PinPoint GPS Solutions Inc.
2800 Skymark Avenue, Suite 300
Mississauga, Ontario L4W 5A6
Telephone: 905-624-6477
Fax: 1-855-724-6477
www.pinpointgps.ca

Smith Engineering – Account Review
April, 2011

After a thorough review of your Pinpoint Fleet Complete GPS account, we have found some key areas where we believe this system can provide a great deal of value to your company. We have analyzed the data from Jan 26th to Apr 26th, 2011.

Our findings are intended to point out opportunities for Smith Engineering to **increase operational efficiencies, reduce costs and minimize business risk**.

- ***Rapid Acceleration and Harsh Braking***

  Both rapid acceleration and harsh braking have negative impacts on fuel economy and vehicle maintenance. Eliminating jack rabbit starts is estimated to improve fuel economy by up to 37%

  Measuring harsh braking events is very important because it indicates a high likelihood of a collision. The driver is more likely to hit the vehicle in front of them and to get hit in the rear end.

  After analyzing the harsh braking and rapid acceleration data for Smith Engineering, the following was found:

  - **There were 347 incidents of harsh braking. Over 17% of that was from Vehicle 462. Over 13% was from Vehicle 532.**
  - **There were 75 incidents of rapid acceleration. 25% of that was from Vehicle 462.**

  Accidents pose a significant risk for businesses with fleet vehicles and can be are very costly in many different aspects:

More accidents = higher insurance premiums	Administrative cost for processing claim
Replacement vehicle rental cost	Lost workdays
Workers' compensation claim cost	Delayed delivery/reorder costs
Damage to company vehicles (Bent Metal)	Rush order replacements
Overtime/temporary employees	Legal fees
Damage to cargo	Punitive damages
Insurance deductibles	Other liability costs

A complete summary of Rapid Acceleration and Harsh Braking can be found in **Appendix A** at the end of this document.

- ***Reduced Idling and Gas Consumption through Engine Monitoring***

Idling is an important measure, because **it affects the bottom line**. With today's fuel prices, unnecessary engine idling can be very costly. In addition, it has an unnecessary negative effect on the environment.

Smith Vehicles (Jan 26 - Apr 26)	#29	#462	#4621	#4622	#494	#507	#520	#532	#57	#58	#59	382544	382545	382545	382545	Total
Total Idling Time (hours)	10.70	21.22	12.00	2.13	17.73	16.73	14.82	19.95	13.60	20.00	13.80	14.88	39.03	43.18	6.52	266.30
Total Trip Duration (hours)	104.98	187.08	91.57	37.83	114.25	114.07	131.20	222.88	110.05	101.32	134.00	132.88	137.15	67.18	64.65	1751.10
% Time Idling	10.19%	11.34%	13.11%	5.64%	15.52%	14.67%	11.29%	8.95%	12.36%	19.74%	10.30%	11.20%	28.46%	64.28%	10.08%	15.21%

**The above table excludes all incidental idling of under 4 mins.*

Smith Engineering has many vehicles idling at very acceptable rates. However, there are 3 vehicles with higher than average idling where improvements could make a significant difference in the operational costs of those vehicles.

If Vehicle 532, Vehicle 58 and Vehicle 382545 all reduced their idling to a realistic 15%, the following savings could be achieved:

Jan 26 - April 26, 2011	Above Average Vehicle Idling
Current Idling %	**Vehicle 532 =19.72% , Vehicle 58 = 19.74% and Vehicle 382545 = 28.46%**

Improved Idling Target %	15.00%
Hours of Idling Eliminated	**33.76 hours**
Estimated Fuel Consumption while Idling	5 Litres/hour
Total Litre Improvement	168.8
Current Fuel Prices	$1.25 per Litre
Total Estimated Savings	**$211.00**

- ***Fuel Inefficiencies and Liability Risk Associated with Speeding***

Speeding is an important issue for Smith Engineering since it represents several negative impacts:

1. **An insurance risk** if an accident were to occur or a ticket issued.
2. **A marketing risk** - a speeding truck with a Smith Engineering logo on the side is not the best advertising for the company as a whole.
3. **Fuel inefficiency** - efficiency declines when speeding occurs which costs $$$.

After analyzing the speeding behaviours of Smith Engineering Trucks, there are several things which stand out:

- Smith had over **1200 incidents** of vehicles travelling **at least 15 km over the posted speed limit**.
  - 24% of those incidents were from **Vehicle 532** and 14% were from **Vehicle 462**.
- **Vehicle 532 had over 12 hours** of speeding at >15km over the speed limit.
- **Vehicle 462 had over 6.3 hours** of speeding at >15km over the speed limit.
- **Vehicle 532 had over 2 hours** of high speed instances, travelling 115km or greater.

A complete Speeding Summary has been included in **Appendix A** at the end of this document.

- ***When Do Vehicles Start and End Their Workday?***

Through the Work Schedule Report, you can get information that will tell you when each vehicle started their ignition for the first time that day and when they turned it off for the final time that same day. Obviously, there are many variables in your business related to how and when your drivers and vehicles begin their day, but a periodic comparison is a valuable tool in managing staff and allocating workload.

The following is a random snapshot of **Tues April 26th, 2011**:

Work Schedule										
Asset	Date	Weekday	Scheduled Start	First Ignition ON	First Movement	Idle Time at Start	Started within Work Hours	Last Ignition OFF	Resource/Crew	Start POI
#507	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 8:31:17 AM	26/04/2011 8:33:19 AM	2 min	Yes	26/04/2011 7:21:19 PM	Jim	Jim's House
382545	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 6:36:32 AM	26/04/2011 6:36:33 AM	< 1 min	Yes	26/04/2011 3:24:09 PM	Tom	Head Office
#29	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 8:10:56 AM	26/04/2011 8:10:56 AM		Yes	26/04/2011 5:21:21 PM	Stan	-----
382544	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 7:05:09 AM	26/04/2011 7:05:09 AM		Yes	26/04/2011 4:46:55 PM	Mark	Mark's House
382545	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 7:42:42 AM	26/04/2011 7:45:50 AM	3 min	Yes	26/04/2011 2:52:03 PM	Sally	Truck Yard
#520	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 7:34:39 AM	26/04/2011 7:34:42 AM	< 1 min	Yes	26/04/2011 5:17:32 PM	George	Head Office
#494	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 8:04:51 AM	26/04/2011 8:04:53 AM	< 1 min	Yes	26/04/2011 6:42:47 PM	Jose	Jose's House
#462	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 8:20:38 AM	26/04/2011 8:31:29 AM	11 min	Yes	26/04/2011 3:28:37 PM	Vince	Vince's House
#4621	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 8:19:41 AM	26/04/2011 8:19:42 AM	< 1 min	Yes	26/04/2011 4:47:04 PM	Bob	Truck Yard
#532	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 8:32:45 AM	26/04/2011 8:32:45 AM		Yes	26/04/2011 6:09:51 PM	Stacey	Truck Yard
#59	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 6:40:22 AM	26/04/2011 6:40:22 AM		Yes	26/04/2011 3:50:43 PM	John	Truck Yard
#58	26/04/2011	Tuesday	26/04/2011 12:00:00 AM	26/04/2011 7:16:58 AM	26/04/2011 7:18:59 AM	2 min	Yes	26/04/2011 2:01:59 PM	Jeff	Truck Yard

- ***Understand Customer Budgets vs. Actual Time Spent on Site***

  Fleet Complete GPS has the ability to tell you how much time your vehicles are actually spending at each customer site. This is critical in planning pricing and budgets. Using **ABC Mart** as an example, we use the POI reporting functionality to understand that between January 26th and Apr 26th, Smith Engineering vehicles spent **over 31 hours at that location.**

- ***Total KMs travelled by each Vehicle***

  In addition, it may prove helpful to understand the total kms travelled by each vehicle in a given period.

Vehicle	Total KMs travelled
#29	2668
#462	7537
#4621	2182
#4622	1235
#494	2934
#507	2571
#520	4161
#532	9045
#57	3258
#58	3465
#59	4182
382544	4334
382545	4936
382545	2358
382545	9135

Appendix A

Speeding Summary Report

Smith Engineering (Jan 26 - April 26, 2011)	Number of Times exceeding Speed Limit by >15km	Total Time at >15 km over Speed Limit (hours)	Total Time at 115km or greater (hours)
#29	45	1.60	
#462	175	6.30	0.33
#4621	23	0.83	
#4622	19	0.65	
#494	63	2.47	0.03
#507	44	1.52	
#520	83	2.98	
#532	304	12.35	2.20
#57	56	1.98	
#58	97	3.73	0.17
#59	47	1.97	
10A	84	3.07	0.13
10C	80	2.97	0.23
10B	74	2.92	
10D	51	1.73	

Harsh Braking and Rapid Acceleration Report Summary

Fleet Performance				
Asset	Asset Type	Resource/Crew	Harsh Braking	Rapid Acceleration
#462	HVAC/R Service	Vince	61	19
#532	HVAC/R Service	Stacey	48	4
10D	HVAC/R Service	Sally	42	5
#494	HVAC/R Service	Jose	38	2
#507	HVAC/R Service	Jim	31	10
#520	HVAC/R Service	George	26	1
#58	HVAC/R Service	Jeff	22	0
#29	HVAC/R Service	Stan	16	4
#59	HVAC/R Service	John	14	1
#57	HVAC/R Service	Chris	14	9
10B	HVAC/R Service	Mark	14	10
#4622	HVAC/R Service	Tom	13	2
#4621	HVAC/R Service	Bob	7	8
#508	HVAC/R Service	Larry	1	0
			347	75