

LIGO Production Small Actuator Test Report

Actuator Serial #: S071

Operator Name: Gordon, Matt

Date: 4/13/2011 Time: 9:38 AM

Actuator Coil Resistance: 10.29 Ohms, PASS

Ambient Temperature: 75.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.657

Y Travel Limit (inches): 0.206

Z Travel Limit (inches): 0.509

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.606	10.061	6.265	PASS
Position 1	0.250	0.085	0.220	1.791	10.080	5.626	PASS
Position 2	0.250	-0.085	0.220	1.759	10.009	5.691	PASS
Position 3	-0.250	-0.085	0.220	1.829	9.981	5.456	PASS
Position 4	-0.250	0.085	0.220	1.823	9.977	5.472	PASS
Position 5	-0.250	0.085	-0.220	1.830	10.014	5.472	PASS
Position 6	-0.250	-0.085	-0.220	1.784	9.986	5.599	PASS
Position 7	0.250	-0.085	-0.220	1.772	9.957	5.620	PASS
Position 8	0.250	0.085	-0.220	1.777	10.022	5.639	PASS
Center	0.000	0.000	0.000	-1.577	-9.943	6.304	PASS
Position 1	0.250	0.085	0.220	-1.773	-10.006	5.645	PASS
Position 2	0.250	-0.085	0.220	-1.811	-9.963	5.502	PASS
Position 3	-0.250	-0.085	0.220	-1.814	-10.039	5.535	PASS
Position 4	-0.250	0.085	0.220	-1.780	-9.997	5.616	PASS
Position 5	-0.250	0.085	-0.220	-1.761	-9.978	5.667	PASS
Position 6	-0.250	-0.085	-0.220	-1.808	-9.988	5.525	PASS
Position 7	0.250	-0.085	-0.220	-1.785	-10.027	5.616	PASS
Position 8	0.250	0.085	-0.220	-1.755	-9.964	5.678	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S072
 Operator Name: Gordon, Matt
 Date: 4/13/2011 Time: 10:09 AM
 Actuator Coil Resistance: 10.31 Ohms, PASS
 Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.665
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.512

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.598	10.053	6.291	PASS
Position 1	0.250	0.085	0.220	1.730	9.950	5.751	PASS
Position 2	0.250	-0.085	0.220	1.785	10.047	5.629	PASS
Position 3	-0.250	-0.085	0.220	1.691	10.028	5.931	PASS
Position 4	-0.250	0.085	0.220	1.763	10.013	5.681	PASS
Position 5	-0.250	0.085	-0.220	1.758	10.089	5.740	PASS
Position 6	-0.250	-0.085	-0.220	1.751	9.949	5.681	PASS
Position 7	0.250	-0.085	-0.220	1.773	10.054	5.671	PASS
Position 8	0.250	0.085	-0.220	1.780	9.959	5.595	PASS
Center	0.000	0.000	0.000	-1.605	-9.965	6.210	PASS
Position 1	0.250	0.085	0.220	-1.797	-10.074	5.605	PASS
Position 2	0.250	-0.085	0.220	-1.807	-10.011	5.540	PASS
Position 3	-0.250	-0.085	0.220	-1.809	-9.939	5.494	PASS
Position 4	-0.250	0.085	0.220	-1.812	-10.061	5.554	PASS
Position 5	-0.250	0.085	-0.220	-1.799	-9.948	5.529	PASS
Position 6	-0.250	-0.085	-0.220	-1.806	-9.988	5.531	PASS
Position 7	0.250	-0.085	-0.220	-1.805	-9.976	5.526	PASS
Position 8	0.250	0.085	-0.220	-1.839	-10.055	5.466	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S073
 Operator Name: Gordon, Matt
 Date: 4/13/2011 Time: 10:30 AM
 Actuator Coil Resistance: 10.18 Ohms, PASS

Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.661
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.512

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.573	9.945	6.322	PASS
Position 1	0.250	0.085	0.220	1.786	9.989	5.593	PASS
Position 2	0.250	-0.085	0.220	1.788	9.983	5.583	PASS
Position 3	-0.250	-0.085	0.220	1.733	10.080	5.817	PASS
Position 4	-0.250	0.085	0.220	1.769	10.020	5.666	PASS
Position 5	-0.250	0.085	-0.220	1.699	10.018	5.895	PASS
Position 6	-0.250	-0.085	-0.220	1.764	9.980	5.658	PASS
Position 7	0.250	-0.085	-0.220	1.779	10.097	5.675	PASS
Position 8	0.250	0.085	-0.220	1.736	9.986	5.751	PASS
Center	0.000	0.000	0.000	-1.616	-9.991	6.183	PASS
Position 1	0.250	0.085	0.220	-1.780	-9.964	5.598	PASS
Position 2	0.250	-0.085	0.220	-1.785	-9.971	5.586	PASS
Position 3	-0.250	-0.085	0.220	-1.782	-9.954	5.586	PASS
Position 4	-0.250	0.085	0.220	-1.791	-9.949	5.554	PASS
Position 5	-0.250	0.085	-0.220	-1.765	-10.058	5.698	PASS
Position 6	-0.250	-0.085	-0.220	-1.809	-10.074	5.570	PASS
Position 7	0.250	-0.085	-0.220	-1.809	-9.993	5.524	PASS
Position 8	0.250	0.085	-0.220	-1.784	-10.062	5.639	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S074
 Operator Name: Gordon, Matt
 Date: 4/13/2011 Time: 11:26 AM
 Actuator Coil Resistance: 10.11 Ohms, PASS
 Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.654
 Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.515

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.629	9.984	6.128	PASS
Position 1	0.250	0.085	0.220	1.826	9.997	5.476	PASS
Position 2	0.250	-0.085	0.220	1.779	10.034	5.641	PASS
Position 3	-0.250	-0.085	0.220	1.754	9.986	5.692	PASS
Position 4	-0.250	0.085	0.220	1.820	10.055	5.525	PASS
Position 5	-0.250	0.085	-0.220	1.800	9.993	5.553	PASS
Position 6	-0.250	-0.085	-0.220	1.779	9.934	5.584	PASS
Position 7	0.250	-0.085	-0.220	1.795	9.929	5.530	PASS
Position 8	0.250	0.085	-0.220	1.814	9.995	5.511	PASS
Center	0.000	0.000	0.000	-1.651	-10.033	6.078	PASS
Position 1	0.250	0.085	0.220	-1.816	-10.053	5.535	PASS
Position 2	0.250	-0.085	0.220	-1.830	-10.072	5.504	PASS
Position 3	-0.250	-0.085	0.220	-1.835	-10.068	5.485	PASS
Position 4	-0.250	0.085	0.220	-1.834	-10.048	5.478	PASS
Position 5	-0.250	0.085	-0.220	-1.833	-9.906	5.404	PASS
Position 6	-0.250	-0.085	-0.220	-1.848	-10.052	5.440	PASS
Position 7	0.250	-0.085	-0.220	-1.819	-9.986	5.490	PASS
Position 8	0.250	0.085	-0.220	-1.838	-9.978	5.427	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S075
 Operator Name: Gordon, Matt
 Date: 4/13/2011 Time: 1:30 PM
 Actuator Coil Resistance: 10.23 Ohms, PASS
 Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.662
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.512

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.550	9.960	6.426	PASS

Position 1	0.250	0.085	0.220	1.785	9.993	5.599	PASS
Position 2	0.250	-0.085	0.220	1.719	10.037	5.839	PASS
Position 3	-0.250	-0.085	0.220	1.716	10.085	5.878	PASS
Position 4	-0.250	0.085	0.220	1.791	9.959	5.561	PASS
Position 5	-0.250	0.085	-0.220	1.763	9.968	5.653	PASS
Position 6	-0.250	-0.085	-0.220	1.723	9.969	5.785	PASS
Position 7	0.250	-0.085	-0.220	1.762	10.095	5.730	PASS
Position 8	0.250	0.085	-0.220	1.770	10.003	5.650	PASS
Center	0.000	0.000	0.000	-1.602	-10.008	6.246	PASS
Position 1	0.250	0.085	0.220	-1.782	-9.994	5.608	PASS
Position 2	0.250	-0.085	0.220	-1.781	-9.986	5.608	PASS
Position 3	-0.250	-0.085	0.220	-1.781	-9.970	5.599	PASS
Position 4	-0.250	0.085	0.220	-1.801	-10.103	5.611	PASS
Position 5	-0.250	0.085	-0.220	-1.829	-10.017	5.476	PASS
Position 6	-0.250	-0.085	-0.220	-1.785	-10.062	5.636	PASS
Position 7	0.250	-0.085	-0.220	-1.802	-10.101	5.606	PASS
Position 8	0.250	0.085	-0.220	-1.821	-10.021	5.503	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S077
Operator Name: Gordon, Matt
Date: 4/13/2011 Time: 10:51 AM
Actuator Coil Resistance: 10.21 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.641
Y Travel Limit (inches): 0.206
Z Travel Limit (inches): 0.512

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.531	10.082	6.585	PASS
Position 1	0.250	0.085	0.220	1.787	10.057	5.628	PASS
Position 2	0.250	-0.085	0.220	1.820	10.043	5.517	PASS
Position 3	-0.250	-0.085	0.220	1.759	10.000	5.683	PASS

Position 4	-0.250	0.085	0.220	1.788	9.982	5.581	PASS
Position 5	-0.250	0.085	-0.220	1.766	9.992	5.657	PASS
Position 6	-0.250	-0.085	-0.220	1.766	10.033	5.679	PASS
Position 7	0.250	-0.085	-0.220	1.768	9.985	5.646	PASS
Position 8	0.250	0.085	-0.220	1.796	9.991	5.562	PASS
Center	0.000	0.000	0.000	-1.604	-9.966	6.215	PASS
Position 1	0.250	0.085	0.220	-1.804	-10.080	5.588	PASS
Position 2	0.250	-0.085	0.220	-1.798	-10.072	5.602	PASS
Position 3	-0.250	-0.085	0.220	-1.738	-9.981	5.742	PASS
Position 4	-0.250	0.085	0.220	-1.812	-10.065	5.554	PASS
Position 5	-0.250	0.085	-0.220	-1.793	-10.046	5.603	PASS
Position 6	-0.250	-0.085	-0.220	-1.781	-10.006	5.618	PASS
Position 7	0.250	-0.085	-0.220	-1.806	-9.973	5.521	PASS
Position 8	0.250	0.085	-0.220	-1.812	-10.018	5.528	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S078
Operator Name: Gordon, Matt
Date: 4/13/2011 Time: 1:53 PM
Actuator Coil Resistance: 10.22 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.654
Y Travel Limit (inches): 0.206
Z Travel Limit (inches): 0.515

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.568	10.015	6.385	PASS
Position 1	0.250	0.085	0.220	1.739	10.010	5.757	PASS
Position 2	0.250	-0.085	0.220	1.759	9.974	5.669	PASS
Position 3	-0.250	-0.085	0.220	1.728	10.069	5.827	PASS
Position 4	-0.250	0.085	0.220	1.785	10.034	5.620	PASS
Position 5	-0.250	0.085	-0.220	1.784	10.081	5.652	PASS
Position 6	-0.250	-0.085	-0.220	1.728	10.014	5.794	PASS

Position 7	0.250	-0.085	-0.220	1.751	9.997	5.710	PASS
Position 8	0.250	0.085	-0.220	1.775	10.091	5.685	PASS
Center	0.000	0.000	0.000	-1.625	-10.043	6.180	PASS
Position 1	0.250	0.085	0.220	-1.795	-10.034	5.590	PASS
Position 2	0.250	-0.085	0.220	-1.779	-10.013	5.630	PASS
Position 3	-0.250	-0.085	0.220	-1.774	-10.000	5.636	PASS
Position 4	-0.250	0.085	0.220	-1.793	-10.037	5.598	PASS
Position 5	-0.250	0.085	-0.220	-1.829	-9.962	5.447	PASS
Position 6	-0.250	-0.085	-0.220	-1.777	-10.039	5.649	PASS
Position 7	0.250	-0.085	-0.220	-1.791	-10.070	5.621	PASS
Position 8	0.250	0.085	-0.220	-1.838	-10.021	5.453	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S079
Operator Name: Gordon, Matt
Date: 4/13/2011 Time: 2:16 PM
Actuator Coil Resistance: 10.42 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.664
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.514

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.572	9.978	6.347	PASS
Position 1	0.250	0.085	0.220	1.778	9.967	5.605	PASS
Position 2	0.250	-0.085	0.220	1.781	9.988	5.607	PASS
Position 3	-0.250	-0.085	0.220	1.818	10.016	5.511	PASS
Position 4	-0.250	0.085	0.220	1.796	10.084	5.613	PASS
Position 5	-0.250	0.085	-0.220	1.775	10.101	5.690	PASS
Position 6	-0.250	-0.085	-0.220	1.746	10.023	5.739	PASS
Position 7	0.250	-0.085	-0.220	1.743	9.996	5.736	PASS
Position 8	0.250	0.085	-0.220	1.750	9.988	5.708	PASS
Center	0.000	0.000	0.000	-1.569	-9.988	6.368	PASS

Position 1	0.250	0.085	0.220	-1.717	-9.994	5.821	PASS
Position 2	0.250	-0.085	0.220	-1.755	-10.065	5.735	PASS
Position 3	-0.250	-0.085	0.220	-1.744	-10.037	5.756	PASS
Position 4	-0.250	0.085	0.220	-1.725	-9.969	5.778	PASS
Position 5	-0.250	0.085	-0.220	-1.772	-9.945	5.611	PASS
Position 6	-0.250	-0.085	-0.220	-1.797	-10.007	5.570	PASS
Position 7	0.250	-0.085	-0.220	-1.783	-10.052	5.638	PASS
Position 8	0.250	0.085	-0.220	-1.770	-10.049	5.676	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S080
Operator Name: Gordon, Matt
Date: 4/13/2011 Time: 2:33 PM
Actuator Coil Resistance: 10.57 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.634
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.514

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.497	9.985	6.672	PASS
Position 1	0.250	0.085	0.220	1.772	10.003	5.644	PASS
Position 2	0.250	-0.085	0.220	1.714	10.014	5.843	PASS
Position 3	-0.250	-0.085	0.220	1.707	10.090	5.912	PASS
Position 4	-0.250	0.085	0.220	1.749	9.995	5.715	PASS
Position 5	-0.250	0.085	-0.220	1.707	9.987	5.851	PASS
Position 6	-0.250	-0.085	-0.220	1.702	10.051	5.906	PASS
Position 7	0.250	-0.085	-0.220	1.679	10.045	5.981	PASS
Position 8	0.250	0.085	-0.220	1.692	9.989	5.904	PASS
Center	0.000	0.000	0.000	-1.560	-10.026	6.428	PASS
Position 1	0.250	0.085	0.220	-1.732	-10.043	5.798	PASS
Position 2	0.250	-0.085	0.220	-1.750	-9.954	5.689	PASS
Position 3	-0.250	-0.085	0.220	-1.727	-9.951	5.763	PASS

Position 4	-0.250	0.085	0.220	-1.727	-10.038	5.812	PASS
Position 5	-0.250	0.085	-0.220	-1.785	-9.999	5.601	PASS
Position 6	-0.250	-0.085	-0.220	-1.806	-9.995	5.535	PASS
Position 7	0.250	-0.085	-0.220	-1.789	-10.038	5.610	PASS
Position 8	0.250	0.085	-0.220	-1.784	-10.074	5.647	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S081
Operator Name: Gordon, Matt
Date: 4/13/2011 Time: 2:48 PM
Actuator Coil Resistance: 10.43 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.667
Y Travel Limit (inches): 0.206
Z Travel Limit (inches): 0.512

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.526	10.055	6.591	PASS
Position 1	0.250	0.085	0.220	1.718	9.987	5.815	PASS
Position 2	0.250	-0.085	0.220	1.799	10.046	5.585	PASS
Position 3	-0.250	-0.085	0.220	1.843	10.087	5.473	PASS
Position 4	-0.250	0.085	0.220	1.699	9.963	5.863	PASS
Position 5	-0.250	0.085	-0.220	1.687	9.977	5.914	PASS
Position 6	-0.250	-0.085	-0.220	1.684	10.067	5.979	PASS
Position 7	0.250	-0.085	-0.220	1.712	10.056	5.873	PASS
Position 8	0.250	0.085	-0.220	1.670	10.005	5.990	PASS
Center	0.000	0.000	0.000	-1.573	-10.069	6.399	PASS
Position 1	0.250	0.085	0.220	-1.709	-9.952	5.823	PASS
Position 2	0.250	-0.085	0.220	-1.724	-10.046	5.825	PASS
Position 3	-0.250	-0.085	0.220	-1.732	-10.033	5.791	PASS
Position 4	-0.250	0.085	0.220	-1.706	-9.937	5.823	PASS
Position 5	-0.250	0.085	-0.220	-1.731	-9.963	5.755	PASS
Position 6	-0.250	-0.085	-0.220	-1.829	-10.021	5.479	PASS

Position 7	0.250	-0.085	-0.220	-1.832	-9.980	5.448	PASS
Position 8	0.250	0.085	-0.220	-1.728	-9.943	5.756	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S082
Operator Name: Gordon, Matt
Date: 4/13/2011 Time: 3:06 PM
Actuator Coil Resistance: 10.41 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.652
Y Travel Limit (inches): 0.204
Z Travel Limit (inches): 0.513

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.528	10.020	6.559	PASS
Position 1	0.250	0.085	0.220	1.713	9.967	5.817	PASS
Position 2	0.250	-0.085	0.220	1.780	9.963	5.598	PASS
Position 3	-0.250	-0.085	0.220	1.799	10.061	5.593	PASS
Position 4	-0.250	0.085	0.220	1.732	10.009	5.779	PASS
Position 5	-0.250	0.085	-0.220	1.694	9.969	5.884	PASS
Position 6	-0.250	-0.085	-0.220	1.699	10.056	5.918	PASS
Position 7	0.250	-0.085	-0.220	1.700	10.038	5.904	PASS
Position 8	0.250	0.085	-0.220	1.724	10.106	5.862	PASS
Center	0.000	0.000	0.000	-1.556	-10.026	6.442	PASS
Position 1	0.250	0.085	0.220	-1.726	-10.049	5.823	PASS
Position 2	0.250	-0.085	0.220	-1.727	-10.013	5.798	PASS
Position 3	-0.250	-0.085	0.220	-1.733	-9.985	5.761	PASS
Position 4	-0.250	0.085	0.220	-1.703	-10.026	5.888	PASS
Position 5	-0.250	0.085	-0.220	-1.773	-9.980	5.628	PASS
Position 6	-0.250	-0.085	-0.220	-1.699	-10.080	5.932	PASS
Position 7	0.250	-0.085	-0.220	-1.701	-10.071	5.922	PASS
Position 8	0.250	0.085	-0.220	-1.747	-9.949	5.696	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S083
 Operator Name: Gordon, Matt
 Date: 4/13/2011 Time: 3:29 PM
 Actuator Coil Resistance: 10.56 Ohms, PASS
 Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.646
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.507

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.526	9.989	6.547	PASS
Position 1	0.250	0.085	0.220	1.751	10.036	5.732	PASS
Position 2	0.250	-0.085	0.220	1.785	10.018	5.612	PASS
Position 3	-0.250	-0.085	0.220	1.668	10.140	6.078	PASS
Position 4	-0.250	0.085	0.220	1.745	9.960	5.709	PASS
Position 5	-0.250	0.085	-0.220	1.701	10.031	5.898	PASS
Position 6	-0.250	-0.085	-0.220	1.668	10.000	5.997	PASS
Position 7	0.250	-0.085	-0.220	1.672	9.996	5.978	PASS
Position 8	0.250	0.085	-0.220	1.700	10.062	5.920	PASS
Center	0.000	0.000	0.000	-1.568	-10.046	6.408	PASS
Position 1	0.250	0.085	0.220	-1.734	-9.968	5.750	PASS
Position 2	0.250	-0.085	0.220	-1.728	-9.954	5.760	PASS
Position 3	-0.250	-0.085	0.220	-1.747	-10.059	5.759	PASS
Position 4	-0.250	0.085	0.220	-1.766	-10.086	5.710	PASS
Position 5	-0.250	0.085	-0.220	-1.728	-10.029	5.805	PASS
Position 6	-0.250	-0.085	-0.220	-1.782	-9.995	5.608	PASS
Position 7	0.250	-0.085	-0.220	-1.737	-10.067	5.795	PASS
Position 8	0.250	0.085	-0.220	-1.749	-9.963	5.695	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S084
 Operator Name: Gordon, Matt
 Date: 4/14/2011 Time: 8:42 AM
 Actuator Coil Resistance: 10.45 Ohms, PASS
 Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.660
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.512

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.600	10.096	6.309	PASS
Position 1	0.250	0.085	0.220	1.788	10.088	5.643	PASS
Position 2	0.250	-0.085	0.220	1.732	9.999	5.772	PASS
Position 3	-0.250	-0.085	0.220	1.745	10.109	5.794	PASS
Position 4	-0.250	0.085	0.220	1.765	9.971	5.650	PASS
Position 5	-0.250	0.085	-0.220	1.759	9.989	5.679	PASS
Position 6	-0.250	-0.085	-0.220	1.717	10.076	5.869	PASS
Position 7	0.250	-0.085	-0.220	1.846	10.079	5.460	PASS
Position 8	0.250	0.085	-0.220	1.738	10.003	5.756	PASS
Center	0.000	0.000	0.000	-1.598	-9.995	6.253	PASS
Position 1	0.250	0.085	0.220	-1.747	-10.059	5.757	PASS
Position 2	0.250	-0.085	0.220	-1.754	-10.041	5.724	PASS
Position 3	-0.250	-0.085	0.220	-1.762	-10.016	5.683	PASS
Position 4	-0.250	0.085	0.220	-1.759	-10.040	5.707	PASS
Position 5	-0.250	0.085	-0.220	-1.798	-10.038	5.581	PASS
Position 6	-0.250	-0.085	-0.220	-1.787	-9.997	5.593	PASS
Position 7	0.250	-0.085	-0.220	-1.834	-10.060	5.486	PASS
Position 8	0.250	0.085	-0.220	-1.835	-10.060	5.482	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S085
 Operator Name: Gordon, Matt
 Date: 4/14/2011 Time: 9:00 AM
 Actuator Coil Resistance: 10.55 Ohms, PASS
 Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.658
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.513

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.533	10.057	6.560	PASS
Position 1	0.250	0.085	0.220	1.733	10.074	5.813	PASS
Position 2	0.250	-0.085	0.220	1.681	10.046	5.976	PASS
Position 3	-0.250	-0.085	0.220	1.750	9.991	5.708	PASS
Position 4	-0.250	0.085	0.220	1.722	10.068	5.847	PASS
Position 5	-0.250	0.085	-0.220	1.707	9.975	5.843	PASS
Position 6	-0.250	-0.085	-0.220	1.704	10.043	5.893	PASS
Position 7	0.250	-0.085	-0.220	1.689	10.031	5.940	PASS
Position 8	0.250	0.085	-0.220	1.637	9.987	6.101	PASS
Center	0.000	0.000	0.000	-1.529	-9.961	6.515	PASS
Position 1	0.250	0.085	0.220	-1.715	-10.009	5.838	PASS
Position 2	0.250	-0.085	0.220	-1.678	-10.029	5.979	PASS
Position 3	-0.250	-0.085	0.220	-1.702	-10.014	5.884	PASS
Position 4	-0.250	0.085	0.220	-1.701	-10.012	5.886	PASS
Position 5	-0.250	0.085	-0.220	-1.746	-10.014	5.735	PASS
Position 6	-0.250	-0.085	-0.220	-1.817	-9.987	5.497	PASS
Position 7	0.250	-0.085	-0.220	-1.770	-10.086	5.700	PASS
Position 8	0.250	0.085	-0.220	-1.755	-10.002	5.701	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S086

Operator Name: Gordon, Matt
 Date: 4/14/2011 Time: 9:18 AM
 Actuator Coil Resistance: 10.56 Ohms, PASS
 Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.649
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.511

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.528	10.009	6.551	PASS
Position 1	0.250	0.085	0.220	1.742	10.031	5.759	PASS
Position 2	0.250	-0.085	0.220	1.737	9.979	5.743	PASS
Position 3	-0.250	-0.085	0.220	1.675	10.038	5.993	PASS
Position 4	-0.250	0.085	0.220	1.748	10.046	5.748	PASS
Position 5	-0.250	0.085	-0.220	1.698	10.041	5.913	PASS
Position 6	-0.250	-0.085	-0.220	1.691	10.073	5.958	PASS
Position 7	0.250	-0.085	-0.220	1.682	10.068	5.985	PASS
Position 8	0.250	0.085	-0.220	1.684	10.033	5.958	PASS
Center	0.000	0.000	0.000	-1.567	-10.058	6.417	PASS
Position 1	0.250	0.085	0.220	-1.735	-10.006	5.766	PASS
Position 2	0.250	-0.085	0.220	-1.731	-9.992	5.771	PASS
Position 3	-0.250	-0.085	0.220	-1.733	-9.983	5.761	PASS
Position 4	-0.250	0.085	0.220	-1.735	-9.997	5.763	PASS
Position 5	-0.250	0.085	-0.220	-1.767	-10.010	5.665	PASS
Position 6	-0.250	-0.085	-0.220	-1.826	-9.959	5.454	PASS
Position 7	0.250	-0.085	-0.220	-1.788	-10.006	5.595	PASS
Position 8	0.250	0.085	-0.220	-1.769	-10.004	5.654	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S087
 Operator Name: Gordon, Matt
 Date: 4/14/2011 Time: 9:34 AM
 Actuator Coil Resistance: 10.44 Ohms, PASS
 Ambient Temperature: 75.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.650

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.513

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.529	10.056	6.576	PASS
Position 1	0.250	0.085	0.220	1.706	9.976	5.846	PASS
Position 2	0.250	-0.085	0.220	1.771	10.053	5.677	PASS
Position 3	-0.250	-0.085	0.220	1.765	9.961	5.643	PASS
Position 4	-0.250	0.085	0.220	1.731	9.954	5.751	PASS
Position 5	-0.250	0.085	-0.220	1.717	10.013	5.832	PASS
Position 6	-0.250	-0.085	-0.220	1.722	10.046	5.833	PASS
Position 7	0.250	-0.085	-0.220	1.722	10.016	5.816	PASS
Position 8	0.250	0.085	-0.220	1.710	10.036	5.870	PASS
Center	0.000	0.000	0.000	-1.507	-9.951	6.602	PASS
Position 1	0.250	0.085	0.220	-1.690	-9.971	5.901	PASS
Position 2	0.250	-0.085	0.220	-1.708	-10.076	5.900	PASS
Position 3	-0.250	-0.085	0.220	-1.710	-10.061	5.884	PASS
Position 4	-0.250	0.085	0.220	-1.712	-10.096	5.897	PASS
Position 5	-0.250	0.085	-0.220	-1.738	-10.039	5.778	PASS
Position 6	-0.250	-0.085	-0.220	-1.768	-9.969	5.637	PASS
Position 7	0.250	-0.085	-0.220	-1.779	-9.970	5.603	PASS
Position 8	0.250	0.085	-0.220	-1.728	-9.987	5.778	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S088

Operator Name: Gordon, Matt

Date: 4/14/2011 Time: 9:50 AM

Actuator Coil Resistance: 10.54 Ohms, PASS

Ambient Temperature: 75.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.669

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.513

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.566	10.096	6.447	PASS
Position 1	0.250	0.085	0.220	1.788	9.988	5.586	PASS
Position 2	0.250	-0.085	0.220	1.727	10.049	5.818	PASS
Position 3	-0.250	-0.085	0.220	1.777	9.971	5.611	PASS
Position 4	-0.250	0.085	0.220	1.799	10.036	5.580	PASS
Position 5	-0.250	0.085	-0.220	1.760	10.068	5.720	PASS
Position 6	-0.250	-0.085	-0.220	1.695	10.015	5.908	PASS
Position 7	0.250	-0.085	-0.220	1.694	10.009	5.909	PASS
Position 8	0.250	0.085	-0.220	1.801	10.087	5.601	PASS
Center	0.000	0.000	0.000	-1.547	-9.951	6.431	PASS
Position 1	0.250	0.085	0.220	-1.728	-10.065	5.825	PASS
Position 2	0.250	-0.085	0.220	-1.731	-10.023	5.790	PASS
Position 3	-0.250	-0.085	0.220	-1.746	-10.015	5.737	PASS
Position 4	-0.250	0.085	0.220	-1.735	-10.048	5.791	PASS
Position 5	-0.250	0.085	-0.220	-1.805	-9.949	5.513	PASS
Position 6	-0.250	-0.085	-0.220	-1.754	-10.011	5.706	PASS
Position 7	0.250	-0.085	-0.220	-1.810	-10.000	5.524	PASS
Position 8	0.250	0.085	-0.220	-1.767	-10.052	5.687	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S089
Operator Name: Gordon, Matt
Date: 4/14/2011 Time: 10:08 AM
Actuator Coil Resistance: 10.53 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.647
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.514

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.553	10.030	6.459	PASS
Position 1	0.250	0.085	0.220	1.817	9.991	5.498	PASS

Position 2	0.250	-0.085	0.220	1.748	9.970	5.704	PASS
Position 3	-0.250	-0.085	0.220	1.789	10.042	5.614	PASS
Position 4	-0.250	0.085	0.220	1.723	9.979	5.791	PASS
Position 5	-0.250	0.085	-0.220	1.748	10.071	5.761	PASS
Position 6	-0.250	-0.085	-0.220	1.709	10.041	5.875	PASS
Position 7	0.250	-0.085	-0.220	1.718	10.017	5.830	PASS
Position 8	0.250	0.085	-0.220	1.769	10.090	5.702	PASS
Center	0.000	0.000	0.000	-1.577	-10.067	6.384	PASS
Position 1	0.250	0.085	0.220	-1.739	-9.964	5.730	PASS
Position 2	0.250	-0.085	0.220	-1.764	-10.061	5.704	PASS
Position 3	-0.250	-0.085	0.220	-1.735	-10.066	5.803	PASS
Position 4	-0.250	0.085	0.220	-1.755	-10.087	5.748	PASS
Position 5	-0.250	0.085	-0.220	-1.841	-9.998	5.431	PASS
Position 6	-0.250	-0.085	-0.220	-1.753	-10.075	5.748	PASS
Position 7	0.250	-0.085	-0.220	-1.824	-10.040	5.505	PASS
Position 8	0.250	0.085	-0.220	-1.779	-10.012	5.628	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S090
Operator Name: Gordon, Matt
Date: 4/14/2011 Time: 10:24 AM
Actuator Coil Resistance: 10.57 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.641
Y Travel Limit (inches): 0.206
Z Travel Limit (inches): 0.513

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.547	10.082	6.518	PASS
Position 1	0.250	0.085	0.220	1.712	9.938	5.803	PASS
Position 2	0.250	-0.085	0.220	1.684	10.056	5.970	PASS
Position 3	-0.250	-0.085	0.220	1.790	10.009	5.592	PASS
Position 4	-0.250	0.085	0.220	1.717	10.011	5.830	PASS

Position 5	-0.250	0.085	-0.220	1.714	10.010	5.839	PASS
Position 6	-0.250	-0.085	-0.220	1.662	10.054	6.048	PASS
Position 7	0.250	-0.085	-0.220	1.727	10.042	5.814	PASS
Position 8	0.250	0.085	-0.220	1.692	10.007	5.916	PASS
Center	0.000	0.000	0.000	-1.562	-9.980	6.389	PASS
Position 1	0.250	0.085	0.220	-1.716	-9.998	5.826	PASS
Position 2	0.250	-0.085	0.220	-1.730	-9.992	5.777	PASS
Position 3	-0.250	-0.085	0.220	-1.723	-9.987	5.795	PASS
Position 4	-0.250	0.085	0.220	-1.735	-9.991	5.760	PASS
Position 5	-0.250	0.085	-0.220	-1.777	-10.043	5.651	PASS
Position 6	-0.250	-0.085	-0.220	-1.703	-10.088	5.922	PASS
Position 7	0.250	-0.085	-0.220	-1.805	-9.988	5.534	PASS
Position 8	0.250	0.085	-0.220	-1.782	-10.017	5.620	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S091
Operator Name: Gordon, Matt
Date: 4/14/2011 Time: 10:48 AM
Actuator Coil Resistance: 10.54 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.653
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.513

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.558	10.058	6.455	PASS
Position 1	0.250	0.085	0.220	1.788	9.980	5.583	PASS
Position 2	0.250	-0.085	0.220	1.722	10.008	5.813	PASS
Position 3	-0.250	-0.085	0.220	1.750	10.000	5.714	PASS
Position 4	-0.250	0.085	0.220	1.709	9.992	5.847	PASS
Position 5	-0.250	0.085	-0.220	1.709	10.073	5.892	PASS
Position 6	-0.250	-0.085	-0.220	1.696	9.960	5.871	PASS
Position 7	0.250	-0.085	-0.220	1.722	10.079	5.852	PASS

Position 8	0.250	0.085	-0.220	1.706	10.067	5.901	PASS
Center	0.000	0.000	0.000	-1.559	-9.968	6.395	PASS
Position 1	0.250	0.085	0.220	-1.732	-9.980	5.761	PASS
Position 2	0.250	-0.085	0.220	-1.752	-10.063	5.744	PASS
Position 3	-0.250	-0.085	0.220	-1.745	-10.046	5.758	PASS
Position 4	-0.250	0.085	0.220	-1.756	-10.087	5.744	PASS
Position 5	-0.250	0.085	-0.220	-1.781	-10.015	5.625	PASS
Position 6	-0.250	-0.085	-0.220	-1.787	-10.048	5.622	PASS
Position 7	0.250	-0.085	-0.220	-1.753	-10.012	5.710	PASS
Position 8	0.250	0.085	-0.220	-1.802	-9.994	5.546	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S092
Operator Name: Gordon, Matt
Date: 4/14/2011 Time: 11:22 AM
Actuator Coil Resistance: 10.49 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.668
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.513

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.553	9.956	6.412	PASS
Position 1	0.250	0.085	0.220	1.717	10.052	5.853	PASS
Position 2	0.250	-0.085	0.220	1.766	9.960	5.638	PASS
Position 3	-0.250	-0.085	0.220	1.766	10.091	5.712	PASS
Position 4	-0.250	0.085	0.220	1.819	10.054	5.528	PASS
Position 5	-0.250	0.085	-0.220	1.733	10.019	5.781	PASS
Position 6	-0.250	-0.085	-0.220	1.734	10.060	5.802	PASS
Position 7	0.250	-0.085	-0.220	1.742	10.065	5.777	PASS
Position 8	0.250	0.085	-0.220	1.747	10.024	5.738	PASS
Center	0.000	0.000	0.000	-1.587	-10.012	6.310	PASS
Position 1	0.250	0.085	0.220	-1.754	-9.975	5.689	PASS

Position 2	0.250	-0.085	0.220	-1.751	-9.996	5.707	PASS
Position 3	-0.250	-0.085	0.220	-1.762	-9.978	5.664	PASS
Position 4	-0.250	0.085	0.220	-1.755	-9.975	5.683	PASS
Position 5	-0.250	0.085	-0.220	-1.751	-9.968	5.694	PASS
Position 6	-0.250	-0.085	-0.220	-1.735	-10.059	5.799	PASS
Position 7	0.250	-0.085	-0.220	-1.765	-10.081	5.711	PASS
Position 8	0.250	0.085	-0.220	-1.765	-10.032	5.683	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S093
Operator Name: Gordon, Matt
Date: 4/14/2011 Time: 1:11 PM
Actuator Coil Resistance: 10.46 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.661
Y Travel Limit (inches): 0.206
Z Travel Limit (inches): 0.513

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.517	10.084	6.648	PASS
Position 1	0.250	0.085	0.220	1.815	10.088	5.557	PASS
Position 2	0.250	-0.085	0.220	1.762	10.018	5.685	PASS
Position 3	-0.250	-0.085	0.220	1.787	10.036	5.616	PASS
Position 4	-0.250	0.085	0.220	1.775	10.024	5.646	PASS
Position 5	-0.250	0.085	-0.220	1.749	10.004	5.720	PASS
Position 6	-0.250	-0.085	-0.220	1.734	9.990	5.762	PASS
Position 7	0.250	-0.085	-0.220	1.735	9.978	5.750	PASS
Position 8	0.250	0.085	-0.220	1.764	10.002	5.671	PASS
Center	0.000	0.000	0.000	-1.570	-9.982	6.359	PASS
Position 1	0.250	0.085	0.220	-1.732	-9.997	5.772	PASS
Position 2	0.250	-0.085	0.220	-1.741	-10.005	5.746	PASS
Position 3	-0.250	-0.085	0.220	-1.745	-9.965	5.710	PASS
Position 4	-0.250	0.085	0.220	-1.752	-9.972	5.691	PASS

Position 5	-0.250	0.085	-0.220	-1.793	-9.953	5.551	PASS
Position 6	-0.250	-0.085	-0.220	-1.822	-9.999	5.487	PASS
Position 7	0.250	-0.085	-0.220	-1.812	-10.071	5.558	PASS
Position 8	0.250	0.085	-0.220	-1.797	-10.048	5.591	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S094
Operator Name: Gordon, Matt
Date: 4/14/2011 Time: 11:05 AM
Actuator Coil Resistance: 10.49 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.666
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.515

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.531	10.060	6.571	PASS
Position 1	0.250	0.085	0.220	1.785	10.076	5.643	PASS
Position 2	0.250	-0.085	0.220	1.712	9.969	5.825	PASS
Position 3	-0.250	-0.085	0.220	1.703	9.955	5.846	PASS
Position 4	-0.250	0.085	0.220	1.761	10.032	5.696	PASS
Position 5	-0.250	0.085	-0.220	1.726	10.033	5.812	PASS
Position 6	-0.250	-0.085	-0.220	1.716	10.024	5.842	PASS
Position 7	0.250	-0.085	-0.220	1.711	10.019	5.855	PASS
Position 8	0.250	0.085	-0.220	1.714	10.050	5.865	PASS
Center	0.000	0.000	0.000	-1.564	-9.962	6.370	PASS
Position 1	0.250	0.085	0.220	-1.739	-10.028	5.765	PASS
Position 2	0.250	-0.085	0.220	-1.730	-9.948	5.750	PASS
Position 3	-0.250	-0.085	0.220	-1.748	-10.055	5.752	PASS
Position 4	-0.250	0.085	0.220	-1.751	-10.024	5.723	PASS
Position 5	-0.250	0.085	-0.220	-1.732	-9.992	5.769	PASS
Position 6	-0.250	-0.085	-0.220	-1.789	-10.075	5.631	PASS
Position 7	0.250	-0.085	-0.220	-1.782	-10.014	5.618	PASS
Position 8	0.250	0.085	-0.220	-1.752	-10.022	5.720	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S095
 Operator Name: Gordon, Matt
 Date: 4/14/2011 Time: 1:29 PM
 Actuator Coil Resistance: 10.56 Ohms, PASS
 Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.650
 Y Travel Limit (inches): 0.204
 Z Travel Limit (inches): 0.514

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.537	10.005	6.509	PASS
Position 1	0.250	0.085	0.220	1.751	10.039	5.733	PASS
Position 2	0.250	-0.085	0.220	1.730	10.015	5.789	PASS
Position 3	-0.250	-0.085	0.220	1.732	9.999	5.773	PASS
Position 4	-0.250	0.085	0.220	1.758	9.967	5.668	PASS
Position 5	-0.250	0.085	-0.220	1.715	9.977	5.817	PASS
Position 6	-0.250	-0.085	-0.220	1.725	10.046	5.822	PASS
Position 7	0.250	-0.085	-0.220	1.731	10.049	5.804	PASS
Position 8	0.250	0.085	-0.220	1.713	9.998	5.838	PASS
Center	0.000	0.000	0.000	-1.551	-10.048	6.480	PASS
Position 1	0.250	0.085	0.220	-1.707	-10.072	5.902	PASS
Position 2	0.250	-0.085	0.220	-1.721	-10.023	5.825	PASS
Position 3	-0.250	-0.085	0.220	-1.716	-10.017	5.839	PASS
Position 4	-0.250	0.085	0.220	-1.717	-10.067	5.865	PASS
Position 5	-0.250	0.085	-0.220	-1.810	-10.046	5.551	PASS
Position 6	-0.250	-0.085	-0.220	-1.761	-10.026	5.692	PASS
Position 7	0.250	-0.085	-0.220	-1.729	-9.984	5.776	PASS
Position 8	0.250	0.085	-0.220	-1.762	-10.053	5.706	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S096
 Operator Name: Gordon, Matt
 Date: 4/14/2011 Time: 1:47 PM
 Actuator Coil Resistance: 10.45 Ohms, PASS
 Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.668
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.513

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.600	10.039	6.276	PASS
Position 1	0.250	0.085	0.220	1.796	10.062	5.602	PASS
Position 2	0.250	-0.085	0.220	1.811	9.965	5.503	PASS
Position 3	-0.250	-0.085	0.220	1.740	10.046	5.774	PASS
Position 4	-0.250	0.085	0.220	1.766	10.052	5.691	PASS
Position 5	-0.250	0.085	-0.220	1.775	9.959	5.610	PASS
Position 6	-0.250	-0.085	-0.220	1.740	10.033	5.765	PASS
Position 7	0.250	-0.085	-0.220	1.728	10.029	5.805	PASS
Position 8	0.250	0.085	-0.220	1.801	9.972	5.536	PASS
Center	0.000	0.000	0.000	-1.612	-9.940	6.167	PASS
Position 1	0.250	0.085	0.220	-1.806	-10.046	5.564	PASS
Position 2	0.250	-0.085	0.220	-1.792	-10.013	5.589	PASS
Position 3	-0.250	-0.085	0.220	-1.807	-10.007	5.539	PASS
Position 4	-0.250	0.085	0.220	-1.814	-10.042	5.535	PASS
Position 5	-0.250	0.085	-0.220	-1.800	-10.054	5.586	PASS
Position 6	-0.250	-0.085	-0.220	-1.836	-10.002	5.447	PASS
Position 7	0.250	-0.085	-0.220	-1.799	-10.056	5.589	PASS
Position 8	0.250	0.085	-0.220	-1.771	-10.032	5.665	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S097

Operator Name: Gordon, Matt

Date: 4/14/2011 Time: 2:06 PM

Actuator Coil Resistance: 10.58 Ohms, PASS

Ambient Temperature: 75.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.684

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.512

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.577	10.051	6.375	PASS
Position 1	0.250	0.085	0.220	1.757	10.022	5.706	PASS
Position 2	0.250	-0.085	0.220	1.756	10.026	5.709	PASS
Position 3	-0.250	-0.085	0.220	1.693	10.005	5.910	PASS
Position 4	-0.250	0.085	0.220	1.706	10.039	5.884	PASS
Position 5	-0.250	0.085	-0.220	1.745	9.994	5.726	PASS
Position 6	-0.250	-0.085	-0.220	1.815	10.064	5.545	PASS
Position 7	0.250	-0.085	-0.220	1.744	10.050	5.763	PASS
Position 8	0.250	0.085	-0.220	1.734	10.017	5.776	PASS
Center	0.000	0.000	0.000	-1.586	-9.977	6.291	PASS
Position 1	0.250	0.085	0.220	-1.756	-9.962	5.674	PASS
Position 2	0.250	-0.085	0.220	-1.786	-10.059	5.632	PASS
Position 3	-0.250	-0.085	0.220	-1.783	-10.054	5.640	PASS
Position 4	-0.250	0.085	0.220	-1.750	-9.958	5.690	PASS
Position 5	-0.250	0.085	-0.220	-1.795	-10.074	5.612	PASS
Position 6	-0.250	-0.085	-0.220	-1.823	-9.961	5.465	PASS
Position 7	0.250	-0.085	-0.220	-1.820	-10.000	5.495	PASS
Position 8	0.250	0.085	-0.220	-1.804	-9.945	5.514	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S098
Operator Name: Gordon, Matt
Date: 4/14/2011 Time: 2:21 PM
Actuator Coil Resistance: 10.58 Ohms, PASS
Ambient Temperature: 75.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.658
Y Travel Limit (inches): 0.206
Z Travel Limit (inches): 0.512

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.574	9.965	6.331	PASS
Position 1	0.250	0.085	0.220	1.762	9.962	5.655	PASS
Position 2	0.250	-0.085	0.220	1.716	10.018	5.838	PASS
Position 3	-0.250	-0.085	0.220	1.717	9.959	5.800	PASS
Position 4	-0.250	0.085	0.220	1.796	10.008	5.573	PASS
Position 5	-0.250	0.085	-0.220	1.711	10.065	5.883	PASS
Position 6	-0.250	-0.085	-0.220	1.680	10.011	5.958	PASS
Position 7	0.250	-0.085	-0.220	1.762	10.008	5.678	PASS
Position 8	0.250	0.085	-0.220	1.711	10.067	5.885	PASS
Center	0.000	0.000	0.000	-1.563	-9.997	6.394	PASS
Position 1	0.250	0.085	0.220	-1.740	-10.035	5.766	PASS
Position 2	0.250	-0.085	0.220	-1.715	-10.000	5.830	PASS
Position 3	-0.250	-0.085	0.220	-1.721	-10.001	5.810	PASS
Position 4	-0.250	0.085	0.220	-1.734	-10.033	5.785	PASS
Position 5	-0.250	0.085	-0.220	-1.801	-9.995	5.551	PASS
Position 6	-0.250	-0.085	-0.220	-1.778	-10.071	5.665	PASS
Position 7	0.250	-0.085	-0.220	-1.775	-10.056	5.666	PASS
Position 8	0.250	0.085	-0.220	-1.814	-9.969	5.496	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S099

Operator Name: Gordon, Matt
 Date: 4/14/2011 Time: 2:34 PM
 Actuator Coil Resistance: 10.58 Ohms, PASS
 Ambient Temperature: 75.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.646
 Y Travel Limit (inches): 0.206
 Z Travel Limit (inches): 0.516

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.559	10.071	6.458	PASS
Position 1	0.250	0.085	0.220	1.726	10.074	5.836	PASS
Position 2	0.250	-0.085	0.220	1.744	9.958	5.710	PASS
Position 3	-0.250	-0.085	0.220	1.789	9.975	5.576	PASS
Position 4	-0.250	0.085	0.220	1.789	9.967	5.571	PASS
Position 5	-0.250	0.085	-0.220	1.716	9.989	5.821	PASS
Position 6	-0.250	-0.085	-0.220	1.749	10.024	5.730	PASS
Position 7	0.250	-0.085	-0.220	1.714	10.019	5.844	PASS
Position 8	0.250	0.085	-0.220	1.720	9.994	5.811	PASS
Center	0.000	0.000	0.000	-1.576	-9.955	6.315	PASS
Position 1	0.250	0.085	0.220	-1.780	-10.005	5.620	PASS
Position 2	0.250	-0.085	0.220	-1.770	-9.954	5.622	PASS
Position 3	-0.250	-0.085	0.220	-1.775	-9.947	5.602	PASS
Position 4	-0.250	0.085	0.220	-1.777	-10.003	5.628	PASS
Position 5	-0.250	0.085	-0.220	-1.784	-9.975	5.591	PASS
Position 6	-0.250	-0.085	-0.220	-1.730	-9.989	5.773	PASS
Position 7	0.250	-0.085	-0.220	-1.809	-9.979	5.516	PASS
Position 8	0.250	0.085	-0.220	-1.788	-10.046	5.619	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S100
 Operator Name: Gordon, Matt
 Date: 4/14/2011 Time: 2:56 PM
 Actuator Coil Resistance: 10.57 Ohms, PASS
 Ambient Temperature: 75.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.683

Y Travel Limit (inches): 0.206

Z Travel Limit (inches): 0.513

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.563	9.952	6.367	PASS
Position 1	0.250	0.085	0.220	1.839	9.968	5.419	PASS
Position 2	0.250	-0.085	0.220	1.767	9.994	5.657	PASS
Position 3	-0.250	-0.085	0.220	1.770	9.995	5.648	PASS
Position 4	-0.250	0.085	0.220	1.748	10.072	5.762	PASS
Position 5	-0.250	0.085	-0.220	1.759	10.017	5.695	PASS
Position 6	-0.250	-0.085	-0.220	1.645	9.960	6.053	PASS
Position 7	0.250	-0.085	-0.220	1.766	10.099	5.720	PASS
Position 8	0.250	0.085	-0.220	1.756	10.046	5.723	PASS
Center	0.000	0.000	0.000	-1.553	-9.971	6.421	PASS
Position 1	0.250	0.085	0.220	-1.729	-10.012	5.791	PASS
Position 2	0.250	-0.085	0.220	-1.715	-10.013	5.837	PASS
Position 3	-0.250	-0.085	0.220	-1.728	-9.975	5.773	PASS
Position 4	-0.250	0.085	0.220	-1.728	-10.008	5.791	PASS
Position 5	-0.250	0.085	-0.220	-1.823	-9.992	5.480	PASS
Position 6	-0.250	-0.085	-0.220	-1.779	-9.954	5.596	PASS
Position 7	0.250	-0.085	-0.220	-1.800	-10.033	5.574	PASS
Position 8	0.250	0.085	-0.220	-1.798	-9.982	5.553	PASS

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LIGO Production Small Actuator Test Report

Actuator Serial #: S101

Operator Name: Gordon, Matt

Date: 4/14/2011 Time: 3:10 PM

Actuator Coil Resistance: 10.54 Ohms, PASS

Ambient Temperature: 75.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.639

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.512

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
Center	0.000	0.000	0.000	1.513	10.052	6.644	PASS
Position 1	0.250	0.085	0.220	1.750	10.066	5.753	PASS
Position 2	0.250	-0.085	0.220	1.748	10.016	5.730	PASS
Position 3	-0.250	-0.085	0.220	1.740	10.038	5.769	PASS
Position 4	-0.250	0.085	0.220	1.751	10.082	5.756	PASS
Position 5	-0.250	0.085	-0.220	1.680	10.031	5.969	PASS
Position 6	-0.250	-0.085	-0.220	1.712	10.091	5.896	PASS
Position 7	0.250	-0.085	-0.220	1.736	10.099	5.819	PASS
Position 8	0.250	0.085	-0.220	1.718	10.037	5.843	PASS
Center	0.000	0.000	0.000	-1.587	-10.071	6.347	PASS
Position 1	0.250	0.085	0.220	-1.726	-9.943	5.759	PASS
Position 2	0.250	-0.085	0.220	-1.750	-10.076	5.757	PASS
Position 3	-0.250	-0.085	0.220	-1.755	-10.056	5.729	PASS
Position 4	-0.250	0.085	0.220	-1.751	-10.055	5.742	PASS
Position 5	-0.250	0.085	-0.220	-1.779	-10.050	5.649	PASS
Position 6	-0.250	-0.085	-0.220	-1.799	-10.070	5.598	PASS
Position 7	0.250	-0.085	-0.220	-1.721	-10.085	5.859	PASS
Position 8	0.250	0.085	-0.220	-1.801	-9.995	5.548	PASS

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