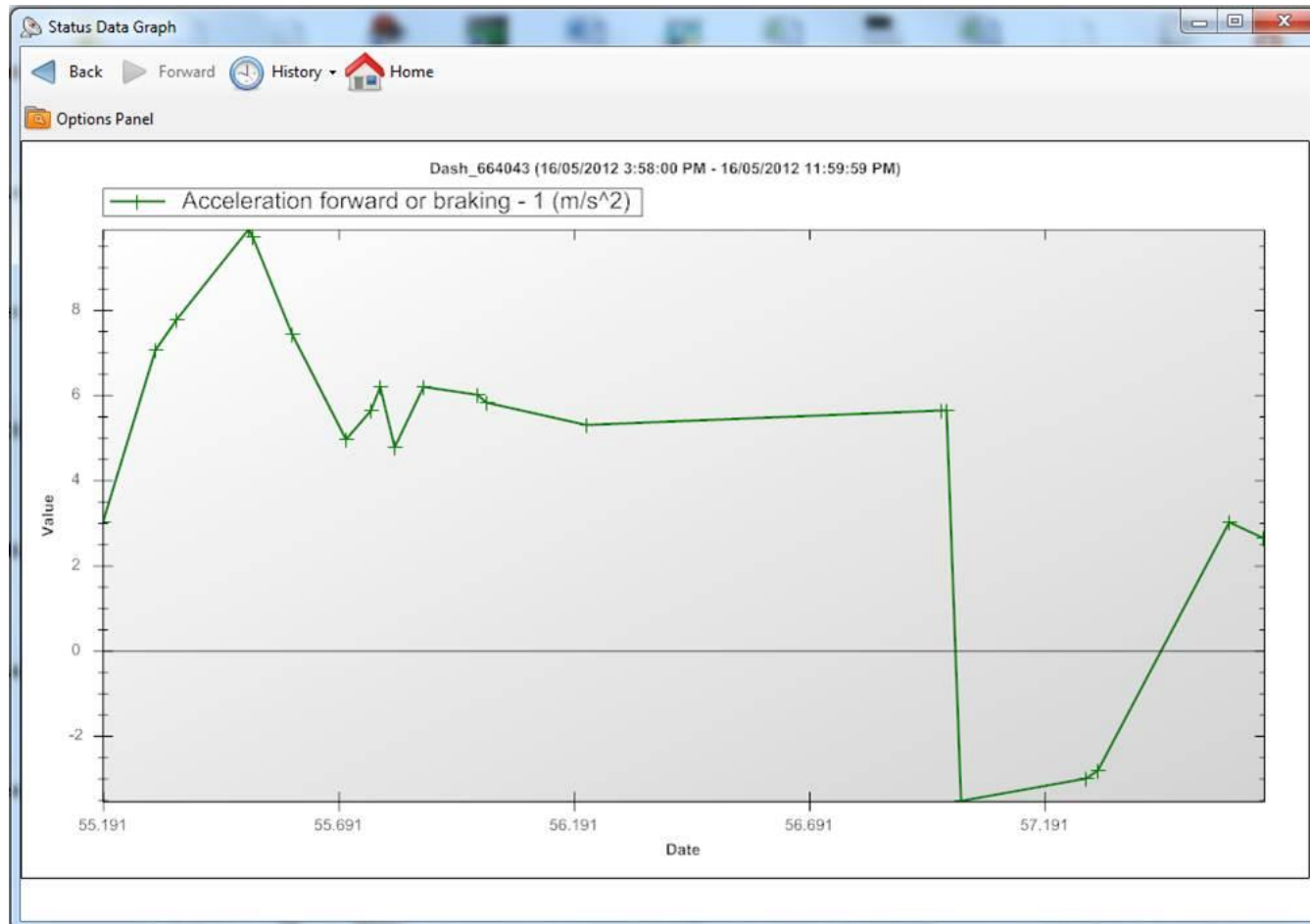
# Geotab – Fleet ROI

- Status view shows the series of engine data in chronological order.
- Interesting to see the timing of the seatbelt.

Device	Time	Description	Diagnostic Code	Value	Source	Controller
00199	9:21 AM	**Unknown GO Diagnostic 2187	2187	22,827.00	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	**Unknown GO Diagnostic 2188	2188	1,886.00	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	Cranking Voltage	37	11.96 Volts	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	Cranking Voltage	37	13.32 Volts	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	Engine Speed	107	1,277.00 RPM	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	Cranking Voltage	37	13.82 Volts	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	Cranking Voltage	37	14.18 Volts	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	Cranking Voltage	37	14.18 Volts	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	Driver Seatbelt (1=unbuckled)	2	1.00	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	GO Device Voltage	9999	13.75 Volts	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	Passenger Occupancy (1=occupied)	3	1.00	Geotab GO Device	Geotab GO Controller
00199	9:21 AM	Passenger Seatbelt Violation(1=unbuckled)	4	1.00	Geotab GO Device	Geotab GO Controller
00199	9:22 AM	GO Device Voltage	9999	14.18 Volts	Geotab GO Device	Geotab GO Controller
00199	9:22 AM	Odometer	5	120,496.20 km	Geotab GO Device	Geotab GO Controller
00199	9:22 AM	Engine Coolant Temperature	99	29.00 Degrees C	Geotab GO Device	Geotab GO Controller
00199	9:22 AM	Driver Seatbelt (1=unbuckled)	2	0.00	Geotab GO Device	Geotab GO Controller
00199	9:22 AM	Gear Position	8	127.00	Geotab GO Device	Geotab GO Controller
00199	9:22 AM	Engine Speed	107	819.25 RPM	Geotab GO Device	Geotab GO Controller
00199	9:22 AM	Engine Speed	107	1,765.50 RPM	Geotab GO Device	Geotab GO Controller
00199	9:22 AM	Engine Coolant Temperature	99	40.00 Degrees C	Geotab GO Device	Geotab GO Controller
00199	9:23 AM	Engine Speed	107	748.00 RPM	Geotab GO Device	Geotab GO Controller
00199	9:23 AM	Engine Speed	107	2,538.75 RPM	Geotab GO Device	Geotab GO Controller
00199	9:23 AM	Engine Speed	107	2,031.25 RPM	Geotab GO Device	Geotab GO Controller
00199	9:23 AM	Engine Speed	107	2,573.25 RPM	Geotab GO Device	Geotab GO Controller

# Geotab – Fleet

## The look of a hard brake



Detect and Communicate events based on severity – text, email, emergency response

# Geotab – Fleet ROI

- Set acceptable thresholds/notifications for:
    - Fault Codes/Engine Light
    - Speeding
    - Idling
    - Harsh Accelerations
    - Unnecessary Miles/KM's driven
- ...Manage to the exceptions to drive lower repair, fuel and running mile costs.



**FLEET**

# Geotab – Management by Measurement

If you can't record it you can't report it.

