APPENDIX A

STATIC HEIGHT SENSOR TEST RESULTS: MN/ROAD TEST

STATIC HEIGHT SENSOR MEASUREMENTS

RSC : North Atlantic ICC
DATE : July 17/2003

DISTANCE FROM GROUND TO SENSOR GLASS (mm): **LEFT :** 323 **CENTER :** 327 **RIGHT :** 326

LEFT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	134.640	134.310	134.090	133.920	133.710	134.134	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.081	25.072	25.015	25.010	24.975	25.031	25.03	0.001	0.045
BASE PLATE + 50 mm BLK + CAL PLATE	49.960	49.988	49.958	49.990	49.941	49.967	50.007	-0.040	0.021
BASE PLATE + 75 mm BLK + CAL PLATE	74.762	74.831	74.991	75.793	74.883	75.052	75.001	0.051	**0.423**
BASE PLATE + 100 mm BLK + CAL PLATE	100.041	100.196	100.251	99.891	100.020	100.080	100.021	0.059	**0.145**

CENTER SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	142.250	141.950	141.680	141.630	141.410	141.784	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.136	25.188	24.770	24.916	24.828	24.968	25.027	-0.059	**0.186**
BASE PLATE + 50 mm BLK + CAL PLATE	49.696	50.010	49.801	49.870	49.752	49.826	50.005	-0.179	0.121
BASE PLATE + 75 mm BLK + CAL PLATE	75.130	74.800	74.775	74.797	74.970	74.894	74.998	-0.104	**0.153**
BASE PLATE + 100 mm BLK + CAL PLATE	100.231	100.258	100.107	100.197	100.231	100.205	100.025	0.180	0.059

RIGHT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	140.070	145.800	145.630	145.500	145.310	144.462	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	24.913	25.198	24.177	25.229	25.215	24.946	25.024	-0.078	**0.450**
BASE PLATE + 50 mm BLK + CAL PLATE	49.805	49.990	49.813	49.731	50.076	49.883	50.005	-0.122	**0.144**
BASE PLATE + 75 mm BLK + CAL PLATE	74.903	75.331	75.001	74.991	74.996	75.044	74.998	0.046	**0.165**
BASE PLATE + 100 mm BLK + CAL PLATE	100.203	100.251	100.279	100.202	100.271	100.241	100.028	0.213	0.037

Note: Values outside tolerance are shown in bold

STATIC HEIGHT SENSOR MEASUREMENTS

RSC : North Central ICC
DATE : July 15/2003

DISTANCE FROM GROUND TO SENSOR GLASS (mm): **LEFT :** 318 **CENTER :** 321 **RIGHT :** 319

LEFT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	150.780	150.590	150.540	150.500	150.310	150.544	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.143	25.119	25.183	25.127	25.184	25.151	25.031	0.120	0.031
BASE PLATE + 50 mm BLK + CAL PLATE	50.158	50.148	50.155	50.150	50.162	50.155	50.017	0.138	0.006
BASE PLATE + 75 mm BLK + CAL PLATE	75.264	75.224	75.265	75.295	75.287	75.267	75.011	**0.256**	0.028
BASE PLATE + 100 mm BLK + CAL PLATE	100.364	100.244	100.205	100.278	100.294	100.277	100.037	0.240	0.059

CENTER SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	148.570	148.450	148.450	148.420	148.290	148.436	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.354	25.405	25.408	25.392	25.412	25.394	25.028	**0.366**	0.024
BASE PLATE + 50 mm BLK + CAL PLATE	50.220	50.175	50.209	50.222	50.228	50.211	50.007	0.204	0.021
BASE PLATE + 75 mm BLK + CAL PLATE	75.125	75.099	75.151	75.150	75.158	75.137	75.014	0.123	0.024
BASE PLATE + 100 mm BLK + CAL PLATE	100.209	100.121	100.139	100.187	100.155	100.162	99.986	0.176	0.036

RIGHT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	148.100	147.950	147.960	147.910	147.850	147.954	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.130	25.125	25.191	25.212	25.137	25.159	25.022	0.137	0.040
BASE PLATE + 50 mm BLK + CAL PLATE	50.085	50.096	50.105	50.010	50.136	50.086	50.012	0.074	0.047
BASE PLATE + 75 mm BLK + CAL PLATE	75.061	75.031	75.029	75.076	75.070	75.053	74.998	0.055	0.022
BASE PLATE + 100 mm BLK + CAL PLATE	100.192	100.108	99.996	100.075	100.104	100.095	100.027	0.068	0.070

Note: Values outside tolerance are shown in bold

STATIC HEIGHT SENSOR MEASUREMENTS

RSC: Southern ICC
Date: 16-Jul-03

Distance from Ground to Sensor Glass (mm): Left: 325 Center 323 Right 323

Left Sensor	Measured Height of Block (mm)					Avg. of Heights (mm)	Actual Block Height (mm)	Average Minus Actual (mm)	Std Dev. of Heights (mm)
	Test 1	Test 2	Test 3	Test 4	Test 5				
Base + Calibration Plate (Value shown for Height 1)	148.790	148.700	148.850	148.980	148.900	148.844	N/A	N/A	N/A
Base Plate + 25 mm Block + Calibration Plate	25.172	25.104	25.177	25.145	25.062	25.132	25.024	0.108	0.049
Base Plate + 50 mm Block + Calibration Plate	49.901	50.089	50.197	50.099	49.938	50.045	50.012	0.033	0.123
Base Plate + 75 mm Block + Calibration Plate	75.133	75.190	75.216	75.091	75.177	75.161	75.006	0.155	0.050
Base Plate + 100 mm Block + Calibration Plate	100.283	100.122	100.339	100.411	100.393	100.310	100.031	**0.279**	0.116

Center Sensor	Measured Height of Block (mm)					Avg. of Heights (mm)	Actual Block Height (mm)	Average Minus Actual (mm)	Standard Dev. of Heights (mm)
	Test 1	Test 2	Test 3	Test 4	Test 5				
Base + Calibration Plate (Value shown in Height 1)	148.430	148.450	148.510	148.060	148.050	148.300	N/A	N/A	N/A
Base Plate + 25 mm Block + Calibration Plate	24.062	25.073	25.175	25.178	24.948	24.887	25.025	-0.138	**0.471**
Base Plate + 50 mm Block + Calibration Plate	49.988	50.122	50.148	49.836	49.925	50.004	50.012	-0.008	**0.132**
Base Plate + 75 mm Block + Calibration Plate	75.128	75.085	75.996	74.963	75.993	75.433	75.013	**0.420**	**0.516**
Base Plate + 100 mm Block + Calibration Plate	100.257	100.376	100.110	100.076	100.017	100.167	100.043	0.124	**0.146**

Right Sensor	Measured Height of Block (mm)					Avg. of Heights (mm)	Actual Block Height (mm)	Average Minus Actual (mm)	Standard Dev. of Heights (mm)
	Test 1	Test 2	Test 3	Test 4	Test 5				
Base + Calibration Plate (Value shown in Height 1)	146.610	146.430	146.360	145.560	148.500	146.692	N/A	N/A	N/A
Base Plate + 25 mm Block + Calibration Plate	24.862	25.089	25.126	25.223	25.200	25.100	25.024	0.076	**0.144**
Base Plate + 50 mm Block + Calibration Plate	50.045	50.024	50.092	50.014	50.055	50.046	50.012	0.034	0.030
Base Plate + 75 mm Block + Calibration Plate	75.013	75.018	75.963	75.240	75.093	75.265	75.006	**0.259**	**0.401**
Base Plate + 100 mm Block + Calibration Plate	100.099	100.053	100.195	100.108	100.163	100.124	100.030	0.094	0.056

Note: Values outside tolerance are shown in bold

STATIC HEIGHT SENSOR MEASUREMENTS

RSC: Western ICC
Date: 15-Jul-03

Distance from Ground to Sensor Glass (mm): Left: 321 Center: 326 Right: 330

Left Sensor	Measured Height of Block (mm)					Avg. of Heights (mm)	Actual Block Height (mm)	Average Minus Actual (mm)	Std Dev. of of Heights (mm)
	Test 1	Test 2	Test 3	Test 4	Test 5				
Base + Calibration Plate (Value shown for Height 1)	162.93	162.86	163.00	162.91	162.94	162.928	N/A	N/A	N/A
Base Plate + 25 mm Block + Calibration Plate	25.223	25.118	25.242	25.128	25.173	25.1768	25.017	0.160	0.055
Base Plate + 50 mm Block + Calibration Plate	50.162	50.156	50.082	50.078	50.036	50.1028	50.015	0.088	0.054
Base Plate + 75 mm Block + Calibration Plate	75.066	75.117	75.109	75.039	75.051	75.0764	74.993	0.083	0.035
Base Plate + 100 mm Block + Calibration Plate	100.178	100.143	100.134	100.140	100.182	100.1554	100.025	0.130	0.023

Center Sensor	Measured Height of Block (mm)					Avg. of Heights (mm)	Actual Block Height (mm)	Average Minus Actual (mm)	Std Dev. of of Heights (mm)
	Test 1	Test 2	Test 3	Test 4	Test 5				
Base + Calibration Plate (Value shown in Height 1)	153.64	153.63	153.64	153.63	153.63	153.634	N/A	N/A	N/A
Base Plate + 25 mm Block + Calibration Plate	24.963	24.916	24.954	24.992	24.935	24.952	25.019	-0.067	0.029
Base Plate + 50 mm Block + Calibration Plate	49.589	49.691	49.793	49.635	49.617	49.665	50.007	**-0.342**	0.081
Base Plate + 75 mm Block + Calibration Plate	74.529	74.541	74.400	74.589	74.514	74.5146	74.991	**-0.476**	0.070
Base Plate + 100 mm Block + Calibration Plate	99.312	99.246	99.332	99.298	99.214	99.2804	100.017	**-0.737**	0.049

Right Sensor	Measured Height of Block (mm)					Avg. of Heights (mm)	Actual Block Height (mm)	Average Minus Actual (mm)	Std Dev. of of Heights (mm)
	Test 1	Test 2	Test 3	Test 4	Test 5				
Base + Calibration Plate (Value shown in Height 1)	157.69	157.78	157.72	157.72	157.69	157.72	N/A	N/A	N/A
Base Plate + 25 mm Block + Calibration Plate	25.043	25.167	25.114	25.098	25.042	25.0928	25.023	0.070	0.053
Base Plate + 50 mm Block + Calibration Plate	49.893	49.943	49.995	49.894	50.053	49.9556	50.015	-0.059	0.069
Base Plate + 75 mm Block + Calibration Plate	75.004	75.079	74.922	74.940	75.069	75.0028	74.998	0.005	0.072
Base Plate + 100 mm Block + Calibration Plate	99.873	99.916	99.881	99.961	99.988	99.9238	100.030	-0.106	0.050

Note: Values outside tolerance are shown in bold

STATIC HEIGHT SENSOR MEASUREMENTS

RSC : North Central KJ Law
DATE : July 15/2003

DISTANCE FROM GROUND TO SENSOR GLASS (mm): **LEFT :** 295.3 **CENTER :** 269.1 **RIGHT :** 272

LEFT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					Average (mm)	Actual Block Height (mm)	Average Minus Actual (mm)	Standard Deviation of Heights (mm)
	TEST 1*	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	280.382	280.209	279.809	279.999	280.134	280.038	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.095	24.915	24.984	24.996	25.047	24.986	25	-0.015	0.054
BASE PLATE + 50 mm BLK + CAL PLATE	50.128	49.904	50.043	49.997	50.102	50.012	50	0.012	0.084
BASE PLATE + 75 mm BLK + CAL PLATE	74.967	74.827	74.859	74.895	74.922	74.876	75	-0.124	0.042

CENTER SENSOR	MEASURED HEIGHT OF BLOCK (mm)					Average (mm)	Actual Block Height (mm)	Average Minus Actual (mm)	Standard Deviation of Heights (mm)
	TEST 1*	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	263.122	263.183	262.963	262.892	262.891	262.982	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.155	25.176	25.025	24.911	24.917	25.007	25	0.007	0.124
BASE PLATE + 50 mm BLK + CAL PLATE	50.439	50.245	50.094	49.906	49.952	50.049	50	0.049	**0.153**
BASE PLATE + 75 mm BLK + CAL PLATE	75.600	75.281	75.120	74.991	75.047	75.110	75	0.110	**0.126**

RIGHT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					Average (mm)	Actual Block Height (mm)	Average Minus Actual (mm)	Standard Deviation of Heights (mm)
	TEST 1*	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	331.650	332.546	332.343	332.528	332.576	332.498	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	24.963	24.938	24.969	25.057	25.003	24.992	25	-0.008	0.051
BASE PLATE + 50 mm BLK + CAL PLATE	49.993	50.008	50.068	50.157	50.203	50.109	50	0.109	0.088
BASE PLATE + 75 mm BLK + CAL PLATE	74.773	75.052	75.044	75.180	75.195	75.118	75	0.118	0.081

* Test 1 was used to calibrate sensors, therefore average and standard deviation was calculated using results from tests 2 to 5

Note: Values outside tolerance are shown in bold

APPENDIX B

RESULTS OBTAINED BY REPEATING STATIC HEIGHT SENSOR TEST

STATIC HEIGHT SENSOR MEASUREMENTS

RSC : North Atlantic Region
DATE : 14-Oct-03

LEFT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	146.270	146.290	146.300	146.310	146.030	146.240	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.267	25.314	25.281	25.226	25.273	25.272	25.024	0.248	0.032
BASE PLATE + 50 mm BLK + CAL PLATE	50.137	50.069	50.025	50.148	50.117	50.099	50.005	0.094	0.051
BASE PLATE + 75 mm BLK + CAL PLATE	74.957	74.986	74.991	74.963	74.995	74.978	74.998	-0.020	0.017
BASE PLATE + 100 mm BLK + CAL PLATE	99.867	99.900	99.863	99.881	99.934	99.889	100.022	-0.133	0.029

CENTER SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	151.550	151.660	151.700	151.810	151.810	151.706	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	24.914	25.008	25.010	25.034	25.038	25.001	25.021	-0.020	0.050
BASE PLATE + 50 mm BLK + CAL PLATE	49.990	49.956	49.954	49.947	49.902	49.950	50.005	-0.055	0.031
BASE PLATE + 75 mm BLK + CAL PLATE	74.869	74.908	74.871	74.941	74.861	74.890	75.006	-0.116	0.034
BASE PLATE + 100 mm BLK + CAL PLATE	99.923	99.944	99.961	99.931	100.004	99.953	100.017	-0.064	0.032

RIGHT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	151.100	151.030	151.120	151.210	151.250	151.142	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.184	25.131	25.172	25.121	25.125	25.147	25.027	0.120	0.029
BASE PLATE + 50 mm BLK + CAL PLATE	50.112	50.127	50.139	50.176	50.123	50.135	50.007	0.128	0.025
BASE PLATE + 75 mm BLK + CAL PLATE	75.132	75.101	75.156	75.147	75.139	75.135	74.998	0.137	0.021
BASE PLATE + 100 mm BLK + CAL PLATE	100.168	100.166	100.216	100.194	100.182	100.185	100.022	0.163	0.021

STATIC HEIGHT SENSOR MEASUREMENTS

RSC : North Central Region
DATE : 2-Oct-03

LEFT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	143.060	143.090	143.100	143.120	143.170	143.108	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.049	25.030	25.033	25.010	25.047	25.034	25.028	0.006	0.016
BASE PLATE + 50 mm BLK + CAL PLATE	49.969	49.968	49.917	49.989	49.884	49.945	50.02	-0.075	0.043
BASE PLATE + 75 mm BLK + CAL PLATE	74.980	74.893	75.030	75.013	75.126	75.008	75.019	-0.011	0.084
BASE PLATE + 100 mm BLK + CAL PLATE	99.948	100.024	100.005	100.042	100.046	100.013	99.999	0.014	0.040

CENTER SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	141.980	141.980	141.990	141.990	142.000	141.988	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.275	25.287	25.321	25.298	25.307	25.298	25.028	**0.270**	0.018
BASE PLATE + 50 mm BLK + CAL PLATE	50.118	50.137	50.131	50.200	50.134	50.144	50.015	0.129	0.032
BASE PLATE + 75 mm BLK + CAL PLATE	75.066	75.060	75.074	75.079	75.072	75.070	75.014	0.056	0.007
BASE PLATE + 100 mm BLK + CAL PLATE	100.070	100.032	100.027	99.988	99.998	100.023	100.027	-0.004	0.032

RIGHT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	141.930	141.920	141.870	141.920	141.910	141.910	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.141	25.116	25.073	25.100	25.105	25.107	25.028	0.079	0.025
BASE PLATE + 50 mm BLK + CAL PLATE	50.000	49.968	49.909	49.899	49.978	49.951	50.017	-0.066	0.044
BASE PLATE + 75 mm BLK + CAL PLATE	74.988	74.981	74.969	74.940	74.957	74.967	75.014	-0.047	0.019
BASE PLATE + 100 mm BLK + CAL PLATE	99.900	99.950	99.904	99.883	99.884	99.904	100.024	-0.120	0.027

STATIC HEIGHT SENSOR MEASUREMENTS

RSC : Southern Region
DATE : 16-Oct-03

LEFT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	154.210	154.320	154.220	154.190	154.250	154.238	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.059	25.158	25.098	25.106	25.123	25.109	25.022	0.087	0.036
BASE PLATE + 50 mm BLK + CAL PLATE	50.124	50.122	50.112	50.122	50.110	50.118	50.012	0.106	0.006
BASE PLATE + 75 mm BLK + CAL PLATE	75.165	75.236	75.216	75.232	75.210	75.212	75.006	0.206	0.028
BASE PLATE + 100 mm BLK + CAL PLATE	100.198	100.260	100.245	100.228	100.274	100.241	100.027	0.214	0.030

CENTER SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	158.715	158.750	158.720	158.700	158.720	158.721	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.097	25.081	24.966	25.007	24.866	25.003	25.025	-0.022	0.094
BASE PLATE + 50 mm BLK + CAL PLATE	50.085	50.024	49.910	49.925	49.995	49.988	50.012	-0.024	0.072
BASE PLATE + 75 mm BLK + CAL PLATE	74.829	74.942	74.941	74.949	74.906	74.913	75.014	-0.101	0.050
BASE PLATE + 100 mm BLK + CAL PLATE	99.853	99.979	99.889	99.881	99.874	99.895	100.029	-0.134	0.049

RIGHT SENSOR	MEASURED HEIGHT OF BLOCK (mm)					AVG. OF HEIGHTS (mm)	ACTUAL BLOCK HEIGHT (mm)	AVERAGE MINUS ACTUAL (mm)	STD. DEV. OF HEIGHTS (mm)
	TEST 1	TEST 2	TEST 3	TEST 4	TEST 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	153.550	153.550	153.610	153.510	153.570	153.558	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.171	25.194	25.242	25.161	25.132	25.180	25.030	0.150	0.041
BASE PLATE + 50 mm BLK + CAL PLATE	50.100	50.045	50.026	50.091	50.085	50.069	50.010	0.059	0.032
BASE PLATE + 75 mm BLK + CAL PLATE	75.116	75.044	75.068	75.027	74.999	75.051	75.019	0.032	0.044
BASE PLATE + 100 mm BLK + CAL PLATE	100.016	100.104	100.068	100.073	100.189	100.090	100.022	0.068	0.064

STATIC HEIGHT SENSOR MEASUREMENTS

RSC: WRSC
Date: 26-Feb-04

Distance from Ground to Sensor Glass (mm): Left: 329 Center: 329 Right: 330

Left Sensor

Position	Height of Block (Note 1)					Avg. of Heights (mm)	Actual Block Height (mm)	Actual Minus Average (mm)	Std Dev. of Heights (mm)
	Test 1	Test 2	Test 3	Test 4	Test 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	169.26	169.19	169.19	169.20	169.14	169.196	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.185	25.126	25.095	25.148	25.022	25.1152	25.021	0.094	0.062
BASE PLATE + 50 mm BLK + CAL PLATE	49.964	49.998	50.002	50.001	50.072	50.0074	50.010	-0.003	0.039
BASE PLATE + 75 mm BLK + CAL PLATE	75.033	75.005	74.986	75.029	75.006	75.0118	74.993	0.019	0.019
BASE PLATE + 100 mm BLK + CAL PLATE	99.983	100.081	99.939	99.971	99.975	99.9898	100.020	-0.030	0.054

Center Sensor

Position	Height of Block (Note 1)					Avg. of Heights (mm)	Actual Block Height (mm)	Actual Minus Average (mm)	Standard Dev. of Heights (mm)
	Test 1	Test 2	Test 3	Test 4	Test 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	165.47	165.47	165.50	165.49	165.52	165.49	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	24.914	24.949	24.993	25.032	25.046	24.9868	25.021	-0.034	0.055
BASE PLATE + 50 mm BLK + CAL PLATE	49.899	49.802	49.925	49.953	49.919	49.8996	50.010	-0.110	0.058
BASE PLATE + 75 mm BLK + CAL PLATE	74.832	74.878	74.835	74.862	74.869	74.8552	74.993	-0.138	0.021
BASE PLATE + 100 mm BLK + CAL PLATE	99.845	99.880	99.888	99.896	99.898	99.8814	100.020	-0.139	0.022

Right Sensor

Position	Height of Block (Note 1)					Avg. of Heights (mm)	Actual Block Height (mm)	Actual Minus Average (mm)	Standard Dev. of Heights (mm)
	Test 1	Test 2	Test 3	Test 4	Test 5				
BASE + CAL PLATE (VALUE FOR HGT 1)	170.20	170.16	170.17	170.20	170.14	170.174	N/A	N/A	N/A
BASE PLATE + 25 mm BLK + CAL PLATE	25.048	25.031	25.036	24.999	24.992	25.0212	25.021	0.000	0.024
BASE PLATE + 50 mm BLK + CAL PLATE	50.051	49.951	50.034	49.959	50.033	50.0056	50.010	-0.004	0.047
BASE PLATE + 75 mm BLK + CAL PLATE	74.948	74.882	74.894	74.893	74.904	74.9042	74.993	-0.089	0.026
BASE PLATE + 100 mm BLK + CAL PLATE	99.952	99.939	99.903	99.855	99.847	99.8992	100.020	-0.121	0.048

APPENDIX C

IRI VALUES OF PROFILE RUNS

Test Section	Profiler	Left Wheel Path IRI (m/km)							Right Wheel Path IRI (m/km)						
		Run Number							Run Number						
		1	2	3	4	5	Avg	S.D	1	2	3	4	5	Avg	S.D.
1	NA - ICC	1.246	1.274	1.278	1.292	1.253	1.269	0.019	1.754	1.689	1.596	1.626	1.747	1.682	0.071
1	NC - ICC	1.260	1.258	1.238	1.271	1.251	1.256	0.012	1.746	1.733	1.744	1.716	1.733	1.734	0.012
1	SO - ICC	1.319	1.265	1.276	1.282	1.288	1.286	0.020	1.599	1.749	1.736	1.729	1.627	1.688	0.070
1	WE - ICC	1.291	1.275	1.283	1.286	1.282	1.283	0.006	1.591	1.566	1.654	1.752	1.719	1.656	0.080
1	K.J. Law	1.302	1.288	1.317	1.338	1.291	1.307	0.021	1.653	1.66	1.638	1.563	1.666	1.636	0.042
2	NA - ICC	2.728	2.723	2.788	2.788	2.784	2.762	0.034	3.001	2.810	2.745	2.759	2.756	2.814	0.107
2	NC - ICC	2.700	2.751	2.815	2.765	2.736	2.753	0.042	2.927	2.861	3.044	3.209	3.024	3.013	0.132
2	SO - ICC	2.779	2.790	2.779	2.797	2.756	2.780	0.016	2.683	2.505	2.584	2.596	2.710	2.616	0.082
2	WE - ICC	2.758	2.760	2.758	2.686	2.792	2.751	0.039	2.646	2.457	2.638	2.467	2.489	2.539	0.094
2	K.J. Law	2.732	2.754	2.788	2.708	2.762	2.749	0.030	2.391	2.505	2.576	2.424	2.414	2.462	0.077
3	NA - ICC	0.913	0.936	0.937	0.921	0.917	0.925	0.011	0.982	0.955	0.975	0.995	1.001	0.982	0.018
3	NC - ICC	0.910	0.946	0.929	0.911	0.929	0.925	0.015	1.037	1.017	1.016	1.012	1.036	1.024	0.012
3	SO - ICC	0.920	0.932	0.946	0.919	0.912	0.926	0.013	0.958	0.944	0.954	0.969	0.994	0.964	0.019
3	WE - ICC	0.914	0.901	0.894	0.913	0.914	0.907	0.009	0.968	0.973	0.992	0.979	0.955	0.973	0.014
3	K.J. Law	0.951	0.947	0.934	0.943	0.941	0.943	0.006	0.967	0.959	0.929	0.957	0.977	0.958	0.018
4	NA - ICC	1.484	1.435	1.434	1.482	1.422	1.451	0.029	1.692	1.681	1.692	1.727	1.701	1.699	0.017
4	NC - ICC	1.611	1.512	1.539	1.592	1.592	1.569	0.042	1.713	1.718	1.726	1.737	1.720	1.723	0.009
4	SO - ICC	1.461	1.430	1.436	1.439	1.496	1.452	0.027	1.680	1.667	1.686	1.695	1.627	1.671	0.027
4	WE - ICC	1.448	1.416	1.442	1.421	1.428	1.431	0.014	1.705	1.722	1.716	1.716	1.699	1.712	0.009
4	K.J. Law	1.491	1.468	1.469	1.477	1.450	1.471	0.015	1.704	1.686	1.718	1.703	1.677	1.698	0.016
5	NA - ICC	2.267	2.210	2.258	2.259	2.249	2.249	0.023	2.535	2.505	2.541	2.554	2.564	2.540	0.022
5	NC - ICC	2.166	2.164	2.119	2.170	2.124	2.149	0.025	2.529	2.546	2.515	2.583	2.526	2.540	0.027
5	SO - ICC	2.166	2.181	2.141	2.121	2.127	2.147	0.026	2.554	2.539	2.490	2.589	2.548	2.544	0.036
5	WE - ICC	2.209	2.246	2.219	2.156	2.175	2.201	0.036	2.556	2.492	2.505	2.477	2.470	2.500	0.034
5	K.J. Law	2.304	2.298	2.170	2.270	2.197	2.248	0.061	2.393	2.475	2.438	2.425	2.452	2.437	0.031
Note: SD - Standard Deviation, Avg - Average, NA - North Atlantic, NC - North Central, SO - Southern, WE - Western															