



Speed Monitoring

Reference Guide

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Understanding Changes to monitoring speed

As Smartrak evolves from thresholds-based reporting to using the posted speed limited for recording speeding events it's important that our customers understand the changes we have made. The purpose of this reference guide is to provide report users with an overview of what's changed, what it means for them and how these changes have affected reporting.

What has changed?

Reports that monitor speeding now track a driver's speed against the posted speed limit on the road they are travelling. Speeding events are reported in all speed zones in urban and rural areas. This provides a holistic view of driver behaviour and a more complete tool to understand if drivers are driving safely and lawfully on all roads. The feature provides the means to support real time conversations and responses to driver behaviour.

What does this mean for you?

As all speeding events are now recorded, including events when a vehicle is slowing down / speeding up between speed zones, there will be more events appearing on your Map and reporting. Other changes to note include;

- Polling occurs every 20s instead of 5s but is still above the industry standard of a minute.
- Smartrak must enable your ability to track against the posted speed limited and this is done on a company basis, not vehicle by vehicle, meaning all vehicles in your fleet are either using thresholds or posted speed limited as the basis for speeding events.
- Once enabled it will override the unit speed thresholds for all vehicles meaning trucks will no longer have a threshold of 95km/hr.
- To maintain the accuracy of reporting, road speed information is uploaded from CoreLogic (NZ) or Tom Tom (AU) on a periodic basis. If the posted road speed changes for a road in the interim it will not be associated with that road and reported until a map update is complete.
- When reported, speeding periods go through a banding process which splits the periods into 5km buckets. A speeding event will appear as one event on the Map but if the driver accelerates through several 5km boundaries it will appear as separate entries on the Overspeed Report. This ensures less frequent but more extreme incidents of over-speeding are captured and aren't hidden due to averaging.

How is speeding recorded?

Speeding events are the difference between the posted speed limit for a road and the speed at which the driver is travelling.

Why Average Magnitude vs Average Speed?

By shifting to monitoring speed against the posted speed limit we are highlighted the need to focus on all speeding events and not just those above 100km/hr. As speeding correlates directly with safety, risks and fines it is important to understand how far above the posted speed limit the driver was travelling than the overall average speed of their trip. Therefore, we are reporting Average Magnitude going forward.

Reporting

The following reports will change once enabled;

- Vehicle Behaviour Report
- Driver Behaviour Report
- Overspeed Period Report
- Overspeed Severity Report

Details of changes to reports are described in the sections below.

Vehicle Behaviour Report

The Vehicle Behaviour Report details the number of daily excessive speed or G-Force events for selected vehicles.

Overview of Report Changes

The report now uses the posted speed limit to calculate and record entries. Overspeed Max Magnitude (speed above the posted speed limit) is reported instead of Overspeed Max (the speed travelled above 100km).

Old Report Layout

Vehicle Behaviour Report for 25/02/2019 - 3/03/2019

Generated on: 04/03/19

Date	Overspeed Event Count	Overspeed Duration	Overspeed Max	Left G-force Count	Left G-force Max	Right G-force Count	Right G-force Max	Brake G-force Count	Brake G-force Max	Acceleration G-force Count	Acceleration G-force Max	Total G-force Count	View on Map
Totals	0	0:00:00	0	0	0.00	0	0.00	0	0.00	0	0.00	0	
Threshold			105		0.60		0.60		0.60		0.60		
Mon, 25-Feb-19	5	0:02:51	60	0	0.00	0	0.00	32	0.76	0	0.00	32	View on Map
Tue, 26-Feb-19	3	0:01:12	47	0	0.00	0	0.00	23	0.80	0	0.00	23	View on Map
Wed, 27-Feb-19	0	0:00:00	0	0	0.00	0	0.00	7	0.71	0	0.00	7	View on Map
Totals	8	0:04:03	60	0	0.00	0	0.00	62	0.80	0	0.00	62	
Threshold			105		0.60		0.60		0.60		0.60		
Mon, 25-Feb-19	10	0:03:42	89	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Tue, 26-Feb-19	11	0:03:52	88	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Wed, 27-Feb-19	8	0:03:08	87	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Thu, 28-Feb-19	8	0:02:51	60	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Fri, 01-Mar-19	13	0:04:17	87	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Sat, 02-Mar-19	9	0:03:31	91	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Sun, 03-Mar-19	2	0:00:40	57	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Totals	61	0:22:01	91	0	0.00	0	0.00	0	0.00	0	0.00	0	
Threshold			105		0.60		0.60		0.60		0.60		

New Report Layout

Vehicle Behaviour Report for 18/02/2019 - 25/02/2019

Generated on: 28/02/19

Date	Overspeed Event Count	Overspeed Duration	Overspeed Magnitude Max	Left G-force Count	Left G-force Max	Right G-force Count	Right G-force Max	Brake G-force Count	Brake G-force Max	Acceleration G-force Count	Acceleration G-force Max	Total G-force Count	View on Map
Mon, 18-Feb-19	5	0:02:02	15	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Tue, 19-Feb-19	7	0:03:01	23	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Wed, 20-Feb-19	3	0:01:22	14	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Thu, 21-Feb-19	14	0:05:33	19	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Fri, 22-Feb-19	9	0:03:21	19	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Sun, 24-Feb-19	1	0:00:00	11	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Mon, 25-Feb-19	5	0:01:38	13	0	0.00	0	0.00	0	0.00	0	0.00	0	View on Map
Totals	44	0:16:57	23	0	0.00	0	0.00	0	0.00	0	0.00	0	
Threshold					0.45		0.45		0.45		0.45		
All													
Totals	44	0:16:57	23	0	0.00	0	0.00	0	0.00	0	0.00	0	

The report has the following new column/s:

- **Overspeed Magnitude Max** – the maximum km/hr above the posted speed limit the vehicle travelled across all speeding events on a given day.

Driver Behaviour Report

The Driver Behaviour Report details the number of daily excessive speed and G-Force events for each driver of the selected vehicles. The driver information is pulled from the pool booking record for the time the incident occurred or the driver name configured on the Resource Info page in admin.

Overview of Report Changes

The report now uses the posted speed limit to calculate and record entries. Overspeed Max Magnitude (speed above the posted speed limit) is reported instead of Overspeed Max (the speed travelled above 100km).

Old Report Layout

Driver Behaviour Report for 25/02/2019 - 3/03/2019

Generated on: 04/03/19

Date	Resource Name	Rego	Overspeed Count	Overspeed Max	Left G-Force Count	Right G-Force Count	Brake G-Force Count	Acceleration G-Force Count	G-Forces Max (Left, Right, Brake, Acceleration)	View On Map
25/02/2019			5	60	0	0	32	0	(None, None, 0.76, None)	view on map
26/02/2019			3	47	0	0	23	0	(None, None, 0.80, None)	view on map
27/02/2019			0		0	0	7	0	(None, None, 0.71, None)	view on map
Totals			8	60	0	0	62	0	(None, None, 0.80, None)	

Totals

Driver Name	Overspeed Event Count	Overspeed Max	Left G-force Count	Right G-force Count	Brake G-force Count	Acceleration G-force Count	G-forces Max (Left, Right, Brake, Acceleration)
	8	60	0	0	62	0	(None, None, 0.80, None)

New Report Layout

Driver Behaviour Report for 27/02/2019 - 28/02/2019

Generated on: 01/03/19

Date	Resource Name	Rego	Overspeed Count	Overspeed Magnitude Max	Left G-Force Count	Right G-Force Count	Brake G-Force Count	Acceleration G-Force Count	G-Forces Max (Left, Right, Brake, Acceleration)	View On Map
27/02/2019		ABC123	2	13	0	0	0	0	(None, None, None, None)	view on map
28/02/2019		ABC123	4	18	0	0	0	0	(None, None, None, None)	view on map
Totals			6	18	0	0	0	0	(None, None, None, None)	

Totals

Driver Name	Overspeed Event Count	Overspeed Magnitude Max	Left G-force Count	Right G-force Count	Brake G-force Count	Acceleration G-force Count	G-forces Max (Left, Right, Brake, Acceleration)
	6	18	0	0	0	0	(None, None, None, None)

The report has the following new column/s:

- **Overspeed Magnitude Max** – the maximum km/hr above the posted speed limit the driver travelled across all speeding events on a given day.
- Please note the total under this column is reporting the Maximum Overspeed value for the driver within the reporting period, not a total Magnitude.

Overspeed Period Report

The Overspeed Period Report shows the individual periods where resources were speeding.

Overview of Report Changes

The report now uses the posted speed limit to calculate and record entries. The Posted Speed Limited, Overspeed Max Magnitude (speed above the posted speed limit) and the average speed of the duration of the overspeed period are now reported.

Old Report Layout

Overspeed Period Report for 25/02/2019 - 3/03/2019										Generated on: 04/03/19
Started Speeding Time	Stopped Speeding Time	Duration (h:mm:ss)	Distance (km)	Min Speed (km/h)	Max Speed (km/h)	Avg Speed (km/h)	Start Address	End Address	Actions	
Monday, 25 February 2019										
8:18 a.m.	8:18 a.m.	0:00:20	0.23	50	50	41	127 Aberdeen Drive, Dinsdale, Hamilton City	102 Aberdeen Drive, Dinsdale, Hamilton City	view on map	
8:30 a.m.	8:31 a.m.	0:00:40	0.63	55	60	56	Boundary Road, Claudelands, Hamilton City	30 Boundary Road, Claudelands, Hamilton City	view on map	
8:31 a.m.	8:32 a.m.	0:00:20	0.29	56	56	52	89 Boundary Road, Claudelands, Hamilton City	129 Boundary Road, Claudelands, Hamilton City	view on map	
8:36 a.m.	8:37 a.m.	0:00:51	0.00	30	33	0	Off road near Ruakura, Hamilton City	420 Ruakura Lane, Ruakura, Hamilton City	view on map	
5:06 p.m.	5:07 p.m.	0:00:40	0.30	36	42	26	113B Ruakura Road, Ruakura, Hamilton City	10 Bisley Road, Ruakura, Hamilton City	view on map	
Tuesday, 26 February 2019										
8:08 a.m.	8:09 a.m.	0:00:20	0.24	47	47	42	30 Aberdeen Drive, Dinsdale, Hamilton City	8 Aberdeen Drive, Dinsdale, Hamilton City	view on map	
8:32 a.m.	8:32 a.m.	0:00:40	0.37	34	42	33	10 Bisley Road, Ruakura, Hamilton City	113B Ruakura Road, Ruakura, Hamilton City	view on map	
10:06 a.m.	10:06 a.m.	0:00:12	0.00	36	36	0	201 Airport Road, Ohaupo, Waipa District	201 Airport Road, Ohaupo, Waipa District	view on map	
Total										
		0:04:03	2.06	30	60	30				

New Report Layout

Overspeed Period Report for 22/02/2019 - 25/02/2019										Generated on: 28/02/19
Started Speeding Time	Stopped Speeding Time	Duration (h:mm:ss)	Distance (km)	Posted Speed Limit (km/h)	Max Overspeed Magnitude (km/h)	Max Speed (km/h)	Avg Overspeed Magnitude (km/h)	Start Address	End Address	Actions
Friday, 22 February 2019										
7:47 a.m.	7:47 a.m.	0:00:20	0.18	20	17	37	12	10 Bisley Road, Ruakura, Hamilton City	Off road near Ruakura, Hamilton City	view on map
7:47 a.m.	7:47 a.m.	0:00:20	0.15	20	14	34	6	Off road near Ruakura, Hamilton City	113B Ruakura Road, Ruakura, Hamilton City	view on map
12:03 p.m.	12:04 p.m.	0:00:41	0.29	20	9	29	5	113B Ruakura Road, Ruakura, Hamilton City	Off road near Ruakura, Hamilton City	view on map
12:04 p.m.	12:04 p.m.	0:00:20	0.20	20	15	35	15	Off road near Ruakura, Hamilton City	10 Bisley Road, Ruakura, Hamilton City	view on map
12:07 p.m.	12:07 p.m.	0:00:20	0.48	80	7	87	6	Wairere Drive, Chartwell, Hamilton City	380 Wairere Drive, Chartwell, Hamilton City	view on map
1:00 p.m.	1:01 p.m.	0:00:20	0.18	20	17	37	12	10 Bisley Road, Ruakura, Hamilton City	Off road near Ruakura, Hamilton City	view on map
1:01 p.m.	1:01 p.m.	0:00:20	0.15	20	14	34	6	Off road near Ruakura, Hamilton City	113B Ruakura Road, Ruakura, Hamilton City	view on map
4:33 p.m.	4:33 p.m.	0:00:18	0.19	20	11	31	17	113B Ruakura Road, Ruakura, Hamilton City	10 Bisley Road, Ruakura, Hamilton City	view on map
4:33 p.m.	4:34 p.m.	0:00:22	0.19	20	19	39	10	10 Bisley Road, Ruakura, Hamilton City	112 Bisley Road, Enderley, Hamilton City	view on map
Monday, 25 February 2019										
7:27 a.m.	7:27 a.m.	0:00:20	0.28	50	5	55	0	Wairere Drive, Queenwood, Hamilton City	Wairere Drive, Huntington, Hamilton City	view on map
7:32 a.m.	7:32 a.m.	0:00:20	0.19	20	5	25	13	10 Bisley Road, Ruakura, Hamilton City	Off road near Ruakura, Hamilton City	view on map
7:32 a.m.	7:33 a.m.	0:00:20	0.17	20	13	33	9	Off road near Ruakura, Hamilton City	113B Ruakura Road, Ruakura, Hamilton City	view on map
7:33 a.m.	7:33 a.m.	0:00:18	0.14	20	8	28	7	113B Ruakura Road, Ruakura, Hamilton City	420 Ruakura Lane, Ruakura, Hamilton City	view on map
7:33 a.m.	7:34 a.m.	0:00:20	0.16	20	8	28	8	420 Ruakura Lane, Ruakura, Hamilton City	2 Ruakura Lane, Hamilton East, Hamilton City	view on map
Total										
		0:04:58	2.92		19	87	9			

The report has the following new column/s:

- **Posted Speed Limit** – speed limit for the road the speeding offence took place.
- **Max Overspeed Magnitude** – amount in km/hr the driver is travelling above the posted speed limit.
- **Average Overspeed Magnitude** – the average speed, above the posted speed limit, of the duration of the overspeed period.

The report removes the following column:

- **Min Speed (km/h)**
- **Avg Speed (km/h)**

Overspeed Severity Report

The Overspeed Severity Report looks at the total % of time and % of distance the driver spent speeding, during the reported period, to understand the scale of the driver's speeding behaviour.

Overview of Report Changes

The report takes into consideration all speeding events, not just events above 100km/hr and provides the maximum the driver went above the speed limit in km/hr and the average overspeed for the speeding events.

Old Report Layout

Overspeed Severity Report for 25/02/2019 - 3/03/2019										
										Generated on: 04/03/19
Resource Name	Rego	# of Overspeed Periods	Total Duration Speeding (h:mm:ss)	% Time Speeding	Total Distance Speeding (km)	% Distance Speeding	Total Distance Driven (km)	Min Overspeed (km/h)	Max Overspeed (km/h)	Avg Overspeed (km/h)
All Offences										
		8	0:04:03	4.0%	2.06	4.7%	44.04	30	60	30
		61	0:22:01	6.0%	13.39	7.4%	181.89	26	91	36
		21	0:09:13	7.4%	4.54	9.8%	46.26	27	68	29
Summary										
Average		30	0:11:45	5.8%	6.66	7.3%	N/A	27	73	31
Median		21	0:09:13	6.0%	4.54	7.4%	N/A	27	68	30
Maximum		61	0:22:01	7.4%	13.39	9.8%	N/A	30	91	36

New Report Layout

Overspeed Severity Report for 25/02/2019											
										Generated on: 28/02/19	
Resource Name	Rego	# of Overspeed Periods	Total Duration Speeding (h:mm:ss)	% Time Speeding	Total Distance Speeding (km)	% Distance Speeding	Total Distance Driven (km)	Max Overspeed (km/h)	Avg Overspeed (km/h)	Max Overspeed Magnitude (km/h)	Avg Overspeed Magnitude (km/h)
All Offences											
		5	0:01:38	4.1%	0.93	3.7%	25.27			13	8
Summary											
Average		5	0:01:38	4.1%	0.93	3.7%	N/A			13	8
Median		5	0:01:38	4.1%	0.93	3.7%	N/A			13	8
Maximum		5	0:01:38	4.1%	0.93	3.7%	N/A			13	8

The report has the following new column/s:

- **Max Overspeed Magnitude** – the maximum km/hr above the posted speed limit the driver travelled across all speeding events on a given day.
- **Average Overspeed Magnitude** – the average speed, above the posted speed limit, of the duration of the overspeed period.

The report removes the following column:

- **Min Overspeed (km/h)**
- **Max Overspeed (km/h)**
- **Avg Overspeed (km/h)**

Transition Period

Due to the change in information required for reporting all speeding events and moving from Overspeed Threshold data to Posted Speed Limit data, a transition period will occur when reviewing reports. Once enabled, reports will perform in the following ways:

- Reporting dates are prior to enablement date
 - Historical overspeed threshold data will be displayed
- Reporting dates include enablement date & dates prior to enablement
 - Historical data, prior to enablement date, will show as blank as the report will be using the new calculation method
- Reporting dates are from the enablement date onwards
 - Reports will display the posted speed limit data and all speeding events.

Scheduling Reports

Reports can be scheduled to be received by email on a regular basis.

- Log on to Smartrak and navigate to Reports
- Select the required Report Type from the drop-down list & change the Type from One-Off Report to **Saved Report**
- Edit the Report Name to make it easy to identify - eg Weekly Vehicle Behaviour
- Select the Date Range for the report - Previous Day, Week or Month
- Select **On** to enable the automatic emailing of the report, and here you can edit when the report is emailed to you
- Select Resources individually by clicking on them until they turn blue or click Select All
- Select **Save Report** to set this up as a scheduled report
- To edit Saved Reports, select the **View Saved Reports** link at the top of the reports page

Create Report

Report: Vehicle Behaviour Report | Type: One-off Report | **Saved Report**

Report Name: Vehicle Behaviour Report (24/50 characters)

Email Report: **On** | Off | Email the report on: Monday | each week

The next report will be sent to on Monday, 11th March 2019 for the week Monday, 4th March 2019 to Sunday, 10th March 2019. Today is Monday, 04 March 2019

Email Frequency: Daily | Weekly | Monthly

Format: xlsx | csv

Hide Resources Without Data: Hide resources that have no relevant data Without Data

Show Summary Totals: Show a summary of resources totals

Selection Mode: Individual Resources | Resource Groups

Resources: Visible Property | Rego

Select All - Select None

F - G

J - V

Save Report | View Report