



Recorders Attachment 1 – Cummins ECM – Power Spec

Chattanooga, TN

HWY17MH009

(45 pages)

Engine Dataplate Report

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:43:46

ECM Information

Module Name	CM2150D
Ecm Code	AU90069.37
Software Phase	6.4.1.10
ECM Serial Number	132372
ECM Part Number	4943134

Engine Information

Engine Model	ISB 07
Engine Build Date	010185
Engine Serial Number	46762586
Do Option	90092
SC Option	97712

Vehicle Information

Vehicle Identification Number (VIN)	*****
Vehicle or Equipment Year	BBBBBBBBBB
OEM Vehicle Equipment Model	????????????????
Customer Name	CustomerCame**
Customer Location	*****
Vehicle Unit Number	x03BBBBBBB

Engine Trip Detail Report (One Page)

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:40:57
Total Engine Distance	58135.66 mi	Total Engine Hours	3262:19:12 hh:mm:ss
Total Fuel Used	8659.57 gal	Total Idle Fuel Used	389.92 gal

Trip Summary

Distance	58138.01 mi	Average Engine Speed	1351 rpm
Fuel	8649.82 gal	Average Vehicle Speed	18 mph
Fuel Economy	6.72 mpg	Average Engine Load	24.5 %
Drive Fuel Economy	7.20 mpg	Maximum Vehicle Speed	70 mph
Time	3262:09:21	Maximum Engine Speed	2981 rpm

Trip Detail	Time (%)	Time (hh:mm:ss)	Distance (miles)	Fuel (gallons)
Trip	100	3262:09:21	58138.01	8649.82
Driving	65.3	2129:53:01	58138.01	8070.80
Cruise	0.0	00:00:00	0.00	0.00
Top Gear	18.8	613:07:52	26122.31	2061.98
Gear Down	12.9	419:45:30	13227.55	1419.01
Max Accelerator Speed	0.4	13:59:50	645.80	89.74
PTO	1.6	52:55:02	0.00	37.02
PTO Moving	0.0	00:00:00	0.00	0.00
Coast	5.7	184:38:03	6323.9	34.3
Idle	23.0	751:49:56	N/A	389.92
Trip Vehicle Overspeed 1	73.9	2409:46:55	58152.43	7909.80
Trip Vehicle Overspeed 2	73.9	2409:46:55	58152.43	7909.80
Fan On Time Manual Switch	0.0	00:00:00	N/A	N/A

Counts

Aftertreatment

Service Brake Actuations / 1K	5535	Trip Fuel Used For Dosing	238.75 gal
Total Number of Sudden Decel	155	Diesel Exhaust Fluid Used	0.00 gal

Counts		Aftertreatment	
Number of Coasts Out of Gear	0	Total Complete Regenerations	726
Service Brake Applications	32181	Total Peak Soot Fill Monitor Status	Normal
	7		
Idle Shutdown	60	Total Peak Soot Filter Delta Pressure	5.14 psi

Engine Trip Summary Report

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:40:57

Fuel Economy

Overall Fuel Economy	6.72	mpg
Drive Fuel Economy	7.20	mpg
Top Gear Fuel Economy	12.67	mpg
Gear Down Fuel Economy	9.32	mpg
Cruise Fuel Economy	0.00	mpg
Idle Fuel Rate	0.52	gal/hr
PTO Fuel Rate	0.70	gal/hr

Distance

Trip Distance	58138.01	mi
% Top Gear Distance	44.9	%
% Gear Down Distance	22.8	%
% Cruise Control Distance	0.0	%
% Maximum Accelerator Speed Distance	1.1	%

Time

Trip Drive Time	2129:53:01	hh:mm:ss
Trip Time	3262:09:21	hh:mm:ss
% Idle Time	23.0	%
% PTO Time	1.6	%
% Fan On Time	0.0	%

Maximums

Maximum Vehicle Speed	70	mph
Maximum Engine Speed	2981	rpm

Counts

Counts

Number of Coasts Out of Gear	0
Sudden Deceleration Counts	155
Engine Protection Shutdown Overrides	0
Service Brake Actuations / 1Kmi	5535
Key Switch Cycle / 1K	7250
Idle Shutdown	60
Idle Shutdown Overrides	0
Number of Trip Resets	0

Aftertreatment

Trip Complete Regenerations	726	
Trip Incomplete Regenerations	0	
Trip Peak Soot Filter Delta Pressure	5.14	psi

Averages

Average Vehicle Speed	0	
Average Vehicle Speed (Drive)	27	mph
Average Vehicle Speed (Top Gear)	12	mph
Average Engine Load	24.5	%
Drive Average Load Factor	32.0	%
Average Engine Speed	1351	rpm
Average Engine Speed (Drive)	1660	rpm
Average Engine Power (Drive)	66	hp

Trip Vehicle Overspeed 1

Trip Vehicle Overspeed 1 Fuel Economy	7.35	mpg
% Overspeed 1 Time	113.1	%
% Overspeed 1 Distance	100.0	%

Trip Vehicle Overspeed 2

Trip Vehicle Overspeed 2 Fuel Economy	7.35	mpg
% Overspeed 2 Time	113.1	%
% Overspeed 2 Distance	100.0	%

Engine Trip Detail Report

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:40:57

Trip Summary

Distance	58138.01 mi	Time	3262:09:21
Fuel	8649.82 gal	Idle Time	751:49:56
Fuel Economy	6.72 mpg	% Idle Time	23.0 %
Drive Fuel Economy	7.20 mpg	Average Vehicle Speed	18 mph
Fuel Consumption	6.72 gal	Average Engine Load	24.5 %
Idle Fuel	389.92 gal	Average Engine Load (Drive)	32.0 %
		Average Engine Speed	1351 rpm

Trip Detail	Time (%)	Time (hh:mm:ss)	Distance (miles)	Fuel (gallons)
Trip	100	3262:09:21	58138.01	8649.82
Driving	65.3	2129:53:01	58138.01	8070.80
Cruise	0.0	00:00:00	0.00	0.00
Top Gear	18.8	613:07:52	26122.31	2061.98
Gear Down	12.9	419:45:30	13227.55	1419.01
Max Accelerator Speed	0.4	13:59:50	645.80	89.74
PTO	1.6	52:55:02	0.00	37.02
PTO Moving	0.0	00:00:00	0.00	0.00
Coast	5.7	184:38:03	6323.9	34.3
Idle	23.0	751:49:56	N/A	389.92
Trip Vehicle Overspeed 1	73.9	2409:46:55	58152.43	7909.80
Trip Vehicle Overspeed 2	73.9	2409:46:55	58152.43	7909.80
Fan On Time Manual Switch	0.0	00:00:00	N/A	N/A

Driver Reward	Time (%)	Time(hh:mm:ss)	Distance	Fuel
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Driver Reward	Time (%)	Time(hh:mm:ss)	Distance	Fuel
Reward (Best)	0.0	00:00:00	0.00	0.00
Reward (Good)	0.0	00:00:00	0.00	0.00
Reward (Expected)	0.0	00:00:00	0.00	0.00
Reward (Penalty)		00:00:00	0.00	0.00

Counts

Service Brake Applications	321817
Sudden Deceleration Counts	155
Number of Coasts Out of Gear	0

Aftertreatment

Trip Desired Regenerations	2824
Trip Complete Regenerations	726
Trip Incomplete Regenerations	0
Trip Fuel Used For Dosing	227.00 gal
Trip Diesel Exhaust Fluid Used	0.00 gal
Total Peak Soot Fill Monitor Status	Normal
Trip Peak Soot Filter Delta Pressure	5.14 psi

Maximums

Maximum Engine Speed	2981 rpm
Maximum Vehicle Speed	70 mph
Maximum Engine Speed at Vehicle Speed	2720 rpm
Maximum Vehicle Speed at Engine Speed	77 mph

Totals

Total Engine Distance	58135.66 mi
Engine Distance Offset	0.00 mi
Total Engine Hours	3262:19:12 hh:mm:ss
Total ECM Distance	58182.11 mi

Totals

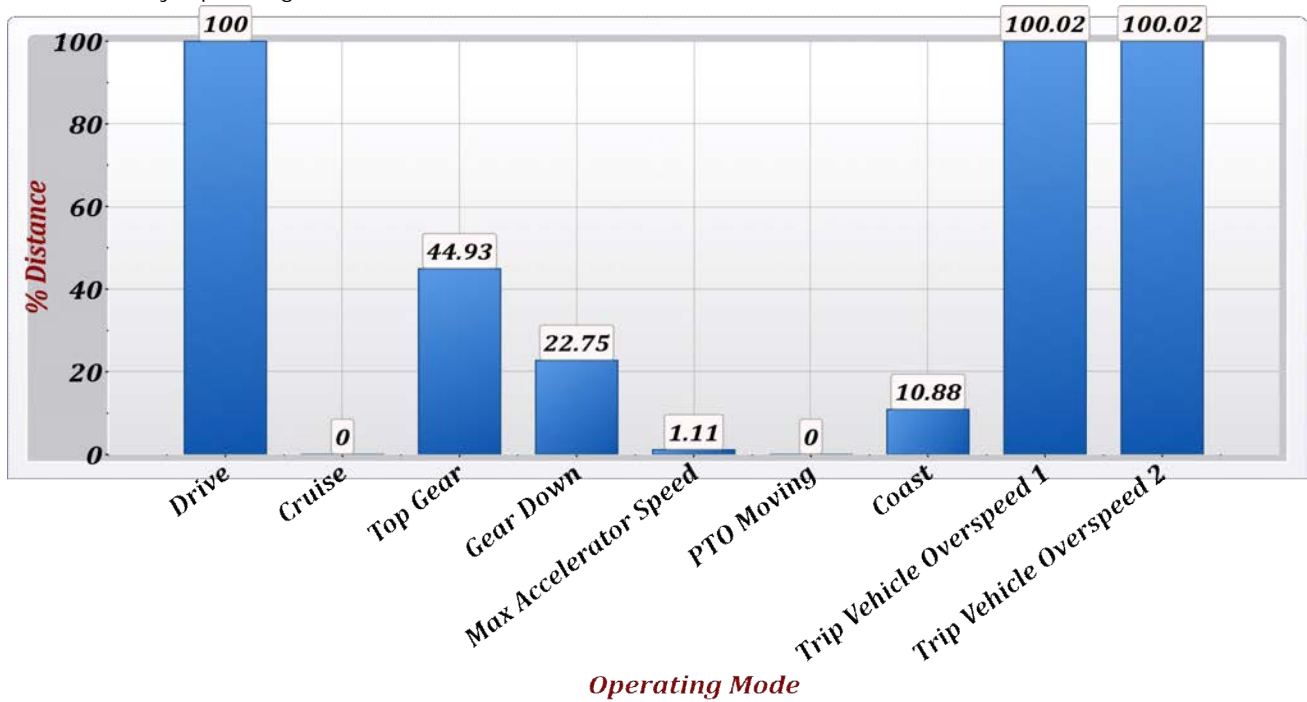
Total Fuel Used	8659.57 gal
Total Idle Fuel Used	389.92 gal
Total Idle Time	751:49:48 hh:mm:ss
Total PTO Fuel Used	37.02 gal
Total PTO Time	52:55:12 hh:mm:ss
Total Complete Regenerations	726
Total Desired Regenerations	2824
Total Fuel Used For Dosing	238.75 gal
Total Incomplete Regenerations	0
Total Peak Soot Fill Monitor Status	Normal
Total Peak Soot Filter Delta Pressure	5.14 psi

Engine Trip Operating Mode Report

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:40:57

Operating Mode Graphs

% Distance by Operating Mode



% Time by Operating Mode



% Fuel by Operating Mode



Trip Summary

Distance	58138.01 mi	Time	3262:09:21
Fuel	8649.82 gal	Idle Time	751:49:56
Fuel Economy	6.72 mpg	% Idle Time	23.0 %
Drive Fuel Economy	7.20 mpg	Average Vehicle Speed	18 mph
Fuel Consumption	6.72 gal	Average Engine Load	24.5 %
Idle Fuel	389.92 gal	Average Engine Load (Drive)	32.0 %
		Average Engine Speed	1351 rpm

Trip Detail	Time (%)	Time (hh:mm:ss)	Distance (miles)	Fuel (gallons)
Trip	100	3262:09:21	58138.01	8649.82
Driving	65.3	2129:53:01	58138.01	8070.80
Cruise	0.0	00:00:00	0.00	0.00
Top Gear	18.8	613:07:52	26122.31	2061.98
Gear Down	12.9	419:45:30	13227.55	1419.01
Max Accelerator Speed	0.4	13:59:50	645.80	89.74
PTO	1.6	52:55:02	0.00	37.02
PTO Moving	0.0	00:00:00	0.00	0.00
Coast	5.7	184:38:03	6323.9	34.3
Idle	23.0	751:49:56	N/A	389.92
Trip Vehicle Overspeed 1	73.9	2409:46:55	58152.43	7909.80
Trip Vehicle Overspeed 2	73.9	2409:46:55	58152.43	7909.80
Fan On Time Manual Switch	0.0	00:00:00	N/A	N/A

Engine AfterTreatment Report

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:45:24

Aftertreatment Regeneration History

ECM Time (Key On Time)	Time Since Previous Regen	Starting DPF Soot Load	Ending DPF Soot Load	Starting DOC Inlet Temp(°F)	Max DPF Inlet Temp(°F)	Max DPF Outlet Temp(°F)	Max DPF Delta Pressure(psi)
3567:35:13	-7:-54:-36	Normal	Normal	721.69	994.84	1117.58	2.67
3575:29:49	-1:-40:-12	Normal	Normal	731.71	895.28	878.41	2.38
3577:10:2	-1:-26:-2	Normal	Normal	754.09	979.09	1069.43	2.8
3578:36:4	-3:-28:-16	Normal	Normal	787.84	1079.33	1146.04	3.35
3582:4:20	-3:-6:-26	Normal	Normal	639.01	1020.94	1172.03	2.6
3585:10:46	-3:-9:-46	Normal	Normal	543.49	1082.59	1164.49	2.91
3588:20:33	-1:-50:-52	Normal	Normal	591.42	914.63	1061.33	2.38
3590:11:25	-1:-59:-19	Normal	Normal	746.78	902.03	958.95	2.12
3592:10:45	-2:-47:-27	Normal	Normal	524.59	925.88	1049.07	2.44
3594:58:12	-	Normal	Normal	716.41	882.68	1001.7	1.98
Average:	-	-	-	675.7	967.73	1061.9	2.56
Std Dev:	-	-	-	89.13	71.21	89.97	0.38

Maximum Soot Load Condition

ECM Time (Key On Time)	Elapsed Time	Maximum DPF Soot Load	DOC Inlet Temp(°F)	DPF Inlet Temp(°F)	DPF Outlet Temp(°F)	DPF Delta Pressure(psi)

Maximum DPF Outlet Temperature Condition

ECM Time (Key On Time)	Elapsed Time	DPF Soot Load	DOC Inlet Temp(°F)	DPF Inlet Temp(°F)	Max DPF Outlet Temp(°F)	DPF Delta Pressure(psi)	
2634:35:1	-	-	Normal	567.23	717.08	1575.12	0.88

Aftertreatment Maintenance

ECM Time (Key On Time)	Elapsed Time	Aftertreatment Reset Applied
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Diesel Particulate Filter Parameters

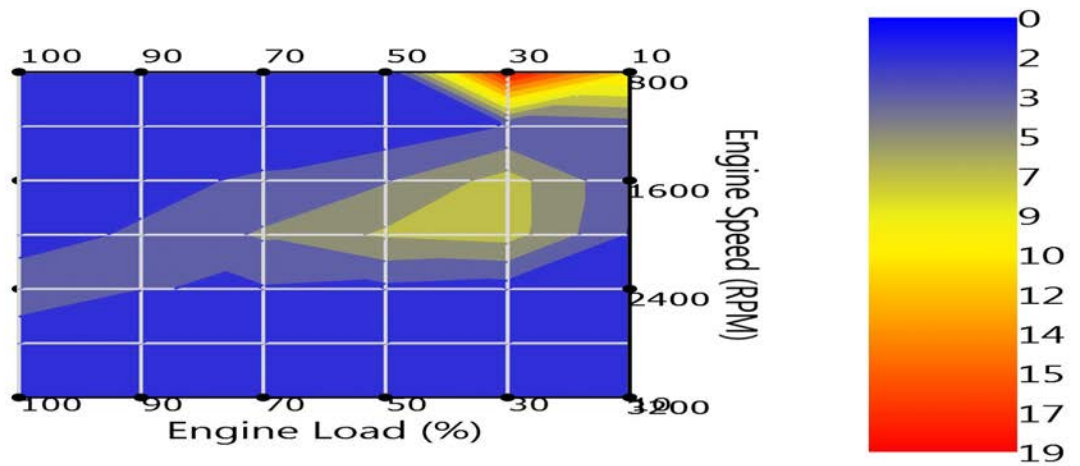
Active Regeneration in PTO and Remote Modes	Disable	
Stationary Regeneration with Parking Brake	Disable	
Diesel Particulate Filter Temperature Stabilization	Disable	
Automatic Stationary Regeneration	Disable	
Automotive Mobile Regeneration	Enable	
Minimum Vehicle Speed	5	mph
Diesel Particulate Filter Lamp	Enable	
Diesel Particulate Filter Permit Switch	Enable	
Diesel Particulate Filter Start Switch	Enable	
High Exhaust System Temperature Lamp	Enable	
HEST Active Maximum Speed	124	mph
HEST Inactive Temperature	662	°F
SAE J1939 Multiplexing – Aftertreatment Regeneration Permit Switch	Enable	
SAE J1939 Multiplexing – Aftertreatment Regeneration Start Switch	Enable	

Engine Duty Cycle Report

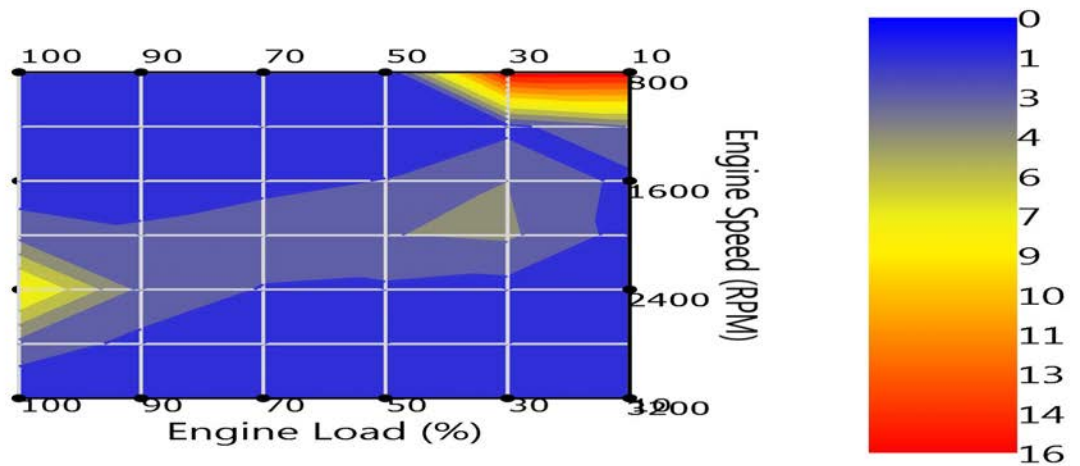
Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:44:13

Duty Cycle Report Graphs

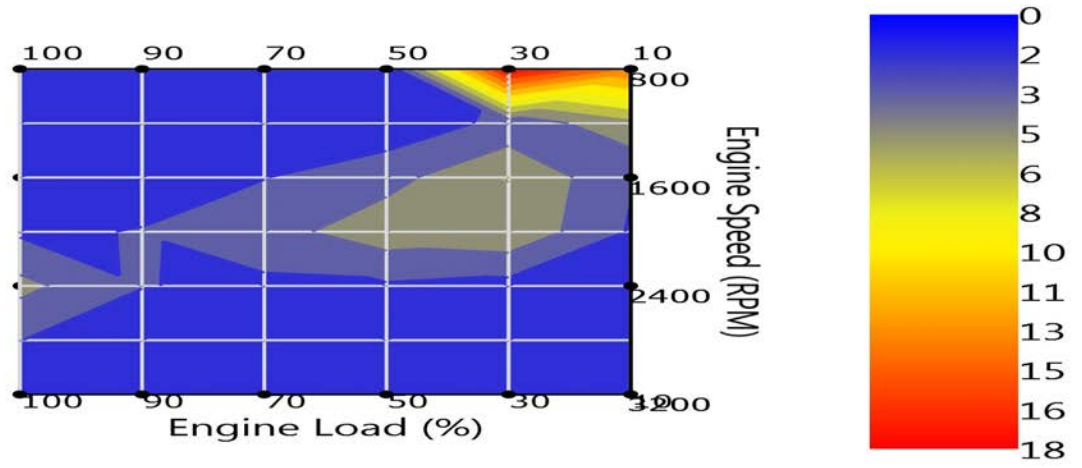
Duty Cycle Monitor - Long Term Map



Duty Cycle Monitor - Short Term Map 1



Duty Cycle Monitor - Short Term Map 2



Long Term Map

Long Term Map Start Time 00:00:00
Long Term Map Total Time 3259:07:41

	800	1200	1600	2000	2400	2800	3200	INF
100	0.02%	0.01%	0.23%	1.02%	2.63%	0.85%	0%	0%
90	0.03%	0.21%	1.11%	1.98%	1.76%	0.35%	0%	0%
70	0.03%	0.23%	2.07%	3.69%	1.6%	0.23%	0%	0%
50	0.18%	0.51%	3.35%	5.47%	1.35%	0.22%	0%	0%
30	18.88%	1.82%	5.95%	5.98%	0.96%	0.16%	0%	0%
10	10.85%	2.42%	2.08%	1.65%	0.29%	0.05%	0%	0%
0	19.81%							0%

Short Term Map 1

Map 1 Start Time 3002:52:13
Map 1 Total Time 259:07:41
Map 1 Hours Remaining Time 240:52:19

	800	1200	1600	2000	2400	2800	3200	INF
100	0.02%	0.02%	0.4%	2.41%	7.95%	2.46%	0%	0%
90	0.04%	0.38%	0.7%	1.7%	2.62%	0.99%	0%	0%
70	0.03%	0.2%	1.03%	2.3%	1.34%	0.4%	0%	0%
50	0.09%	0.33%	1.49%	2.82%	1.2%	0.45%	0%	0%
30	15.76%	1.06%	2.88%	3.15%	0.9%	0.35%	0%	0%
10	15.73%	2.93%	1.05%	0.9%	0.29%	0.12%	0%	0%
0	23.5%							0%

Short Term Map 2

Map 2 Start Time 2502:20:27
Map 2 Total Time 500:00:00
Map 2 Hours Remaining Time 00:00:00

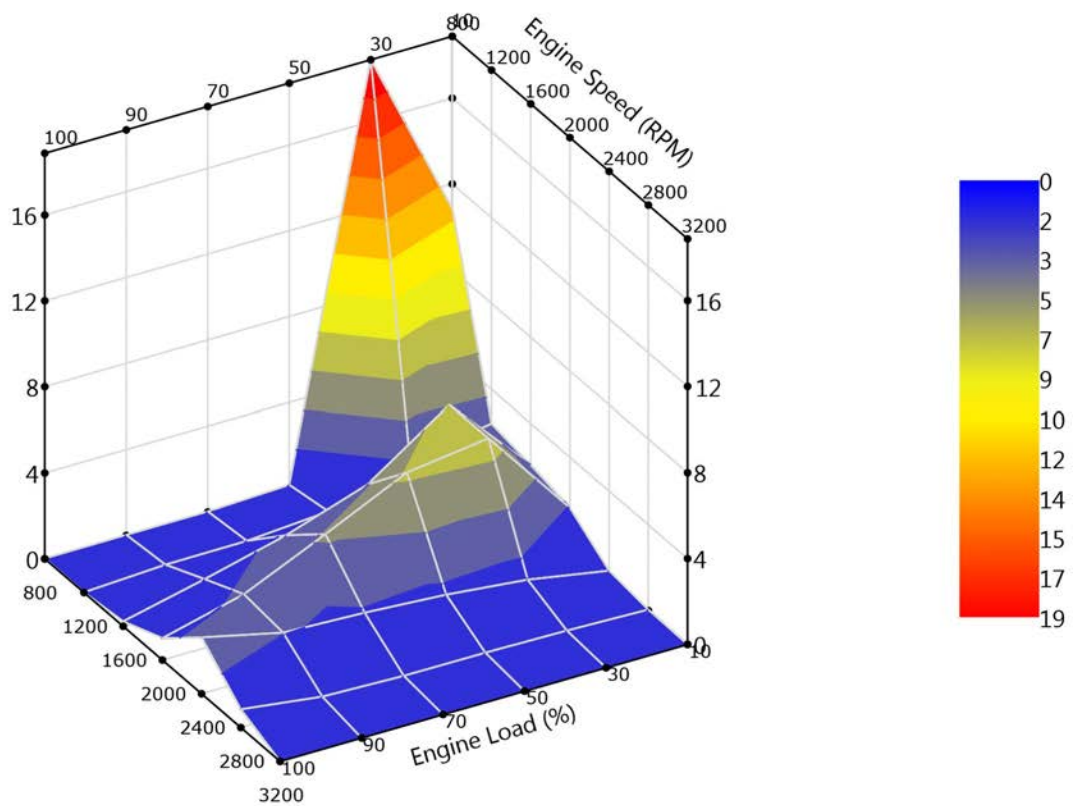
	800	1200	1600	2000	2400	2800	3200	INF
100	0.01%	0.01%	0.26%	1.37%	3.73%	1.65%	0%	0%
90	0.02%	0.19%	0.91%	1.69%	1.68%	0.54%	0%	0%
70	0.02%	0.19%	1.58%	2.61%	1.3%	0.22%	0%	0%
50	0.11%	0.5%	2.7%	4.22%	1.43%	0.24%	0%	0%
30	17.84%	2.08%	4.89%	4.61%	1.07%	0.2%	0%	0%
10	13.1%	4.45%	1.78%	1.48%	0.36%	0.06%	0%	0%
0	20.89%							0%

Engine Duty Cycle Report

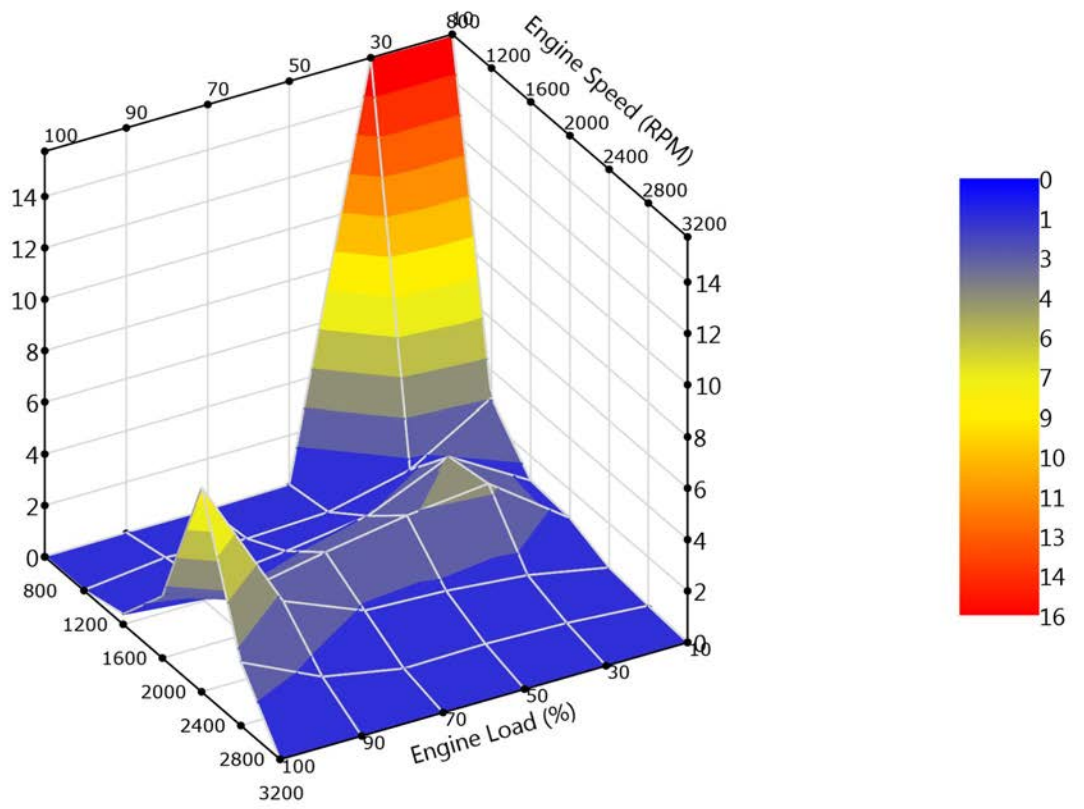
Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:44:13

Duty Cycle Report Graphs

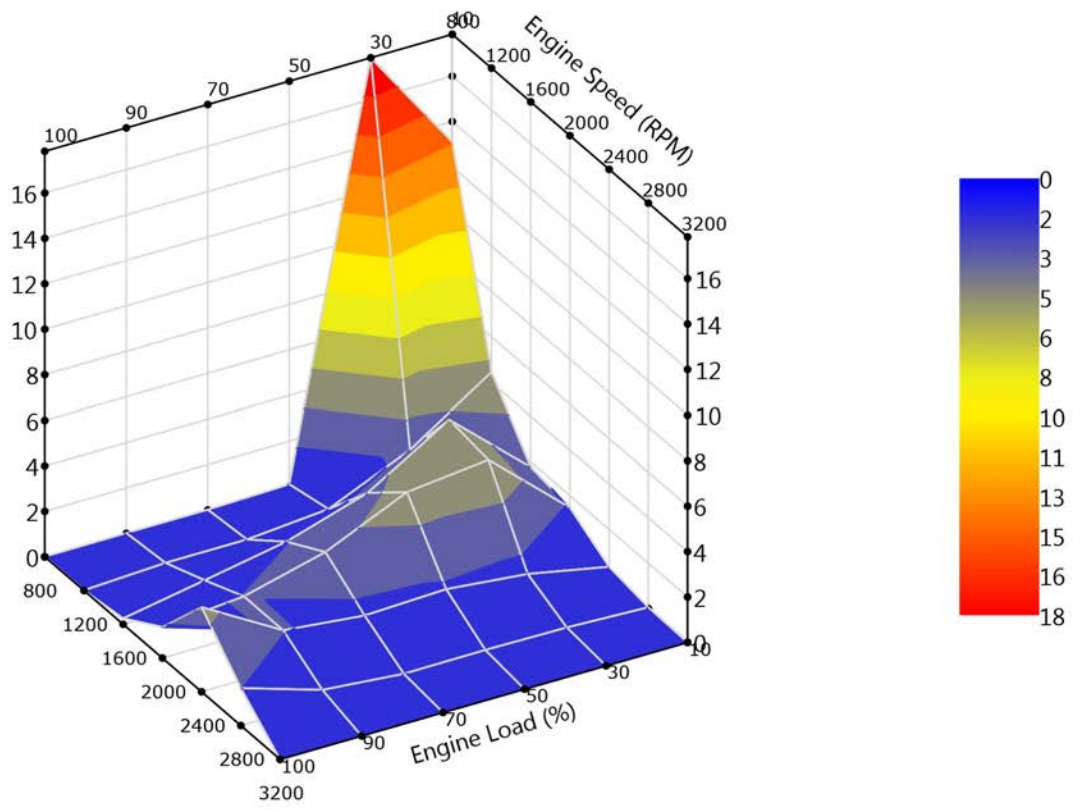
Duty Cycle Monitor - Long Term Map



Duty Cycle Monitor - Short Term Map 1



Duty Cycle Monitor - Short Term Map 2



Long Term Map

Long Term Map Start Time 00:00:00
 Long Term Map Total Time 3259:07:41

	800	1200	1600	2000	2400	2800	3200	INF
100	0.02%	0.01%	0.23%	1.02%	2.63%	0.85%	0%	0%
90	0.03%	0.21%	1.11%	1.98%	1.76%	0.35%	0%	0%
70	0.03%	0.23%	2.07%	3.69%	1.6%	0.23%	0%	0%
50	0.18%	0.51%	3.35%	5.47%	1.35%	0.22%	0%	0%
30	18.88%	1.82%	5.95%	5.98%	0.96%	0.16%	0%	0%
10	10.85%	2.42%	2.08%	1.65%	0.29%	0.05%	0%	0%
0	19.81%							0%

Short Term Map 1

Map 1 Start Time 3002:52:13
 Map 1 Total Time 259:07:41
 Map 1 Hours Remaining Time 240:52:19

	800	1200	1600	2000	2400	2800	3200	INF
100	0.02%	0.02%	0.4%	2.41%	7.95%	2.46%	0%	0%
90	0.04%	0.38%	0.7%	1.7%	2.62%	0.99%	0%	0%
70	0.03%	0.2%	1.03%	2.3%	1.34%	0.4%	0%	0%
50	0.09%	0.33%	1.49%	2.82%	1.2%	0.45%	0%	0%
30	15.76%	1.06%	2.88%	3.15%	0.9%	0.35%	0%	0%
10	15.73%	2.93%	1.05%	0.9%	0.29%	0.12%	0%	0%
0	23.5%							0%

Short Term Map 2

Map 2 Start Time 2502:20:27
 Map 2 Total Time 500:00:00
 Map 2 Hours Remaining Time 00:00:00

	800	1200	1600	2000	2400	2800	3200	INF
100	0.01%	0.01%	0.26%	1.37%	3.73%	1.65%	0%	0%
90	0.02%	0.19%	0.91%	1.69%	1.68%	0.54%	0%	0%
70	0.02%	0.19%	1.58%	2.61%	1.3%	0.22%	0%	0%
50	0.11%	0.5%	2.7%	4.22%	1.43%	0.24%	0%	0%
30	17.84%	2.08%	4.89%	4.61%	1.07%	0.2%	0%	0%
10	13.1%	4.45%	1.78%	1.48%	0.36%	0.06%	0%	0%
0	20.89%							0%

Engine Fault Report

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:40:30

Active Fault Codes Description	Fault Code	Count
Engine Oil Rifle Pressure - Data Valid But Below Normal Operating Range - Most Severe Level	415	1

Inactive Fault Codes Description	Fault Code	Count
VGT Actuator Driver Circuit (Motor) - Mechanical System Not Responding or Out of Adjustment	2387	90
Crankcase Pressure - Data Erratic, Intermittent, or Incorrect	1942	1
Crankcase Pressure - Data Valid But Above Normal Operating Range - Moderately Severe Level	555	2
Crankcase Pressure - Data Valid But Above Normal Operating Range - Most Severe Level	556	1

Engine Feature Settings Report

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:42:36

Fuel Economy

Road Speed Governor

Road Speed Governor Enable	Enable	
Maximum Acceleration Vehicle Speed	65	mph
Accelerator Lower Droop	1.00	mph
Accelerator Upper Droop	0.00	mph
Smart Road Speed Governor	Disable	
Global Maximum Road Speed	93	mph

Geardown Protection

Gear Down Protection Feature	Disable	
Gear Down Protection Heavy Load Vehicle Speed	90	mph
Gear Down Protection Light Load Vehicle Speed	85	mph

Idle Speed Control

Low Idle Speed	750	rpm
Low Idle Speed Switch	Disable	

Idle Shutdown

Idle Shutdown Enable	Enable	
Idle Shutdown Timer	00:15:00	hh:mm:ss
Idle Shutdown Ambient Air Temperature Override	Disable	
Idle Shutdown Hot Ambient Air Temperature	120	°F
Idle Shutdown Intermediate Ambient Air Temperature	120	°F
Idle Shutdown Cold Ambient Air Temperature	30	°F
Idle Shutdown Manual Override	Disable	
Idle Shutdown in PTO	Disable	
Idle Shutdown Percent Engine Loading	100	%
Idle Shutdown Warning Period	00:00:30	hh:mm:ss

Idle Shutdown

Relay Diagnostic	Disable
Idle Shutdown Parking Brake Switch Enable	Disable

Fan Control

Fan On Time(AC) Minimum	5	sec
Fan On During Engine Braking	Enable	
Fan Control Vehicle Speed Interaction	Disable	
Manual Fan Switch	Disable	
Fan Type	Discrete	
Fan Control Clutch Logic	12/24 Volts ON	
Variable Speed Fan Frequency	53	Hz
Fan Control A/C Press Switch	Disable	

Driver Satisfaction

Cruise Control

Cruise Control Feature	Disable	
Maximum Cruise Control Speed	85	mph
Cruise Control Lower Droop	0.0	mph
Cruise Control Upper Droop	0.0	mph
Cruise Control Save Set Speed	Enable	
Cruise Control Auto-Resume	Disable	

Engine Brake

Engine Brake Control Enable	Disable	
Engine Brake Minimum Vehicle Speed	10	mph
Engine Brake Cruise Control Activation	Disable	
Cruise Control Speed Delta for Minimum Engine Brake	3.0	mph
Cruise Control Speed Delta for Maximum Engine Brake	4.0	mph
Engine Brake Service Brake Activation	Disable	
Engine Brake Delay	0.5	sec
Driveline Brake Type	Exhaust Brake	
Engine Brake Clutch Pedal Activation	Enable	

Accelerator Control

Accelerator Type	Automotive
Remote Accelerator Pedal or Lever	Disable

Adaptive Cruise Control

Adaptive Cruise Control	Disable
Adaptive Recovery	Key Cycle Not Required

Reserve Speed

Reserve Speed	Disable	
Speed Increase	6	mph
Override Distance	124	mi

Asset Utilization

PTO/Remote PTO

PTO Feature	Enable	
PTO Maximum Engine Load	1475	lb ft
PTO Service Brake Override	Enable	
PTO Maximum Vehicle Speed	0	mph
PTO Maximum Speed	2400	rpm
PTO Minimum Speed	750	rpm
PTO Accelerator Override Enable	Enable	
PTO Accelerator Override Max Eng Speed	3000	rpm
PTO Set Engine Speed	750	rpm
PTO Resume Engine Speed	750	rpm
PTO Additional Speed Switch Engine Speed	750	rpm
PTO Engine Speed Accel/Coast Ramp Rate	250	rpm/s
PTO Clutch Override	Disable	
PTO Remote Enable	Enable	
Remote PTO Number of Speed Settings	One	
Remote PTO Speed Setting 1	950	rpm
Ignore Vehicle Speed Source In PTO	Disable	
PTO Alternate Enable	Disable	
PTO Zero VSS Limit Enable	Disable	

Maintenance Monitor

Maintenance Monitor Enable	Disable	
Maintenance Monitor Mode	Automatic	
Maintenance Monitor Fuel	2000	gal
Interval Factor	1.00	
Maintenance Monitor Distance	9010	mi
Maintenance Monitor Time	500	hrs
Interval Alert Percentage	90	%

Asset Management

Trip Information

Overspeed 1 Threshold	0	mph
Overspeed 2 Threshold	0	mph

Asset Protection

Engine Protection Shutdown

Engine Protection Shutdown	Disable	
Engine Protection Restart Inhibit	Enable	
Engine Protection Shutdown Override	Disable	

Anti-Tampering Measure

Maximum Engine Speed without VSS	2600	rpm
Vehicle Speed Sensor (VSS) Tamper Detection	Enable	
Vehicle Speed Signal Tempering Sensitivity Level	High	

Password Security

Current Engine Master Password	
Engine Reset Password	

After-Treatment

Automatic Stationary DPF Regeneration	Disable	
Diesel Particulate Filter Mobile Regeneration Vehicle Speed Threshold Enable	Enable	
DPF Mobile Regeneration Vehicle Speed Threshold	5	mph
Diesel Particulate Filter Regeneration in PTO	Disable	
Diesel Particulate Filter Regeneration Lamp	Enable	
Diesel Particulate Filter Regeneration Permit Switch	Enable	

After-Treatment

Diesel Particulate Filter Regeneration Start Switch	Enable	
Active Temperature	1472	°F
Inactive Temperature	662	°F
Active Maximum Speed	124	mph

Vehicle Setup

Driveline Configuration

Rear Axle Ratio	6.14	
Tire Size	497	rev/mi
Transmission Top Gear Ratio	0.76	ratio
Transmission One Gear Down Ratio	1.00	ratio
Vehicle Acceleration Management Enable	Disable	
VAM Acceleration Rate 1	3.61	mph/s
VAM Acceleration Rate 2	3.61	mph/s
VAM Vehicle Speed 1	20	mph
VAM Vehicle Speed 2	50	mph

Switch Maximum Engine Speed

Switched Maximum Engine Speed Feature	Disable	
Switched Maximum Operating Speed	2800.00	rpm

Cruise Control Switch

Cruise Control Switch Setup	Set/Coast (Resume/ Accelerate)
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OEM Ambient Air Temperature Sensor

OEM Ambient Air Temperature Sensor	Disable
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Vehicle Setup Parameters

Clutch Switch	Not Installed
J1939 Controls	Enable
J1939 Service Reset	Enable
J1939 Stop Broadcast Allowed	Enable
J1939 Trip Reset	Enable
# of Transmission Tailshaft Gear Teeth	16

Vehicle Setup Parameters

Rear Axle Ratio Switch	Single Speed
Vehicle Speed Sensor Type	Data Link - Tailshaft

Transmission Setup

Transmission Type	Automatic
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Multiplexing

Multiplex Accelerator Interlock Switch	Disable
Accelerator Interlock Switch Multiplex Address	23
Multiplex Accelerator Pedal or Lever Position	0
Accelerator Pedal Position Multiplex Address	23
Multiplex Air Conditioner Pressure Switch	Disable
Air Conditioner Pressure Switch	23
Multiplexed Aftertreatment Regeneration Start Switch	Disable
Aftertreatment Regeneration Switch Multiplexed Address	23
Multiplexed Aftertreatment Regeneration Permit Switch	Disable
Aftertreatment Permit Regeneration Switch Multiplexed Address	80
Multiplex Auxiliary Shutdown Switch	Disable
Aux Shutdown Switch Mux Address	23
Multiplex Clutch Pedal Position Switch	Disable
Clutch Pedal Position Switch	23
Multiplex Cruise Control On/Off Switch	Disable
Cruise Control On/Off Switch Multiplex Address	23
Multiplex Cruise Control Resume Switch	Disable
Cruise Control Resume Switch Multiplex Address	23
Multiplex Cruise Control Set Switch	Disable
Cruise Control Set Switch Mux Address	23
Multiplex Diagnostic Test Mode Switch	Disable
Diagnostic Test Mode Switch	23
Multiplex Engine Brake Switch Level	Disable
Engine Brake Switch Level Mux Address	23

Multiplexing

Multiplex Fan Control Switch	Disable
Fan Control Switch Multiplex Address	23
Multiplex Idle Decrement Switch	Disable
Idle Decrement Switch Mux Address	23
Multiplex Idle Increment Switch	Disable
Idle Increment Switch Mux Address	23
Multiplex Idle Validation Switch	Disable
Idle Validation Switch Multiplex Address	23
Multiplex Parking Brake Switch	Disable
Parking Brake Mux Address	23
Multiplex PTO On/Off Switch	Disable
PTO On/Off Switch Mux Address	23
Multiplex PTO Resume Switch	Disable
PTO Resume Switch Multiplex Address	23
Multiplex PTO Set Switch	Disable
PTO Set Switch Multiplex Address	23
Multiplex Remote PTO Switch	Disable
Remote PTO Switch Multiplex Address	23
Multiplex Remote Accelerator Switch	Disable
Remote Accelerator Pedal or Lever Switch	23
Multiplex Remote Accelerator Pedal or Lever	Disable
Remote Accelerator Pedal or Lever	23
Multiplex Service Brake Switch	Disable
Service Brake Switch Multiplex Address	23
Multiplex Torque Derate Switch	Disable
Torque Derate Multiplex Address	23

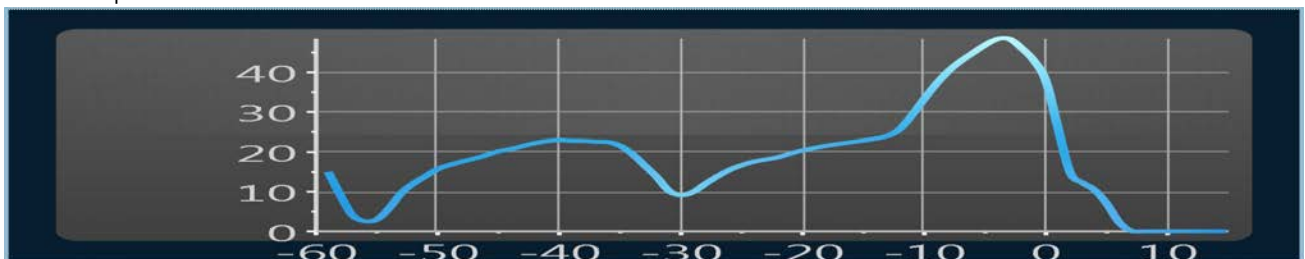
Vehicle Sudden Deceleration Report Record 1

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:35:39
Sudden Decel Threshold	N/A	ECM Run time	3595:45:9

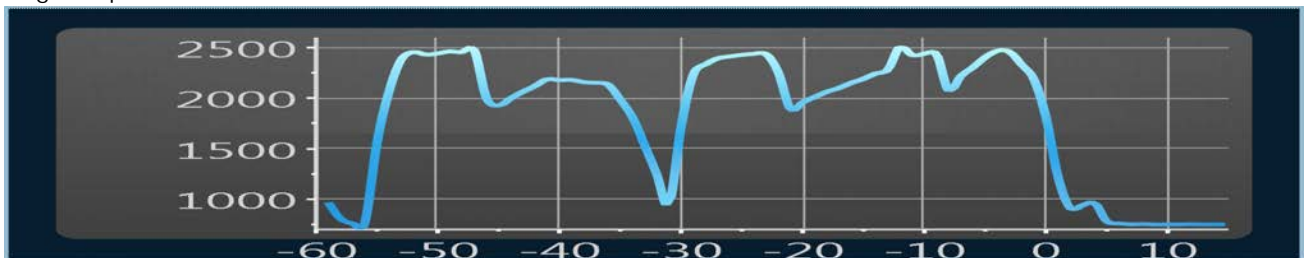
Rate:

Occurrence Date: N/A	ECM Run Time at Occurrence: 3595:13:2
Air Temperature (°F) at Occurrence: 56	Occurrence Distance (mi): 58130.1

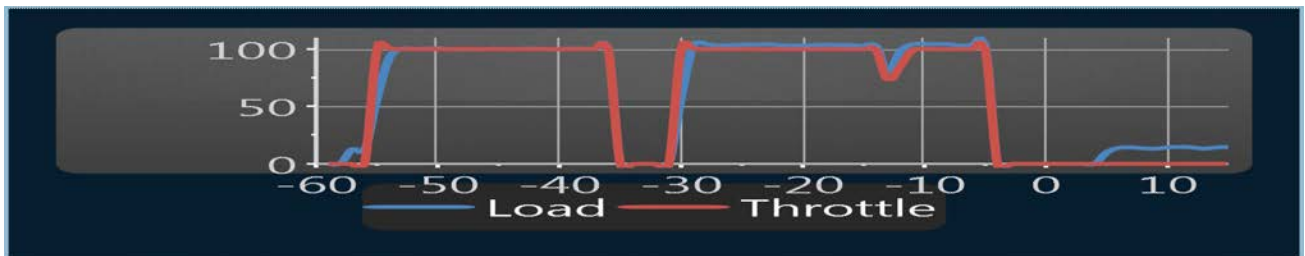
Vehicle Speed



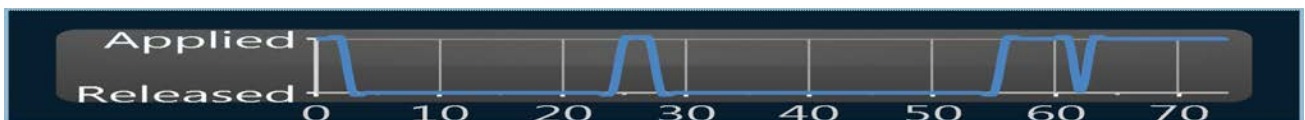
Engine Speed



Percent



Brake



Clutch



Record 1

Time (Seconds)	Vehicle Speed (mph)	Engine Speed (rpm)	Engine Load (%)	Throttle (%)	Brake Status	Clutch Status	Cruise Status	Lamp Status
-59	15	968	0.0	0.0	On	-	-	-
-58	9	808	0.0	0.0	On	-	-	-
-57	4	761	13.3	0.0	On	-	-	-
-56	3	763	12.1	0.0	-	-	-	-
-55	3	1554	56.6	100.0	-	-	-	-
-54	6	2065	91.8	100.0	-	-	-	-
-53	10	2381	100.4	100.0	-	-	-	-
-52	12	2457	100.0	100.0	-	-	-	-
-51	14	2430	100.4	100.0	-	-	-	-
-50	16	2442	100.8	100.0	-	-	-	-
-49	17	2464	100.0	100.0	-	-	-	-
-48	18	2453	99.6	100.0	-	-	-	-
-47	18	2476	100.0	100.0	-	-	-	-
-46	19	2000	100.0	100.0	-	-	-	-
-45	20	1924	100.4	100.0	-	-	-	-
-44	21	1996	100.0	100.0	-	-	-	-
-43	22	2063	100.4	100.0	-	-	-	-
-42	22	2119	100.4	100.0	-	-	-	-
-41	23	2187	100.0	100.0	-	-	-	-
-40	23	2177	100.0	100.0	-	-	-	-
-39	23	2180	100.4	100.0	-	-	-	-
-38	23	2157	100.4	100.0	-	-	-	-
-37	23	2150	100.4	100.0	-	-	-	-
-36	23	2134	100.4	100.0	-	-	-	-
-35	22	1985	0.0	0.0	-	-	-	-
-34	20	1809	0.0	0.0	On	-	-	-
-33	17	1538	0.0	0.0	On	-	-	-
-32	14	1250	0.0	0.0	On	-	-	-
-31	10	941	0.0	0.0	-	-	-	-
-30	9	1713	57.8	99.7	-	-	-	-
-29	10	2231	103.1	100.0	-	-	-	-
-28	12	2332	104.3	100.0	-	-	-	-
-27	14	2394	103.1	100.0	-	-	-	-
-26	16	2412	103.5	100.0	-	-	-	-
-25	17	2428	103.9	100.0	-	-	-	-
-24	18	2438	103.9	100.0	-	-	-	-

Record 1

Time (Seconds)	Vehicle Speed (mph)	Engine Speed (rpm)	Engine Load (%)	Throttle (%)	Brake Status	Clutch Status	Cruise Status	Lamp Status
-23	18	2436	104.3	100.0	-	-	-	-
-22	19	2252	103.5	100.0	-	-	-	-
-21	20	1888	103.1	100.0	-	-	-	-
-20	20	1957	103.1	100.0	-	-	-	-
-19	21	2011	103.5	100.0	-	-	-	-
-18	22	2062	103.9	100.0	-	-	-	-
-17	22	2100	103.5	100.0	-	-	-	-
-16	23	2150	103.5	100.0	-	-	-	-
-15	23	2190	102.7	100.0	-	-	-	-
-14	23	2244	103.5	100.0	-	-	-	-
-13	24	2280	78.9	72.2	-	-	-	-
-12	26	2510	98.0	84.8	-	-	-	-
-11	29	2423	104.3	99.0	-	-	-	-
-10	33	2438	104.3	100.0	-	-	-	-
-9	37	2436	104.3	100.0	-	-	-	-
-8	40	2069	104.3	100.0	-	-	-	-
-7	43	2218	103.1	100.0	-	-	-	-
-6	45	2305	103.5	100.0	-	-	-	-
-5	47	2405	103.5	100.0	-	-	-	-
-4	48	2469	0.0	0.0	-	-	-	-
-3	48	2460	0.0	0.0	On	-	-	-
-2	46	2330	0.0	0.0	On	-	-	-
-1	43	2185	0.0	0.0	On	-	-	-
0	38	1806	0.0	0.0	On	-	-	-
1	26	1216	0.0	0.0	On	-	-	-
2	15	909	0.0	0.0	On	-	-	-
3	12	943	0.0	0.0	-	-	-	-
4	10	964	0.0	0.0	On	-	-	-
5	7	779	10.2	0.0	On	-	-	-
6	2	761	14.1	0.0	On	-	-	-
7	0	751	14.5	0.0	On	-	-	-
8	0	754	13.7	0.0	On	-	-	-
9	0	749	13.3	0.0	On	-	-	-
10	0	750	14.5	0.0	On	-	-	-
11	0	749	14.8	0.0	On	-	-	-
12	0	753	14.5	0.0	On	-	-	-

Record 1

Time (Seconds)	Vehicle Speed (mph)	Engine Speed (rpm)	Engine Load (%)	Throttle (%)	Brake Status	Clutch Status	Cruise Status	Lamp Status
13	0	749	13.3	0.0	On	-	-	-
14	0	750	14.5	0.0	On	-	-	-
15	0	748	14.8	0.0	On	-	-	-

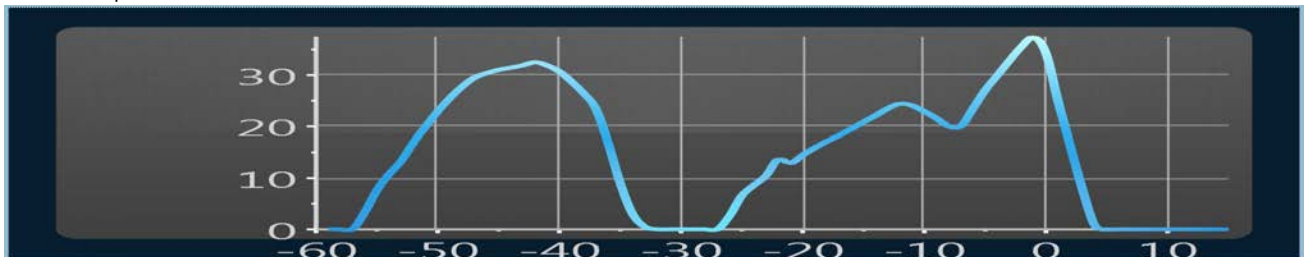
Vehicle Sudden Deceleration Report Record 2

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:35:39
Sudden Decel Threshold	N/A	ECM Run time	3595:45:9

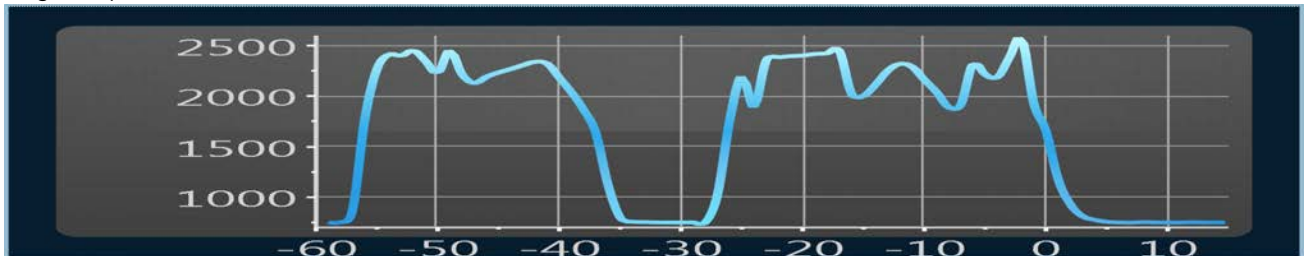
Rate:

Occurrence Date: N/A	ECM Run Time at Occurrence: 3595:15:17
Air Temperature (°F) at Occurrence: 62	Occurrence Distance (mi): 58130.6

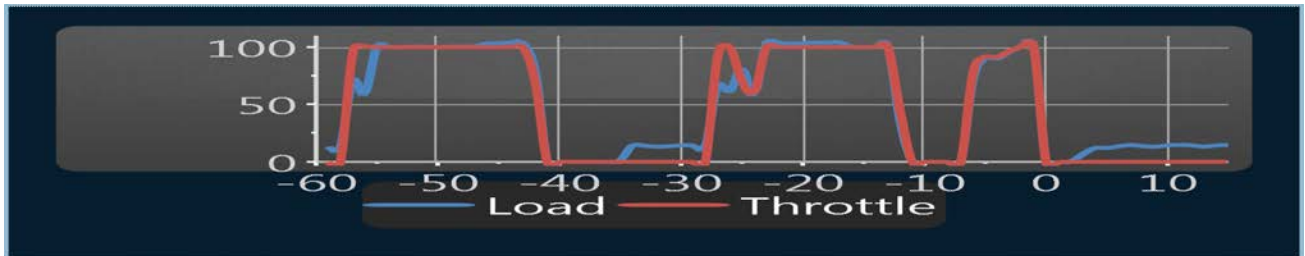
Vehicle Speed



Engine Speed



Percent



Brake



Clutch



Record 2

Time (Seconds)	Vehicle Speed (mph)	Engine Speed (rpm)	Engine Load (%)	Throttle (%)	Brake Status	Clutch Status	Cruise Status	Lamp Status
-59	0	751	13.3	0.0	On	-	-	-
-58	0	750	12.9	0.0	On	-	-	-
-57	0	875	71.5	94.0	-	-	-	-
-56	3	1767	58.2	100.0	-	-	-	-
-55	8	2266	100.4	100.0	-	-	-	-
-54	11	2414	100.0	100.0	-	-	-	-
-53	13	2397	100.0	100.0	-	-	-	-
-52	17	2454	100.4	100.0	-	-	-	-
-51	20	2347	100.4	100.0	-	-	-	-
-50	23	2223	100.0	100.0	-	-	-	-
-49	26	2457	100.4	100.0	-	-	-	-
-48	28	2215	100.4	100.0	-	-	-	-
-47	29	2125	100.4	100.0	-	-	-	-
-46	30	2190	103.1	100.0	-	-	-	-
-45	31	2234	103.5	100.0	-	-	-	-
-44	31	2268	103.9	100.0	-	-	-	-
-43	32	2305	103.5	100.0	-	-	-	-
-42	33	2340	78.9	70.2	-	-	-	-
-41	32	2322	0.0	0.0	-	-	-	-
-40	31	2182	0.0	0.0	-	-	-	-
-39	29	2035	0.0	0.0	On	-	-	-
-38	26	1862	0.0	0.0	On	-	-	-
-37	23	1633	0.0	0.0	On	-	-	-
-36	17	1122	0.0	0.0	On	-	-	-
-35	9	799	1.2	0.0	On	-	-	-
-34	3	758	14.5	0.0	On	-	-	-
-33	1	754	14.1	0.0	On	-	-	-
-32	0	750	13.3	0.0	On	-	-	-
-31	0	750	13.7	0.0	On	-	-	-
-30	0	749	14.5	0.0	On	-	-	-
-29	0	751	14.5	0.0	On	-	-	-
-28	0	749	13.3	0.0	On	-	-	-
-27	0	1029	67.2	90.9	-	-	-	-
-26	3	1761	60.5	100.0	-	-	-	-
-25	7	2204	81.6	70.6	-	-	-	-
-24	9	1888	56.3	59.4	-	-	-	-

Record 2

Time (Seconds)	Vehicle Speed (mph)	Engine Speed (rpm)	Engine Load (%)	Throttle (%)	Brake Status	Clutch Status	Cruise Status	Lamp Status
-23	11	2354	103.1	100.0	-	-	-	-
-22	14	2383	103.5	100.0	-	-	-	-
-21	13	2395	103.1	100.0	-	-	-	-
-20	14	2401	103.5	100.0	-	-	-	-
-19	16	2418	103.9	100.0	-	-	-	-
-18	17	2423	103.9	100.0	-	-	-	-
-17	18	2453	104.3	100.0	-	-	-	-
-16	20	2025	100.4	100.0	-	-	-	-
-15	21	2002	99.6	100.0	-	-	-	-
-14	22	2114	100.0	100.0	-	-	-	-
-13	23	2253	100.8	100.0	-	-	-	-
-12	24	2320	35.5	44.6	-	-	-	-
-11	24	2291	0.0	0.0	-	-	-	-
-10	23	2159	0.0	0.0	On	-	-	-
-9	22	2040	0.0	0.0	On	-	-	-
-8	20	1886	0.0	0.0	On	-	-	-
-7	20	1915	0.0	0.0	-	-	-	-
-6	23	2322	71.9	77.5	-	-	-	-
-5	27	2213	90.6	91.5	-	-	-	-
-4	30	2184	89.8	91.0	-	-	-	-
-3	33	2385	96.1	96.7	-	-	-	-
-2	36	2575	100.4	100.0	-	-	-	-
-1	37	1923	100.4	100.0	-	-	-	-
0	34	1652	0.0	0.0	On	-	-	-
1	25	1178	0.0	0.0	On	-	-	-
2	16	930	0.0	0.0	On	-	-	-
3	8	811	6.6	0.0	On	-	-	-
4	1	776	12.1	0.0	On	-	-	-
5	0	756	12.1	0.0	On	-	-	-
6	0	750	13.7	0.0	On	-	-	-
7	0	748	14.8	0.0	On	-	-	-
8	0	753	13.7	0.0	On	-	-	-
9	0	750	13.3	0.0	On	-	-	-
10	0	749	14.5	0.0	On	-	-	-
11	0	748	14.8	0.0	On	-	-	-
12	0	753	14.5	0.0	On	-	-	-

Record 2

Time (Seconds)	Vehicle Speed (mph)	Engine Speed (rpm)	Engine Load (%)	Throttle (%)	Brake Status	Clutch Status	Cruise Status	Lamp Status
13	0	749	13.3	0.0	On	-	-	-
14	0	750	14.5	0.0	On	-	-	-
15	0	747	14.8	0.0	On	-	-	-

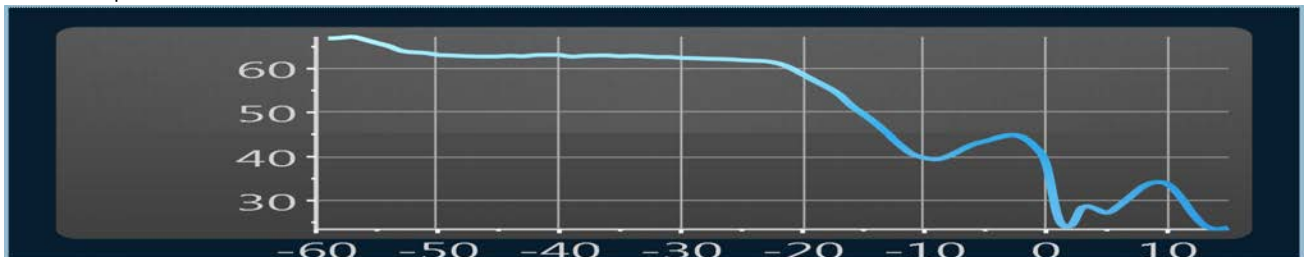
Vehicle Sudden Deceleration Report Record 3

Engine Type	ISB 07	Ecm Code	AU90069.37
Engine Serial Number	46762586	Software Phase	6.4.1.10
Unit Number	x03BBBBBBB	Extraction Date	11-25-2016 02:35:39
Sudden Decel Threshold	N/A	ECM Run time	3595:45:9

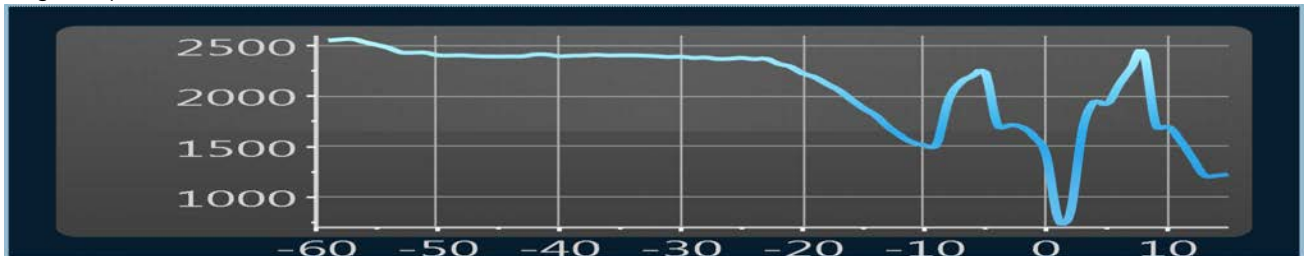
Rate:

Occurrence Date: N/A	ECM Run Time at Occurrence: 3594:35:45
Air Temperature (°F) at Occurrence: 34	Occurrence Distance (mi): 58118.0

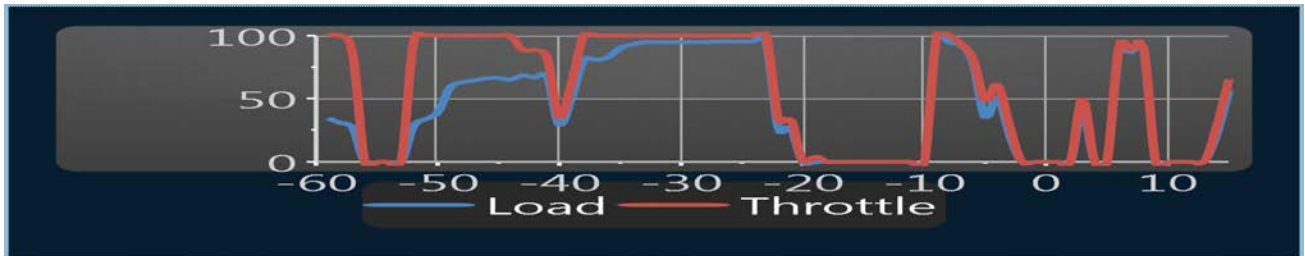
Vehicle Speed



Engine Speed



Percent



Brake



Clutch



Record 3

Time (Seconds)	Vehicle Speed (mph)	Engine Speed (rpm)	Engine Load (%)	Throttle (%)	Brake Status	Clutch Status	Cruise Status	Lamp Status
-59	67	2551	34.4	100.0	-	-	-	-
-58	67	2561	30.5	100.0	-	-	-	-
-57	67	2566	27.0	86.0	-	-	-	-
-56	67	2534	0.0	0.0	-	-	-	-
-55	66	2507	0.0	0.0	-	-	-	-
-54	65	2477	0.0	0.0	-	-	-	-
-53	64	2432	0.0	0.0	-	-	-	-
-52	64	2430	27.7	94.1	-	-	-	-
-51	64	2431	33.6	100.0	-	-	-	-
-50	63	2404	38.7	100.0	-	-	-	-
-49	63	2402	58.6	100.0	-	-	-	-
-48	63	2404	62.9	100.0	-	-	-	-
-47	63	2397	64.5	100.0	-	-	-	-
-46	63	2394	66.0	100.0	-	-	-	-
-45	63	2392	66.4	100.0	-	-	-	-
-44	63	2394	64.8	100.0	-	-	-	-
-43	63	2394	68.8	88.4	-	-	-	-
-42	63	2413	66.4	88.5	-	-	-	-
-41	63	2412	68.0	82.0	-	-	-	-
-40	63	2394	28.5	34.4	-	-	-	-
-39	63	2400	51.2	62.3	-	-	-	-
-38	63	2401	80.9	100.0	-	-	-	-
-37	63	2409	80.5	100.0	-	-	-	-
-36	63	2402	82.8	100.0	-	-	-	-
-35	63	2403	90.2	100.0	-	-	-	-
-34	63	2404	93.0	100.0	-	-	-	-
-33	63	2401	94.9	100.0	-	-	-	-
-32	63	2395	94.9	100.0	-	-	-	-
-31	63	2387	94.9	100.0	-	-	-	-
-30	62	2392	94.9	100.0	-	-	-	-
-29	62	2378	94.9	100.0	-	-	-	-
-28	62	2383	94.9	100.0	-	-	-	-
-27	62	2367	95.3	100.0	-	-	-	-
-26	62	2370	95.3	100.0	-	-	-	-
-25	62	2379	95.3	100.0	-	-	-	-
-24	62	2365	95.3	100.0	-	-	-	-

Record 3

Time (Seconds)	Vehicle Speed (mph)	Engine Speed (rpm)	Engine Load (%)	Throttle (%)	Brake Status	Clutch Status	Cruise Status	Lamp Status
-23	62	2371	95.3	99.8	-	-	-	-
-22	61	2319	26.2	33.9	-	-	-	-
-21	60	2292	27.3	34.7	-	-	-	-
-20	59	2224	0.0	0.0	-	-	-	-
-19	57	2186	0.0	4.7	-	-	-	-
-18	56	2118	0.0	0.0	-	-	-	-
-17	54	2055	0.0	0.0	On	-	-	-
-16	52	1963	0.0	0.0	On	-	-	-
-15	50	1878	0.0	0.0	On	-	-	-
-14	48	1806	0.0	0.0	On	-	-	-
-13	45	1696	0.0	0.0	On	-	-	-
-12	43	1612	0.0	0.0	On	-	-	-
-11	41	1546	0.0	0.0	-	-	-	-
-10	40	1518	0.0	0.0	-	-	-	-
-9	39	1525	99.2	99.3	-	-	-	-
-8	40	1960	94.5	100.0	-	-	-	-
-7	42	2136	92.6	93.5	-	-	-	-
-6	43	2199	78.5	81.6	-	-	-	-
-5	44	2235	34.4	47.4	-	-	-	-
-4	44	1716	52.0	61.8	-	-	-	-
-3	45	1714	21.5	28.4	-	-	-	-
-2	45	1693	0.0	0.0	-	-	-	-
-1	43	1604	0.0	0.0	On	-	-	-
0	38	1423	0.0	0.0	On	-	-	-
1	26	784	0.0	0.0	On	-	-	-
2	24	850	0.0	0.0	-	-	-	-
3	29	1668	41.0	50.6	-	-	-	-
4	28	1947	0.0	0.0	-	-	-	-
5	27	1913	0.0	0.0	-	-	-	-
6	29	2112	89.1	90.9	-	-	-	-
7	31	2277	85.2	87.1	-	-	-	-
8	33	2439	91.4	92.0	-	-	-	-
9	34	1725	0.0	0.4	-	-	-	-
10	34	1703	0.0	0.0	On	-	-	-
11	31	1570	0.0	0.0	On	-	-	-
12	27	1395	0.0	0.0	On	-	-	-

Record 3

Time (Seconds)	Vehicle Speed (mph)	Engine Speed (rpm)	Engine Load (%)	Throttle (%)	Brake Status	Clutch Status	Cruise Status	Lamp Status
13	24	1217	0.0	0.0	On	-	-	-
14	23	1215	21.1	27.1	-	-	-	-
15	24	1230	55.1	63.8	-	-	-	-

*Cummins does not intend for the Electronic Control Module ("ECM") and/or the Electronic Control Unit ("ECU") to be used for purposes of accident reconstruction nor did Cummins design the ECM/ECU for purposes of accident reconstruction. The ECM /ECU does not retrieve sudden deceleration event information with requisite specificity for accident reconstruction. As such, the PowerSpec software is not intended to retrieve data from the ECM/ECU for purposes of accident reconstruction. Furthermore, only authorized personnel should use the PowerSpec software to retrieve data from the ECM/ECU. Cummins does not guarantee the accuracy of ECM/ECU data retrieved and interpreted by unauthorized third parties. Nor will Cummins interpret ECM/ECU data that is retrieved by third parties.