

LIGO Production Large Actuator Test Report

Actuator Serial #: L001

Operator Name: Smith, Lane

Date: 8/11/2009 Time: 5:37 PM

Actuator Coil Resistance: 6.42 Ohms, PASS

Ambient Temperature: 72.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.530

Y Travel Limit (inches): 0.196

Z Travel Limit (inches): 0.478

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.102	20.162	9.591	PASS
Positi on 1	0.250	0.075	0.215	2.480	20.268	8.172	PASS
Positi on 2	0.250	-0.075	0.215	2.304	19.829	8.608	PASS
Positi on 3	-0.250	-0.075	0.215	2.352	20.188	8.583	PASS
Positi on 4	-0.250	0.075	0.215	2.403	20.008	8.328	PASS
Positi on 5	-0.250	0.075	-0.215	2.290	20.010	8.738	PASS
Positi on 6	-0.250	-0.075	-0.215	2.328	19.871	8.534	PASS
Positi on 7	0.250	-0.075	-0.215	2.301	19.888	8.644	PASS

Position 8	0.250	0.075	-0.215	2.288	20.068	8.772	PASS
Center	0.000	0.000	0.000	-2.158	-20.320	9.414	PASS
Position 1	0.250	0.075	0.215	-2.368	-20.062	8.472	PASS
Position 2	0.250	-0.075	0.215	-2.292	-19.953	8.706	PASS
Position 3	-0.250	-0.075	0.215	-2.274	-19.998	8.792	PASS
Position 4	-0.250	0.075	0.215	-2.336	-20.096	8.604	PASS
Position 5	-0.250	0.075	-0.215	-2.587	-19.855	7.675	PASS
Position 6	-0.250	-0.075	-0.215	-2.641	-19.905	7.537	PASS
Position 7	0.250	-0.075	-0.215	-2.390	-19.943	8.343	PASS
Position 8	0.250	0.075	-0.215	-2.546	-20.007	7.858	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L002

Operator Name: Hartmann, Donna

Date: 8/12/2009 Time: 5:30 PM

Actuator Coil Resistance: 6.33 Ohms, PASS

Ambient Temperature: 72.7 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	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	2.147	20.080	9.353	PASS
Position 1	0.250	0.075	0.215	2.434	19.833	8.147	PASS
Position 2	0.250	-0.075	0.215	2.383	20.013	8.399	PASS
Position 3	-0.250	-0.075	0.215	2.331	20.049	8.601	PASS
Position 4	-0.250	0.075	0.215	2.480	19.960	8.047	PASS
Position 5	-0.250	0.075	-0.215	2.348	20.208	8.606	PASS
Position 6	-0.250	-0.075	-0.215	2.344	19.878	8.481	PASS
Position 7	0.250	-0.075	-0.215	2.338	19.884	8.504	PASS
Position 8	0.250	0.075	-0.215	2.317	20.214	8.724	PASS
Center	0.000	0.000	0.000	-2.119	-20.185	9.524	PASS
Position 1	0.250	0.075	0.215	-2.319	-20.167	8.698	PASS
Position 2	0.250	-0.075	0.215	-2.304	-20.060	8.705	PASS
Position 3	-0.250	-0.075	0.215	-2.298	-19.975	8.691	PASS

Position 4	-0.250	0.075	0.215	-2.362	-20.031	8.479	PASS
Position 5	-0.250	0.075	-0.215	-2.369	-20.023	8.452	PASS
Position 6	-0.250	-0.075	-0.215	-2.423	-20.005	8.258	PASS
Position 7	0.250	-0.075	-0.215	-2.365	-19.964	8.441	PASS
Position 8	0.250	0.075	-0.215	-2.363	-20.031	8.476	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L003

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 3:17 PM

Actuator Coil Resistance: 6.40 Ohms, PASS

Ambient Temperature: 71.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.520

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.504

	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	2.103	20.081	9.549	PASS
Position 1	0.250	0.075	0.215	2.283	20.150	8.826	PASS

Positio n 2	0.250	-0.075	0.215	2.334	19.964	8.555	PASS
Positio n 3	-0.250	-0.075	0.215	2.331	20.065	8.607	PASS
Positio n 4	-0.250	0.075	0.215	2.390	19.900	8.326	PASS
Positio n 5	-0.250	0.075	-0.215	2.310	20.010	8.662	PASS
Positio n 6	-0.250	-0.075	-0.215	2.342	20.125	8.594	PASS
Positio n 7	0.250	-0.075	-0.215	2.331	20.147	8.643	PASS
Positio n 8	0.250	0.075	-0.215	2.296	20.052	8.735	PASS
Center	0.000	0.000	0.000	-2.144	-20.141	9.395	PASS
Positio n 1	0.250	0.075	0.215	-2.406	-20.363	8.463	PASS
Positio n 2	0.250	-0.075	0.215	-2.404	-20.186	8.398	PASS
Positio n 3	-0.250	-0.075	0.215	-2.355	-19.883	8.442	PASS
Positio n 4	-0.250	0.075	0.215	-2.330	-19.869	8.527	PASS
Positio n 5	-0.250	0.075	-0.215	-2.482	-20.002	8.058	PASS
Positio n 6	-0.250	-0.075	-0.215	-2.598	-19.907	7.663	PASS
Positio n 7	0.250	-0.075	-0.215	-2.438	-20.072	8.234	PASS
Positio n 8	0.250	0.075	-0.215	-2.495	-19.846	7.955	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L004

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 3:35 PM

Actuator Coil Resistance: 6.40 Ohms, PASS

Ambient Temperature: 72.2 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.523

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.503

	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	2.068	20.134	9.735	PASS
Position 1	0.250	0.075	0.215	2.302	20.209	8.778	PASS
Position 2	0.250	-0.075	0.215	2.317	20.194	8.716	PASS
Position 3	-0.250	-0.075	0.215	2.319	19.875	8.570	PASS
Position 4	-0.250	0.075	0.215	2.392	20.028	8.373	PASS
Position 5	-0.250	0.075	-0.215	2.297	19.900	8.664	PASS
Position 6	-0.250	-0.075	-0.215	2.344	20.059	8.558	PASS
Position 7	0.250	-0.075	-0.215	2.417	20.088	8.310	PASS
Position 8	0.250	0.075	-0.215	2.325	19.958	8.584	PASS
Center	0.000	0.000	0.000	-2.162	-20.186	9.337	PASS
Position 1	0.250	0.075	0.215	-2.350	-19.987	8.505	PASS
Position 2	0.250	-0.075	0.215	-2.330	-20.204	8.670	PASS

Position 3	-0.250	-0.075	0.215	-2.361	-20.232	8.570	PASS
Position 4	-0.250	0.075	0.215	-2.330	-19.985	8.577	PASS
Position 5	-0.250	0.075	-0.215	-2.427	-19.836	8.174	PASS
Position 6	-0.250	-0.075	-0.215	-2.470	-20.077	8.129	PASS
Position 7	0.250	-0.075	-0.215	-2.481	-19.863	8.007	PASS
Position 8	0.250	0.075	-0.215	-2.439	-19.962	8.185	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L005
Operator Name: Smith, Lane
Date: 8/11/2009 Time: 4:23 PM
Actuator Coil Resistance: 6.41 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.521
Y Travel Limit (inches): 0.193
Z Travel Limit (inches): 0.479

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.098	20.188	9.621	PASS
Positi on 1	0.250	0.075	0.215	2.547	20.146	7.909	PASS
Positi on 2	0.250	-0.075	0.215	2.345	20.104	8.573	PASS
Positi on 3	-0.250	-0.075	0.215	2.324	20.050	8.626	PASS
Positi on 4	-0.250	0.075	0.215	2.448	20.037	8.184	PASS
Positi on 5	-0.250	0.075	-0.215	2.295	20.104	8.759	PASS
Positi on 6	-0.250	-0.075	-0.215	2.296	19.898	8.667	PASS
Positi on 7	0.250	-0.075	-0.215	2.286	19.899	8.703	PASS
Positi on 8	0.250	0.075	-0.215	2.292	20.116	8.776	PASS
Cente r	0.000	0.000	0.000	-2.154	-20.32 7	9.438	PASS
Positi on 1	0.250	0.075	0.215	-2.350	-20.04 6	8.532	PASS
Positi on 2	0.250	-0.075	0.215	-2.298	-19.89 8	8.659	PASS
Positi on 3	-0.250	-0.075	0.215	-2.304	-19.94 1	8.653	PASS
Positi on 4	-0.250	0.075	0.215	-2.358	-20.09 0	8.521	PASS
Positi on 5	-0.250	0.075	-0.215	-2.559	-19.86 7	7.765	PASS

Position 6	-0.250	-0.075	-0.215	-2.503	-19.963	7.975	PASS
Position 7	0.250	-0.075	-0.215	-2.464	-19.887	8.070	PASS
Position 8	0.250	0.075	-0.215	-2.546	-19.899	7.817	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L006
 Operator Name: Smith, Lane
 Date: 8/12/2009 Time: 7:20 AM
 Actuator Coil Resistance: 6.39 Ohms, PASS
 Ambient Temperature: 68.0 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.517
 Y Travel Limit (inches): 0.214
 Z Travel Limit (inches): 0.484

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.057	20.287	9.862	PASS
Positi on 1	0.250	0.075	0.215	2.534	20.136	7.948	PASS
Positi on 2	0.250	-0.075	0.215	2.435	20.051	8.233	PASS
Positi on 3	-0.250	-0.075	0.215	2.371	19.837	8.365	PASS
Positi on 4	-0.250	0.075	0.215	2.334	19.923	8.534	PASS
Positi on 5	-0.250	0.075	-0.215	2.315	20.025	8.650	PASS
Positi on 6	-0.250	-0.075	-0.215	2.355	20.072	8.522	PASS
Positi on 7	0.250	-0.075	-0.215	2.320	20.072	8.652	PASS
Positi on 8	0.250	0.075	-0.215	2.318	20.064	8.657	PASS
Cente r	0.000	0.000	0.000	-2.091	-20.026	9.576	PASS
Positi on 1	0.250	0.075	0.215	-2.327	-20.166	8.668	PASS
Positi on 2	0.250	-0.075	0.215	-2.271	-20.079	8.841	PASS
Positi on 3	-0.250	-0.075	0.215	-2.253	-20.166	8.949	PASS
Positi on 4	-0.250	0.075	0.215	-2.355	-20.224	8.586	PASS
Positi on 5	-0.250	0.075	-0.215	-2.464	-20.028	8.127	PASS

Position 6	-0.250	-0.075	-0.215	-2.424	-19.968	8.239	PASS
Position 7	0.250	-0.075	-0.215	-2.373	-19.844	8.362	PASS
Position 8	0.250	0.075	-0.215	-2.376	-20.218	8.508	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L007
 Operator Name: Smith, Lane
 Date: 8/11/2009 Time: 2:47 PM
 Actuator Coil Resistance: 6.33 Ohms, PASS
 Ambient Temperature: 76.9 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.511
 Y Travel Limit (inches): 0.196
 Z Travel Limit (inches): 0.483

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.107	19.877	9.436	PASS
Positi on 1	0.250	0.075	0.215	2.404	20.112	8.366	PASS
Positi on 2	0.250	-0.075	0.215	2.414	20.323	8.418	PASS
Positi on 3	-0.250	-0.075	0.215	2.418	20.354	8.417	PASS
Positi on 4	-0.250	0.075	0.215	2.479	20.350	8.209	PASS
Positi on 5	-0.250	0.075	-0.215	2.174	19.875	9.144	PASS
Positi on 6	-0.250	-0.075	-0.215	2.411	20.531	8.516	PASS
Positi on 7	0.250	-0.075	-0.215	2.332	20.579	8.826	PASS
Positi on 8	0.250	0.075	-0.215	2.278	19.910	8.742	PASS
Cente r	0.000	0.000	0.000	-2.121	-20.39 2	9.616	PASS
Positi on 1	0.250	0.075	0.215	-2.306	-20.12 4	8.725	PASS
Positi on 2	0.250	-0.075	0.215	-2.302	-20.33 5	8.833	PASS
Positi on 3	-0.250	-0.075	0.215	-2.354	-20.38 3	8.657	PASS
Positi on 4	-0.250	0.075	0.215	-2.312	-20.18 5	8.731	PASS
Positi on 5	-0.250	0.075	-0.215	-2.522	-19.98 3	7.923	PASS

Position 6	-0.250	-0.075	-0.215	-2.609	-20.053	7.685	PASS
Position 7	0.250	-0.075	-0.215	-2.387	-20.391	8.543	PASS
Position 8	0.250	0.075	-0.215	-2.418	-20.442	8.454	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L008
 Operator Name: Smith, Lane
 Date: 8/12/2009 Time: 10:03 AM
 Actuator Coil Resistance: 6.33 Ohms, PASS
 Ambient Temperature: 69.8 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.522
 Y Travel Limit (inches): 0.206
 Z Travel Limit (inches): 0.481

	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	2.192	20.204	9.217	PASS
Position 1	0.250	0.075	0.215	2.501	20.073	8.026	PASS

Positio n 2	0.250	-0.075	0.215	2.474	20.034	8.098	PASS
Positio n 3	-0.250	-0.075	0.215	2.546	19.958	7.839	PASS
Positio n 4	-0.250	0.075	0.215	2.504	19.974	7.977	PASS
Positio n 5	-0.250	0.075	-0.215	2.348	20.197	8.603	PASS
Positio n 6	-0.250	-0.075	-0.215	2.400	20.018	8.341	PASS
Positio n 7	0.250	-0.075	-0.215	2.478	20.043	8.090	PASS
Positio n 8	0.250	0.075	-0.215	2.362	19.817	8.388	PASS
Center	0.000	0.000	0.000	-2.005	-19.894	9.923	PASS
Positio n 1	0.250	0.075	0.215	-2.256	-19.929	8.832	PASS
Positio n 2	0.250	-0.075	0.215	-2.295	-19.974	8.703	PASS
Positio n 3	-0.250	-0.075	0.215	-2.253	-20.095	8.921	PASS
Positio n 4	-0.250	0.075	0.215	-2.245	-19.964	8.893	PASS
Positio n 5	-0.250	0.075	-0.215	-2.296	-20.018	8.719	PASS
Positio n 6	-0.250	-0.075	-0.215	-2.492	-19.975	8.017	PASS
Positio n 7	0.250	-0.075	-0.215	-2.390	-19.991	8.365	PASS
Positio n 8	0.250	0.075	-0.215	-2.367	-20.223	8.544	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L009

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 4:50 PM

Actuator Coil Resistance: 6.37 Ohms, PASS

Ambient Temperature: 72.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	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	2.083	20.276	9.735	PASS
Position 1	0.250	0.075	0.215	2.482	20.148	8.117	PASS
Position 2	0.250	-0.075	0.215	2.332	20.211	8.666	PASS
Position 3	-0.250	-0.075	0.215	2.272	20.341	8.954	PASS
Position 4	-0.250	0.075	0.215	2.408	20.084	8.340	PASS
Position 5	-0.250	0.075	-0.215	2.258	20.164	8.931	PASS
Position 6	-0.250	-0.075	-0.215	2.307	19.892	8.622	PASS
Position 7	0.250	-0.075	-0.215	2.307	19.896	8.622	PASS
Position 8	0.250	0.075	-0.215	2.299	20.205	8.789	PASS
Center	0.000	0.000	0.000	-2.093	-19.847	9.483	PASS
Position 1	0.250	0.075	0.215	-2.323	-20.072	8.640	PASS
Position 2	0.250	-0.075	0.215	-2.350	-20.076	8.542	PASS

Position 3	-0.250	-0.075	0.215	-2.350	-20.266	8.624	PASS
Position 4	-0.250	0.075	0.215	-2.353	-20.086	8.537	PASS
Position 5	-0.250	0.075	-0.215	-2.441	-19.853	8.133	PASS
Position 6	-0.250	-0.075	-0.215	-2.444	-19.899	8.143	PASS
Position 7	0.250	-0.075	-0.215	-2.437	-20.174	8.278	PASS
Position 8	0.250	0.075	-0.215	-2.455	-19.905	8.110	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L010

Operator Name: Hartmann, Donna

Date: 8/12/2009 Time: 5:58 PM

Actuator Coil Resistance: 6.37 Ohms, PASS

Ambient Temperature: 72.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.523

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.504

	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	2.175	20.204	9.288	PASS

Positio n 1	0.250	0.075	0.215	2.443	20.211	8.273	PASS
Positio n 2	0.250	-0.075	0.215	2.372	20.080	8.464	PASS
Positio n 3	-0.250	-0.075	0.215	2.543	21.216	8.341	PASS
Positio n 4	-0.250	0.075	0.215	2.421	20.193	8.340	PASS
Positio n 5	-0.250	0.075	-0.215	2.340	20.163	8.617	PASS
Positio n 6	-0.250	-0.075	-0.215	2.392	20.392	8.526	PASS
Positio n 7	0.250	-0.075	-0.215	2.379	19.971	8.396	PASS
Positio n 8	0.250	0.075	-0.215	2.367	20.169	8.521	PASS
Center	0.000	0.000	0.000	-2.114	-20.297	9.601	PASS
Positio n 1	0.250	0.075	0.215	-2.313	-19.951	8.627	PASS
Positio n 2	0.250	-0.075	0.215	-2.317	-20.205	8.721	PASS
Positio n 3	-0.250	-0.075	0.215	-2.304	-20.138	8.740	PASS
Positio n 4	-0.250	0.075	0.215	-2.337	-19.968	8.543	PASS
Positio n 5	-0.250	0.075	-0.215	-2.495	-20.077	8.048	PASS
Positio n 6	-0.250	-0.075	-0.215	-2.472	-20.048	8.111	PASS
Positio n 7	0.250	-0.075	-0.215	-2.431	-19.947	8.205	PASS
Positio n 8	0.250	0.075	-0.215	-2.378	-20.029	8.422	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L011

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 8:36 AM

Actuator Coil Resistance: 6.39 Ohms, PASS

Ambient Temperature: 68.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.517

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.475

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Center	0.000	0.000	0.000	2.150	20.101	9.349	PASS
Position 1	0.250	0.075	0.215	2.425	19.825	8.174	PASS
Position 2	0.250	-0.075	0.215	2.354	20.004	8.497	PASS
Position 3	-0.250	-0.075	0.215	2.356	20.094	8.528	PASS
Position 4	-0.250	0.075	0.215	2.423	19.948	8.231	PASS
Position 5	-0.250	0.075	-0.215	2.386	20.164	8.451	PASS
Position 6	-0.250	-0.075	-0.215	2.408	19.926	8.273	PASS

Position 7	0.250	-0.075	-0.215	2.454	19.944	8.126	PASS
Position 8	0.250	0.075	-0.215	2.396	20.220	8.439	PASS
Center	0.000	0.000	0.000	-2.119	-20.172	9.519	PASS
Position 1	0.250	0.075	0.215	-2.304	-20.223	8.777	PASS
Position 2	0.250	-0.075	0.215	-2.266	-20.016	8.834	PASS
Position 3	-0.250	-0.075	0.215	-2.254	-20.055	8.897	PASS
Position 4	-0.250	0.075	0.215	-2.312	-20.263	8.764	PASS
Position 5	-0.250	0.075	-0.215	-2.473	-19.883	8.039	PASS
Position 6	-0.250	-0.075	-0.215	-2.499	-19.866	7.950	PASS
Position 7	0.250	-0.075	-0.215	-2.452	-19.978	8.149	PASS
Position 8	0.250	0.075	-0.215	-2.343	-19.877	8.482	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L012

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 11:18 AM

Actuator Coil Resistance: 6.39 Ohms, PASS

Ambient Temperature: 70.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.523

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.506

	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	2.129	20.085	9.432	PASS
Position 1	0.250	0.075	0.215	2.483	20.046	8.073	PASS
Position 2	0.250	-0.075	0.215	2.388	20.028	8.385	PASS
Position 3	-0.250	-0.075	0.215	2.416	20.076	8.311	PASS
Position 4	-0.250	0.075	0.215	2.405	19.857	8.255	PASS
Position 5	-0.250	0.075	-0.215	2.300	20.015	8.704	PASS
Position 6	-0.250	-0.075	-0.215	2.400	20.210	8.420	PASS
Position 7	0.250	-0.075	-0.215	2.399	19.837	8.269	PASS
Position 8	0.250	0.075	-0.215	2.328	20.081	8.626	PASS
Center	0.000	0.000	0.000	-2.149	-20.159	9.381	PASS
Position 1	0.250	0.075	0.215	-2.373	-20.111	8.476	PASS
Position 2	0.250	-0.075	0.215	-2.337	-19.905	8.517	PASS
Position 3	-0.250	-0.075	0.215	-2.336	-20.075	8.592	PASS

Position 4	-0.250	0.075	0.215	-2.388	-20.210	8.462	PASS
Position 5	-0.250	0.075	-0.215	-2.433	-19.963	8.206	PASS
Position 6	-0.250	-0.075	-0.215	-2.458	-20.069	8.164	PASS
Position 7	0.250	-0.075	-0.215	-2.407	-19.898	8.267	PASS
Position 8	0.250	0.075	-0.215	-2.378	-20.010	8.413	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L013

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 2:20 PM

Actuator Coil Resistance: 6.42 Ohms, PASS

Ambient Temperature: 70.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.522

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.502

	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	2.131	20.219	9.487	PASS
Position 1	0.250	0.075	0.215	2.450	19.899	8.122	PASS

Positio n 2	0.250	-0.075	0.215	2.289	19.868	8.679	PASS
Positio n 3	-0.250	-0.075	0.215	2.358	19.982	8.475	PASS
Positio n 4	-0.250	0.075	0.215	2.291	19.825	8.655	PASS
Positio n 5	-0.250	0.075	-0.215	2.329	19.990	8.585	PASS
Positio n 6	-0.250	-0.075	-0.215	2.370	20.061	8.463	PASS
Positio n 7	0.250	-0.075	-0.215	2.371	20.084	8.471	PASS
Positio n 8	0.250	0.075	-0.215	2.337	20.072	8.588	PASS
Center	0.000	0.000	0.000	-2.142	-20.249	9.453	PASS
Positio n 1	0.250	0.075	0.215	-2.347	-20.136	8.581	PASS
Positio n 2	0.250	-0.075	0.215	-2.316	-19.823	8.560	PASS
Positio n 3	-0.250	-0.075	0.215	-2.314	-19.893	8.596	PASS
Positio n 4	-0.250	0.075	0.215	-2.361	-20.015	8.476	PASS
Positio n 5	-0.250	0.075	-0.215	-2.440	-20.002	8.196	PASS
Positio n 6	-0.250	-0.075	-0.215	-2.446	-19.909	8.140	PASS
Positio n 7	0.250	-0.075	-0.215	-2.422	-20.158	8.323	PASS
Positio n 8	0.250	0.075	-0.215	-2.427	-20.049	8.260	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L014

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 3:58 PM

Actuator Coil Resistance: 6.34 Ohms, PASS

Ambient Temperature: 72.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.517

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.505

	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	2.154	20.199	9.376	PASS
Position 1	0.250	0.075	0.215	2.446	20.075	8.207	PASS
Position 2	0.250	-0.075	0.215	2.353	19.927	8.468	PASS
Position 3	-0.250	-0.075	0.215	2.327	20.078	8.628	PASS
Position 4	-0.250	0.075	0.215	2.467	20.101	8.147	PASS
Position 5	-0.250	0.075	-0.215	2.316	20.011	8.640	PASS
Position 6	-0.250	-0.075	-0.215	2.337	19.844	8.492	PASS
Position 7	0.250	-0.075	-0.215	2.332	20.300	8.706	PASS
Position 8	0.250	0.075	-0.215	2.351	20.087	8.544	PASS
Center	0.000	0.000	0.000	-2.044	-19.845	9.708	PASS
Position 1	0.250	0.075	0.215	-2.277	-19.904	8.743	PASS
Position 2	0.250	-0.075	0.215	-2.300	-20.034	8.712	PASS

Position 3	-0.250	-0.075	0.215	-2.313	-20.120	8.699	PASS
Position 4	-0.250	0.075	0.215	-2.314	-19.931	8.614	PASS
Position 5	-0.250	0.075	-0.215	-2.413	-20.081	8.322	PASS
Position 6	-0.250	-0.075	-0.215	-2.503	-20.594	8.228	PASS
Position 7	0.250	-0.075	-0.215	-2.454	-19.998	8.150	PASS
Position 8	0.250	0.075	-0.215	-2.411	-19.906	8.256	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L015
Operator Name: Smith, Lane
Date: 8/11/2009 Time: 5:17 PM
Actuator Coil Resistance: 6.34 Ohms, PASS
Ambient Temperature: 72.4 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.531
Y Travel Limit (inches): 0.196
Z Travel Limit (inches): 0.481

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.196	19.903	9.063	PASS
Positi on 1	0.250	0.075	0.215	2.466	20.079	8.141	PASS
Positi on 2	0.250	-0.075	0.215	2.383	19.877	8.343	PASS
Positi on 3	-0.250	-0.075	0.215	2.327	20.038	8.612	PASS
Positi on 4	-0.250	0.075	0.215	2.418	19.993	8.267	PASS
Positi on 5	-0.250	0.075	-0.215	2.356	20.281	8.608	PASS
Positi on 6	-0.250	-0.075	-0.215	2.395	20.154	8.417	PASS
Positi on 7	0.250	-0.075	-0.215	2.374	20.174	8.498	PASS
Positi on 8	0.250	0.075	-0.215	2.351	20.291	8.632	PASS
Cente r	0.000	0.000	0.000	-2.123	-20.03 3	9.437	PASS
Positi on 1	0.250	0.075	0.215	-2.346	-20.10 0	8.569	PASS
Positi on 2	0.250	-0.075	0.215	-2.323	-20.00 1	8.611	PASS
Positi on 3	-0.250	-0.075	0.215	-2.318	-20.08 4	8.666	PASS
Positi on 4	-0.250	0.075	0.215	-2.379	-20.14 4	8.467	PASS
Positi on 5	-0.250	0.075	-0.215	-2.564	-20.05 8	7.823	PASS

Position 6	-0.250	-0.075	-0.215	-2.582	-19.857	7.691	PASS
Position 7	0.250	-0.075	-0.215	-2.458	-20.049	8.157	PASS
Position 8	0.250	0.075	-0.215	-2.415	-19.969	8.268	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L016
 Operator Name: Smith, Lane
 Date: 8/12/2009 Time: 1:06 PM
 Actuator Coil Resistance: 6.42 Ohms, PASS
 Ambient Temperature: 69.3 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.521
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.506

	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	2.106	20.286	9.633	PASS
Position 1	0.250	0.075	0.215	2.505	20.056	8.005	PASS

Positio n 2	0.250	-0.075	0.215	2.333	19.892	8.528	PASS
Positio n 3	-0.250	-0.075	0.215	2.347	19.934	8.492	PASS
Positio n 4	-0.250	0.075	0.215	2.451	20.012	8.163	PASS
Positio n 5	-0.250	0.075	-0.215	2.335	20.200	8.650	PASS
Positio n 6	-0.250	-0.075	-0.215	2.336	19.998	8.562	PASS
Positio n 7	0.250	-0.075	-0.215	2.358	20.021	8.492	PASS
Positio n 8	0.250	0.075	-0.215	2.178	19.824	9.104	PASS
Center	0.000	0.000	0.000	-2.102	-20.369	9.691	PASS
Positio n 1	0.250	0.075	0.215	-2.310	-19.999	8.658	PASS
Positio n 2	0.250	-0.075	0.215	-2.317	-20.224	8.730	PASS
Positio n 3	-0.250	-0.075	0.215	-2.303	-20.060	8.712	PASS
Positio n 4	-0.250	0.075	0.215	-2.295	-19.924	8.682	PASS
Positio n 5	-0.250	0.075	-0.215	-2.422	-20.169	8.328	PASS
Positio n 6	-0.250	-0.075	-0.215	-2.401	-19.855	8.270	PASS
Positio n 7	0.250	-0.075	-0.215	-2.413	-20.021	8.298	PASS
Positio n 8	0.250	0.075	-0.215	-2.354	-20.140	8.556	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L017

Operator Name: Smith, Lane

Date: 8/11/2009 Time: 3:54 PM

Actuator Coil Resistance: 6.33 Ohms, PASS

Ambient Temperature: 74.2 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.516

Y Travel Limit (inches): 0.196

Z Travel Limit (inches): 0.480

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.127	20.234	9.513	PASS
Positi on 1	0.250	0.075	0.215	2.522	20.235	8.024	PASS
Positi on 2	0.250	-0.075	0.215	2.316	20.422	8.818	PASS
Positi on 3	-0.250	-0.075	0.215	2.381	20.126	8.453	PASS
Positi on 4	-0.250	0.075	0.215	2.469	20.103	8.144	PASS
Positi on 5	-0.250	0.075	-0.215	2.400	20.088	8.368	PASS
Positi on 6	-0.250	-0.075	-0.215	2.355	19.915	8.458	PASS
Positi on 7	0.250	-0.075	-0.215	2.301	19.999	8.690	PASS

Position 8	0.250	0.075	-0.215	2.446	20.051	8.198	PASS
Center	0.000	0.000	0.000	-2.091	-19.929	9.531	PASS
Position 1	0.250	0.075	0.215	-2.309	-20.225	8.760	PASS
Position 2	0.250	-0.075	0.215	-2.262	-20.051	8.866	PASS
Position 3	-0.250	-0.075	0.215	-2.286	-20.111	8.798	PASS
Position 4	-0.250	0.075	0.215	-2.341	-20.245	8.648	PASS
Position 5	-0.250	0.075	-0.215	-2.317	-20.254	8.742	PASS
Position 6	-0.250	-0.075	-0.215	-2.257	-20.099	8.904	PASS
Position 7	0.250	-0.075	-0.215	-2.250	-20.052	8.910	PASS
Position 8	0.250	0.075	-0.215	-2.312	-20.217	8.743	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L018

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 5:07 PM

Actuator Coil Resistance: 6.39 Ohms, PASS

Ambient Temperature: 72.2 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.522

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	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	2.107	20.154	9.565	PASS
Position 1	0.250	0.075	0.215	2.309	20.032	8.675	PASS
Position 2	0.250	-0.075	0.215	2.348	20.217	8.611	PASS
Position 3	-0.250	-0.075	0.215	2.286	19.904	8.708	PASS
Position 4	-0.250	0.075	0.215	2.427	20.099	8.280	PASS
Position 5	-0.250	0.075	-0.215	2.368	20.003	8.447	PASS
Position 6	-0.250	-0.075	-0.215	2.359	20.147	8.540	PASS
Position 7	0.250	-0.075	-0.215	2.404	20.153	8.382	PASS
Position 8	0.250	0.075	-0.215	2.306	20.057	8.697	PASS
Center	0.000	0.000	0.000	-2.140	-20.209	9.445	PASS
Position 1	0.250	0.075	0.215	-2.361	-19.851	8.407	PASS
Position 2	0.250	-0.075	0.215	-2.354	-19.938	8.469	PASS
Position 3	-0.250	-0.075	0.215	-2.345	-20.142	8.588	PASS

Position 4	-0.250	0.075	0.215	-2.331	-19.976	8.570	PASS
Position 5	-0.250	0.075	-0.215	-2.467	-19.938	8.081	PASS
Position 6	-0.250	-0.075	-0.215	-2.505	-19.907	7.946	PASS
Position 7	0.250	-0.075	-0.215	-2.444	-20.020	8.192	PASS
Position 8	0.250	0.075	-0.215	-2.385	-19.848	8.322	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L019

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 1:44 PM

Actuator Coil Resistance: 6.37 Ohms, PASS

Ambient Temperature: 70.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.522

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.505

	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	2.123	20.219	9.526	PASS
Position 1	0.250	0.075	0.215	2.308	19.970	8.653	PASS

Positio n 2	0.250	-0.075	0.215	2.427	19.997	8.240	PASS
Positio n 3	-0.250	-0.075	0.215	2.413	20.016	8.296	PASS
Positio n 4	-0.250	0.075	0.215	2.310	20.214	8.752	PASS
Positio n 5	-0.250	0.075	-0.215	2.326	19.984	8.593	PASS
Positio n 6	-0.250	-0.075	-0.215	2.277	19.885	8.733	PASS
Positio n 7	0.250	-0.075	-0.215	2.398	19.911	8.302	PASS
Positio n 8	0.250	0.075	-0.215	2.325	19.999	8.603	PASS
Center	0.000	0.000	0.000	-2.162	-20.431	9.452	PASS
Positio n 1	0.250	0.075	0.215	-2.352	-19.871	8.448	PASS
Positio n 2	0.250	-0.075	0.215	-2.324	-20.016	8.612	PASS
Positio n 3	-0.250	-0.075	0.215	-2.343	-20.196	8.618	PASS
Positio n 4	-0.250	0.075	0.215	-2.336	-20.130	8.616	PASS
Positio n 5	-0.250	0.075	-0.215	-2.411	-20.049	8.317	PASS
Positio n 6	-0.250	-0.075	-0.215	-2.506	-19.907	7.944	PASS
Positio n 7	0.250	-0.075	-0.215	-2.426	-20.023	8.255	PASS
Positio n 8	0.250	0.075	-0.215	-2.390	-20.194	8.450	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L020

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 10:32 AM

Actuator Coil Resistance: 6.34 Ohms, PASS

Ambient Temperature: 70.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.521

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.508

	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	2.155	20.235	9.391	PASS
Position 1	0.250	0.075	0.215	2.496	19.844	7.951	PASS
Position 2	0.250	-0.075	0.215	2.423	19.931	8.226	PASS
Position 3	-0.250	-0.075	0.215	2.372	19.943	8.406	PASS
Position 4	-0.250	0.075	0.215	2.506	19.897	7.940	PASS
Position 5	-0.250	0.075	-0.215	2.455	20.077	8.178	PASS
Position 6	-0.250	-0.075	-0.215	2.407	20.203	8.395	PASS
Position 7	0.250	-0.075	-0.215	2.394	20.239	8.456	PASS
Position 8	0.250	0.075	-0.215	2.301	20.110	8.741	PASS
Center	0.000	0.000	0.000	-2.031	-19.845	9.769	PASS
Position 1	0.250	0.075	0.215	-2.302	-20.095	8.730	PASS
Position 2	0.250	-0.075	0.215	-2.279	-20.138	8.838	PASS

Position 3	-0.250	-0.075	0.215	-2.277	-19.835	8.711	PASS
Position 4	-0.250	0.075	0.215	-2.315	-20.162	8.709	PASS
Position 5	-0.250	0.075	-0.215	-2.541	-19.917	7.837	PASS
Position 6	-0.250	-0.075	-0.215	-2.467	-20.291	8.224	PASS
Position 7	0.250	-0.075	-0.215	-2.492	-19.975	8.017	PASS
Position 8	0.250	0.075	-0.215	-2.358	-19.958	8.464	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L021

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 11:38 AM

Actuator Coil Resistance: 6.36 Ohms, PASS

Ambient Temperature: 70.4 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.523

Y Travel Limit (inches): 0.206

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	2.146	20.332	9.474	PASS

Positio n 1	0.250	0.075	0.215	2.442	19.910	8.153	PASS
Positio n 2	0.250	-0.075	0.215	2.366	19.959	8.436	PASS
Positio n 3	-0.250	-0.075	0.215	2.339	20.020	8.559	PASS
Positio n 4	-0.250	0.075	0.215	2.358	20.183	8.558	PASS
Positio n 5	-0.250	0.075	-0.215	2.366	20.174	8.528	PASS
Positio n 6	-0.250	-0.075	-0.215	2.338	19.897	8.511	PASS
Positio n 7	0.250	-0.075	-0.215	2.283	19.901	8.717	PASS
Positio n 8	0.250	0.075	-0.215	2.347	20.214	8.612	PASS
Center	0.000	0.000	0.000	-2.075	-19.894	9.587	PASS
Positio n 1	0.250	0.075	0.215	-2.335	-20.164	8.637	PASS
Positio n 2	0.250	-0.075	0.215	-2.314	-20.102	8.688	PASS
Positio n 3	-0.250	-0.075	0.215	-2.281	-19.955	8.750	PASS
Positio n 4	-0.250	0.075	0.215	-2.320	-20.067	8.649	PASS
Positio n 5	-0.250	0.075	-0.215	-2.430	-19.865	8.175	PASS
Positio n 6	-0.250	-0.075	-0.215	-2.496	-19.850	7.952	PASS
Positio n 7	0.250	-0.075	-0.215	-2.484	-20.105	8.093	PASS
Positio n 8	0.250	0.075	-0.215	-2.370	-19.970	8.427	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L022
Operator Name: Smith, Lane
Date: 8/12/2009 Time: 9:45 AM
Actuator Coil Resistance: 6.37 Ohms, PASS
Ambient Temperature: 69.5 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.521
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.481

	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	2.161	19.967	9.238	PASS
Position 1	0.250	0.075	0.215	2.479	19.986	8.063	PASS
Position 2	0.250	-0.075	0.215	2.340	19.992	8.543	PASS
Position 3	-0.250	-0.075	0.215	2.411	20.088	8.331	PASS
Position 4	-0.250	0.075	0.215	2.415	19.909	8.245	PASS
Position 5	-0.250	0.075	-0.215	2.339	19.892	8.504	PASS
Position 6	-0.250	-0.075	-0.215	2.351	20.003	8.510	PASS
Position 7	0.250	-0.075	-0.215	2.342	20.005	8.543	PASS
Position 8	0.250	0.075	-0.215	2.313	19.907	8.607	PASS
Center	0.000	0.000	0.000	-2.132	-20.063	9.412	PASS
Position 1	0.250	0.075	0.215	-2.395	-20.126	8.403	PASS

Position 2	0.250	-0.075	0.215	-2.305	-19.933	8.647	PASS
Position 3	-0.250	-0.075	0.215	-2.349	-20.079	8.549	PASS
Position 4	-0.250	0.075	0.215	-2.367	-19.826	8.374	PASS
Position 5	-0.250	0.075	-0.215	-2.532	-20.027	7.908	PASS
Position 6	-0.250	-0.075	-0.215	-2.622	-19.817	7.558	PASS
Position 7	0.250	-0.075	-0.215	-2.388	-19.832	8.306	PASS
Position 8	0.250	0.075	-0.215	-2.381	-19.894	8.356	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L023

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 9:26 AM

Actuator Coil Resistance: 6.42 Ohms, PASS

Ambient Temperature: 68.8 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.518

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.478

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/ FAIL
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Center	0.000	0.000	0.000	2.150	20.232	9.408	PASS
Positio n 1	0.250	0.075	0.215	2.434	19.844	8.153	PASS
Positio n 2	0.250	-0.075	0.215	2.362	19.821	8.393	PASS
Positio n 3	-0.250	-0.075	0.215	2.342	19.827	8.465	PASS
Positio n 4	-0.250	0.075	0.215	2.485	20.035	8.063	PASS
Positio n 5	-0.250	0.075	-0.215	2.398	20.104	8.382	PASS
Positio n 6	-0.250	-0.075	-0.215	2.317	19.895	8.586	PASS
Positio n 7	0.250	-0.075	-0.215	2.386	19.919	8.349	PASS
Positio n 8	0.250	0.075	-0.215	2.356	20.162	8.558	PASS
Center	0.000	0.000	0.000	-2.112	-20.252	9.591	PASS
Positio n 1	0.250	0.075	0.215	-2.361	-20.116	8.521	PASS
Positio n 2	0.250	-0.075	0.215	-2.297	-20.218	8.801	PASS
Positio n 3	-0.250	-0.075	0.215	-2.314	-20.019	8.650	PASS
Positio n 4	-0.250	0.075	0.215	-2.314	-19.874	8.590	PASS
Positio n 5	-0.250	0.075	-0.215	-2.520	-19.928	7.906	PASS
Positio n 6	-0.250	-0.075	-0.215	-2.475	-19.836	8.016	PASS
Positio n 7	0.250	-0.075	-0.215	-2.377	-19.891	8.367	PASS
Positio n 8	0.250	0.075	-0.215	-2.457	-19.807	8.061	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L024

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 7:43 AM

Actuator Coil Resistance: 6.41 Ohms, PASS

Ambient Temperature: 68.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.516

Y Travel Limit (inches): 0.215

Z Travel Limit (inches): 0.479

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Center	0.000	0.000	0.000	2.159	20.130	9.322	PASS
Position 1	0.250	0.075	0.215	2.392	19.937	8.334	PASS
Position 2	0.250	-0.075	0.215	2.372	20.286	8.550	PASS
Position 3	-0.250	-0.075	0.215	2.509	19.888	7.928	PASS
Position 4	-0.250	0.075	0.215	2.417	20.234	8.371	PASS
Position 5	-0.250	0.075	-0.215	2.391	20.207	8.451	PASS

Position 6	-0.250	-0.075	-0.215	2.354	20.085	8.533	PASS
Position 7	0.250	-0.075	-0.215	2.458	20.107	8.181	PASS
Position 8	0.250	0.075	-0.215	2.416	20.253	8.383	PASS
Center	0.000	0.000	0.000	-2.130	-20.247	9.504	PASS
Position 1	0.250	0.075	0.215	-2.317	-20.138	8.690	PASS
Position 2	0.250	-0.075	0.215	-2.268	-20.055	8.842	PASS
Position 3	-0.250	-0.075	0.215	-2.294	-20.096	8.759	PASS
Position 4	-0.250	0.075	0.215	-2.311	-20.186	8.736	PASS
Position 5	-0.250	0.075	-0.215	-2.512	-19.814	7.889	PASS
Position 6	-0.250	-0.075	-0.215	-2.470	-19.939	8.074	PASS
Position 7	0.250	-0.075	-0.215	-2.370	-19.921	8.405	PASS
Position 8	0.250	0.075	-0.215	-2.426	-20.084	8.279	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L025
 Operator Name: Smith, Lane
 Date: 8/12/2009 Time: 10:56 AM
 Actuator Coil Resistance: 6.39 Ohms, PASS
 Ambient Temperature: 71.3 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.523
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.503

	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	2.208	20.339	9.210	PASS
Position 1	0.250	0.075	0.215	2.371	19.828	8.363	PASS
Position 2	0.250	-0.075	0.215	2.252	20.076	8.914	PASS
Position 3	-0.250	-0.075	0.215	2.275	19.910	8.750	PASS
Position 4	-0.250	0.075	0.215	2.415	20.015	8.286	PASS
Position 5	-0.250	0.075	-0.215	2.312	20.045	8.671	PASS
Position 6	-0.250	-0.075	-0.215	2.407	20.291	8.429	PASS
Position 7	0.250	-0.075	-0.215	2.383	19.922	8.359	PASS
Position 8	0.250	0.075	-0.215	2.316	20.105	8.681	PASS
Center	0.000	0.000	0.000	-2.093	-19.925	9.521	PASS
Position 1	0.250	0.075	0.215	-2.323	-20.221	8.705	PASS
Position 2	0.250	-0.075	0.215	-2.288	-20.047	8.763	PASS

Position 3	-0.250	-0.075	0.215	-2.291	-19.907	8.689	PASS
Position 4	-0.250	0.075	0.215	-2.338	-20.152	8.618	PASS
Position 5	-0.250	0.075	-0.215	-2.505	-19.924	7.954	PASS
Position 6	-0.250	-0.075	-0.215	-2.494	-19.832	7.952	PASS
Position 7	0.250	-0.075	-0.215	-2.398	-20.187	8.420	PASS
Position 8	0.250	0.075	-0.215	-2.482	-20.078	8.091	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L026
Operator Name: Smith, Lane
Date: 8/13/2009 Time: 3:18 PM
Actuator Coil Resistance: 6.45 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.518
Y Travel Limit (inches): 0.207
Z Travel Limit (inches): 0.504

	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	2.118	20.252	9.560	PASS

Positio n 1	0.250	0.075	0.215	2.457	19.842	8.074	PASS
Positio n 2	0.250	-0.075	0.215	2.443	20.049	8.205	PASS
Positio n 3	-0.250	-0.075	0.215	2.474	20.095	8.122	PASS
Positio n 4	-0.250	0.075	0.215	2.411	20.145	8.354	PASS
Positio n 5	-0.250	0.075	-0.215	2.273	20.152	8.864	PASS
Positio n 6	-0.250	-0.075	-0.215	2.309	19.954	8.641	PASS
Positio n 7	0.250	-0.075	-0.215	2.362	20.069	8.495	PASS
Positio n 8	0.250	0.075	-0.215	2.283	20.224	8.859	PASS
Center	0.000	0.000	0.000	-2.094	-19.924	9.514	PASS
Positio n 1	0.250	0.075	0.215	-2.347	-19.855	8.460	PASS
Positio n 2	0.250	-0.075	0.215	-2.332	-20.110	8.622	PASS
Positio n 3	-0.250	-0.075	0.215	-2.363	-20.019	8.470	PASS
Positio n 4	-0.250	0.075	0.215	-2.361	-20.080	8.504	PASS
Positio n 5	-0.250	0.075	-0.215	-2.353	-19.878	8.449	PASS
Positio n 6	-0.250	-0.075	-0.215	-2.412	-20.182	8.367	PASS
Positio n 7	0.250	-0.075	-0.215	-2.384	-20.291	8.511	PASS
Positio n 8	0.250	0.075	-0.215	-2.442	-20.217	8.278	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L027
Operator Name: Smith, Lane
Date: 8/12/2009 Time: 1:24 PM
Actuator Coil Resistance: 6.41 Ohms, PASS
Ambient Temperature: 69.5 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.525
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.505

	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	2.147	20.189	9.404	PASS
Position 1	0.250	0.075	0.215	2.420	19.995	8.261	PASS
Position 2	0.250	-0.075	0.215	2.333	20.145	8.635	PASS
Position 3	-0.250	-0.075	0.215	2.442	20.032	8.203	PASS
Position 4	-0.250	0.075	0.215	2.370	20.062	8.466	PASS
Position 5	-0.250	0.075	-0.215	2.320	20.171	8.696	PASS
Position 6	-0.250	-0.075	-0.215	2.296	20.028	8.724	PASS
Position 7	0.250	-0.075	-0.215	2.333	20.044	8.593	PASS
Position 8	0.250	0.075	-0.215	2.317	20.218	8.728	PASS
Center	0.000	0.000	0.000	-2.115	-19.905	9.410	PASS
Position 1	0.250	0.075	0.215	-2.392	-20.187	8.440	PASS

Position 2	0.250	-0.075	0.215	-2.340	-20.056	8.573	PASS
Position 3	-0.250	-0.075	0.215	-2.282	-19.838	8.693	PASS
Position 4	-0.250	0.075	0.215	-2.350	-19.935	8.481	PASS
Position 5	-0.250	0.075	-0.215	-2.414	-20.002	8.284	PASS
Position 6	-0.250	-0.075	-0.215	-2.453	-19.997	8.151	PASS
Position 7	0.250	-0.075	-0.215	-2.396	-19.916	8.312	PASS
Position 8	0.250	0.075	-0.215	-2.400	-20.068	8.363	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L028

Operator Name: Smith, Lane

Date: 8/11/2009 Time: 2:03 PM

Actuator Coil Resistance: 6.39 Ohms, PASS

Ambient Temperature: 75.4 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.521

Y Travel Limit (inches): 0.191

Z Travel Limit (inches): 0.480

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.181	20.461	9.383	PASS
Positi on 1	0.250	0.075	0.220	2.460	20.242	8.227	PASS
Positi on 2	0.250	-0.075	0.220	2.312	19.855	8.586	PASS
Positi on 3	-0.250	-0.075	0.220	2.367	19.914	8.411	PASS
Positi on 4	-0.250	0.075	0.220	2.493	20.407	8.186	PASS
Positi on 5	-0.250	0.075	-0.220	2.396	20.078	8.379	PASS
Positi on 6	-0.250	-0.075	-0.220	2.364	19.966	8.446	PASS
Positi on 7	0.250	-0.075	-0.220	2.360	20.015	8.480	PASS
Positi on 8	0.250	0.075	-0.220	2.382	20.180	8.473	PASS
Cente r	0.000	0.000	0.000	-2.113	-20.060	9.494	PASS
Positi on 1	0.250	0.075	0.220	-2.416	-20.578	8.518	PASS
Positi on 2	0.250	-0.075	0.220	-2.308	-19.937	8.639	PASS
Positi on 3	-0.250	-0.075	0.220	-2.302	-20.014	8.692	PASS
Positi on 4	-0.250	0.075	0.220	-2.347	-20.634	8.792	PASS
Positi on 5	-0.250	0.075	-0.220	-2.674	-20.015	7.486	PASS

Position 6	-0.250	-0.075	-0.220	-2.794	-19.919	7.128	PASS
Position 7	0.250	-0.075	-0.220	-2.498	-20.323	8.135	PASS
Position 8	0.250	0.075	-0.220	-2.583	-19.985	7.736	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L029
 Operator Name: Smith, Lane
 Date: 8/11/2009 Time: 4:56 PM
 Actuator Coil Resistance: 6.35 Ohms, PASS
 Ambient Temperature: 72.5 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.527
 Y Travel Limit (inches): 0.193
 Z Travel Limit (inches): 0.483

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.104	20.187	9.592	PASS
Positi on 1	0.250	0.075	0.215	2.517	19.950	7.925	PASS
Positi on 2	0.250	-0.075	0.215	2.366	20.510	8.667	PASS
Positi on 3	-0.250	-0.075	0.215	2.475	20.246	8.181	PASS
Positi on 4	-0.250	0.075	0.215	2.436	20.211	8.295	PASS
Positi on 5	-0.250	0.075	-0.215	2.287	20.091	8.784	PASS
Positi on 6	-0.250	-0.075	-0.215	2.301	19.958	8.674	PASS
Positi on 7	0.250	-0.075	-0.215	2.265	19.967	8.816	PASS
Positi on 8	0.250	0.075	-0.215	2.298	20.035	8.718	PASS
Cente r	0.000	0.000	0.000	-2.112	-19.83 8	9.393	PASS
Positi on 1	0.250	0.075	0.215	-2.344	-20.01 6	8.541	PASS
Positi on 2	0.250	-0.075	0.215	-2.337	-20.18 9	8.638	PASS
Positi on 3	-0.250	-0.075	0.215	-2.355	-20.21 7	8.586	PASS
Positi on 4	-0.250	0.075	0.215	-2.355	-20.03 0	8.504	PASS
Positi on 5	-0.250	0.075	-0.215	-2.596	-20.04 1	7.720	PASS

Position 6	-0.250	-0.075	-0.215	-2.441	-19.904	8.154	PASS
Position 7	0.250	-0.075	-0.215	-2.439	-20.153	8.262	PASS
Position 8	0.250	0.075	-0.215	-2.521	-19.907	7.895	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L030
 Operator Name: Smith, Lane
 Date: 8/12/2009 Time: 8:58 AM
 Actuator Coil Resistance: 6.34 Ohms, PASS
 Ambient Temperature: 68.6 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.524
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.479

	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	2.181	20.271	9.296	PASS
Position 1	0.250	0.075	0.215	2.558	19.987	7.814	PASS

Positio n 2	0.250	-0.075	0.215	2.340	19.848	8.484	PASS
Positio n 3	-0.250	-0.075	0.215	2.402	20.010	8.329	PASS
Positio n 4	-0.250	0.075	0.215	2.316	19.913	8.599	PASS
Positio n 5	-0.250	0.075	-0.215	2.325	20.142	8.662	PASS
Positio n 6	-0.250	-0.075	-0.215	2.346	19.870	8.470	PASS
Positio n 7	0.250	-0.075	-0.215	2.396	20.309	8.475	PASS
Positio n 8	0.250	0.075	-0.215	2.223	20.199	9.086	PASS
Center	0.000	0.000	0.000	-2.029	-19.866	9.793	PASS
Positio n 1	0.250	0.075	0.215	-2.341	-19.922	8.509	PASS
Positio n 2	0.250	-0.075	0.215	-2.303	-20.070	8.716	PASS
Positio n 3	-0.250	-0.075	0.215	-2.256	-19.833	8.793	PASS
Positio n 4	-0.250	0.075	0.215	-2.305	-20.081	8.711	PASS
Positio n 5	-0.250	0.075	-0.215	-2.505	-19.859	7.929	PASS
Positio n 6	-0.250	-0.075	-0.215	-2.491	-19.845	7.966	PASS
Positio n 7	0.250	-0.075	-0.215	-2.451	-19.997	8.158	PASS
Positio n 8	0.250	0.075	-0.215	-2.508	-19.840	7.910	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L031

Operator Name: Smith, Lane

Date: 8/12/2009 Time: 2:35 PM

Actuator Coil Resistance: 6.39 Ohms, PASS

Ambient Temperature: 71.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.524

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.502

	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	2.027	20.111	9.920	PASS
Position 1	0.250	0.075	0.215	2.392	20.024	8.371	PASS
Position 2	0.250	-0.075	0.215	2.334	20.072	8.600	PASS
Position 3	-0.250	-0.075	0.215	2.322	20.135	8.671	PASS
Position 4	-0.250	0.075	0.215	2.339	20.173	8.624	PASS
Position 5	-0.250	0.075	-0.215	2.302	20.032	8.704	PASS
Position 6	-0.250	-0.075	-0.215	2.269	20.101	8.858	PASS
Position 7	0.250	-0.075	-0.215	2.308	20.114	8.715	PASS
Position 8	0.250	0.075	-0.215	2.305	20.087	8.716	PASS
Center	0.000	0.000	0.000	-2.112	-20.162	9.545	PASS
Position 1	0.250	0.075	0.215	-2.349	-19.909	8.475	PASS
Position 2	0.250	-0.075	0.215	-2.331	-20.102	8.625	PASS

Position 3	-0.250	-0.075	0.215	-2.334	-20.134	8.627	PASS
Position 4	-0.250	0.075	0.215	-2.336	-19.825	8.486	PASS
Position 5	-0.250	0.075	-0.215	-2.443	-19.926	8.158	PASS
Position 6	-0.250	-0.075	-0.215	-2.518	-20.013	7.949	PASS
Position 7	0.250	-0.075	-0.215	-2.403	-20.095	8.363	PASS
Position 8	0.250	0.075	-0.215	-2.440	-19.902	8.158	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L032

Operator Name: Gordon, Matt

Date: 9/24/2009 Time: 9:18 AM

Actuator Coil Resistance: 6.31 Ohms, PASS

Ambient Temperature: 70.2 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.503

	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	2.214	20.001	9.035	PASS

Positio n 1	0.250	0.080	0.217	2.475	20.148	8.139	PASS
Positio n 2	0.250	-0.080	0.217	2.494	20.145	8.077	PASS
Positio n 3	-0.250	-0.080	0.217	2.527	19.896	7.873	PASS
Positio n 4	-0.250	0.080	0.217	2.597	20.150	7.758	PASS
Positio n 5	-0.250	0.080	-0.217	2.444	20.339	8.321	PASS
Positio n 6	-0.250	-0.080	-0.217	2.396	20.024	8.358	PASS
Positio n 7	0.250	-0.080	-0.217	2.441	19.996	8.191	PASS
Positio n 8	0.250	0.080	-0.217	2.406	20.350	8.460	PASS
Center	0.000	0.000	0.000	-2.040	-20.150	9.877	PASS
Positio n 1	0.250	0.080	0.217	-2.285	-20.107	8.799	PASS
Positio n 2	0.250	-0.080	0.217	-2.287	-20.249	8.854	PASS
Positio n 3	-0.250	-0.080	0.217	-2.289	-20.130	8.795	PASS
Positio n 4	-0.250	0.080	0.217	-2.289	-20.042	8.755	PASS
Positio n 5	-0.250	0.080	-0.217	-2.292	-20.057	8.751	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.306	-20.444	8.866	PASS
Positio n 7	0.250	-0.080	-0.217	-2.301	-20.347	8.843	PASS
Positio n 8	0.250	0.080	-0.217	-2.342	-20.142	8.600	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L033
Operator Name: Gordon, Matt
Date: 9/23/2009 Time: 2:41 PM
Actuator Coil Resistance: 6.42 Ohms, PASS
Ambient Temperature: 74.7 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.523
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.506

	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	2.109	20.361	9.655	PASS
Position 1	0.250	0.080	0.217	2.434	20.057	8.239	PASS
Position 2	0.250	-0.080	0.217	2.443	20.255	8.292	PASS
Position 3	-0.250	-0.080	0.217	2.426	20.355	8.389	PASS
Position 4	-0.250	0.080	0.217	2.349	20.519	8.736	PASS
Position 5	-0.250	0.080	-0.217	2.324	20.475	8.812	PASS
Position 6	-0.250	-0.080	-0.217	2.335	20.522	8.788	PASS
Position 7	0.250	-0.080	-0.217	2.358	20.523	8.705	PASS
Position 8	0.250	0.080	-0.217	2.316	20.494	8.850	PASS
Center	0.000	0.000	0.000	-2.106	-20.030	9.513	PASS
Position 1	0.250	0.080	0.217	-2.338	-20.328	8.696	PASS

Position 2	0.250	-0.080	0.217	-2.347	-20.303	8.650	PASS
Position 3	-0.250	-0.080	0.217	-2.350	-20.265	8.624	PASS
Position 4	-0.250	0.080	0.217	-2.322	-20.179	8.692	PASS
Position 5	-0.250	0.080	-0.217	-2.401	-20.611	8.585	PASS
Position 6	-0.250	-0.080	-0.217	-2.342	-20.027	8.550	PASS
Position 7	0.250	-0.080	-0.217	-2.344	-20.234	8.632	PASS
Position 8	0.250	0.080	-0.217	-2.501	-20.248	8.096	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L034

Operator Name: Hartmann Donna

Date: 9/23/2009 Time: 10:57 AM

Actuator Coil Resistance: 6.43 Ohms, PASS

Ambient Temperature: 72.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.505

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/ FAIL
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Center	0.000	0.000	0.000	2.072	20.090	9.698	PASS
Positio n 1	0.250	0.080	0.217	2.335	20.034	8.580	PASS
Positio n 2	0.250	-0.080	0.217	2.513	20.124	8.009	PASS
Positio n 3	-0.250	-0.080	0.217	2.178	20.620	9.469	PASS
Positio n 4	-0.250	0.080	0.217	2.413	20.374	8.442	PASS
Positio n 5	-0.250	0.080	-0.217	2.398	20.110	8.386	PASS
Positio n 6	-0.250	-0.080	-0.217	2.303	20.175	8.762	PASS
Positio n 7	0.250	-0.080	-0.217	2.333	20.159	8.641	PASS
Positio n 8	0.250	0.080	-0.217	2.320	20.140	8.680	PASS
Center	0.000	0.000	0.000	-2.150	-20.227	9.408	PASS
Positio n 1	0.250	0.080	0.217	-2.334	-20.030	8.584	PASS
Positio n 2	0.250	-0.080	0.217	-2.331	-20.137	8.638	PASS
Positio n 3	-0.250	-0.080	0.217	-2.335	-20.045	8.583	PASS
Positio n 4	-0.250	0.080	0.217	-2.374	-20.425	8.603	PASS
Positio n 5	-0.250	0.080	-0.217	-2.445	-20.281	8.296	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.341	-20.642	8.816	PASS
Positio n 7	0.250	-0.080	-0.217	-2.372	-20.654	8.709	PASS
Positio n 8	0.250	0.080	-0.217	-2.435	-20.284	8.330	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L035
Operator Name: Gordon, Matt
Date: 9/24/2009 Time: 9:01 AM
Actuator Coil Resistance: 6.29 Ohms, PASS
Ambient Temperature: 69.7 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.523
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.504

	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	2.103	20.059	9.539	PASS
Position 1	0.250	0.080	0.217	2.340	20.034	8.562	PASS
Position 2	0.250	-0.080	0.217	2.384	20.095	8.430	PASS
Position 3	-0.250	-0.080	0.217	2.509	20.044	7.990	PASS
Position 4	-0.250	0.080	0.217	2.396	20.109	8.391	PASS
Position 5	-0.250	0.080	-0.217	2.339	20.075	8.584	PASS
Position 6	-0.250	-0.080	-0.217	2.321	20.181	8.695	PASS
Position 7	0.250	-0.080	-0.217	2.337	20.151	8.621	PASS
Position 8	0.250	0.080	-0.217	2.290	20.072	8.766	PASS
Center	0.000	0.000	0.000	-2.134	-20.173	9.454	PASS

Position 1	0.250	0.080	0.217	-2.338	-20.017	8.561	PASS
Position 2	0.250	-0.080	0.217	-2.391	-19.997	8.364	PASS
Position 3	-0.250	-0.080	0.217	-2.376	-20.264	8.529	PASS
Position 4	-0.250	0.080	0.217	-2.334	-19.986	8.563	PASS
Position 5	-0.250	0.080	-0.217	-2.437	-20.120	8.258	PASS
Position 6	-0.250	-0.080	-0.217	-2.400	-20.380	8.492	PASS
Position 7	0.250	-0.080	-0.217	-2.434	-20.173	8.288	PASS
Position 8	0.250	0.080	-0.217	-2.434	-20.268	8.329	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L036
Operator Name: Gordon, Matt
Date: 9/23/2009 Time: 5:54 PM
Actuator Coil Resistance: 6.33 Ohms, PASS
Ambient Temperature: 71.8 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.531
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.508

	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	2.096	20.022	9.555	PASS
Position 1	0.250	0.080	0.217	2.386	20.104	8.425	PASS
Position 2	0.250	-0.080	0.217	2.440	20.071	8.227	PASS
Position 3	-0.250	-0.080	0.217	2.361	20.063	8.497	PASS
Position 4	-0.250	0.080	0.217	2.434	20.297	8.340	PASS
Position 5	-0.250	0.080	-0.217	2.288	20.483	8.951	PASS
Position 6	-0.250	-0.080	-0.217	2.334	20.419	8.750	PASS
Position 7	0.250	-0.080	-0.217	2.321	20.411	8.795	PASS
Position 8	0.250	0.080	-0.217	2.369	20.462	8.639	PASS
Center	0.000	0.000	0.000	-2.121	-20.240	9.542	PASS
Position 1	0.250	0.080	0.217	-2.379	-20.319	8.540	PASS
Position 2	0.250	-0.080	0.217	-2.390	-20.326	8.506	PASS
Position 3	-0.250	-0.080	0.217	-2.338	-19.975	8.545	PASS
Position 4	-0.250	0.080	0.217	-2.368	-20.283	8.565	PASS
Position 5	-0.250	0.080	-0.217	-2.384	-20.151	8.451	PASS
Position 6	-0.250	-0.080	-0.217	-2.388	-20.221	8.468	PASS
Position 7	0.250	-0.080	-0.217	-2.357	-20.305	8.614	PASS
Position 8	0.250	0.080	-0.217	-2.382	-20.123	8.448	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L037
 Operator Name: Hartmann Donna
 Date: 9/23/2009 Time: 8:45 AM
 Actuator Coil Resistance: 6.38 Ohms, PASS
 Ambient Temperature: 72.0 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.526
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.502

	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	2.105	20.241	9.617	PASS
Position 1	0.250	0.080	0.217	2.477	20.388	8.230	PASS
Position 2	0.250	-0.080	0.217	2.459	20.241	8.231	PASS
Position 3	-0.250	-0.080	0.217	2.477	20.199	8.154	PASS
Position 4	-0.250	0.080	0.217	2.390	20.154	8.434	PASS
Position 5	-0.250	0.080	-0.217	2.402	20.391	8.488	PASS
Position 6	-0.250	-0.080	-0.217	2.293	20.115	8.774	PASS
Position 7	0.250	-0.080	-0.217	2.332	20.137	8.636	PASS
Position 8	0.250	0.080	-0.217	2.343	20.390	8.701	PASS

Center	0.000	0.000	0.000	-2.136	-20.393	9.548	PASS
Position 1	0.250	0.080	0.217	-2.357	-20.432	8.668	PASS
Position 2	0.250	-0.080	0.217	-2.444	-20.401	8.347	PASS
Position 3	-0.250	-0.080	0.217	-2.432	-20.538	8.444	PASS
Position 4	-0.250	0.080	0.217	-2.393	-20.430	8.538	PASS
Position 5	-0.250	0.080	-0.217	-2.428	-20.246	8.337	PASS
Position 6	-0.250	-0.080	-0.217	-2.470	-20.062	8.121	PASS
Position 7	0.250	-0.080	-0.217	-2.384	-20.315	8.521	PASS
Position 8	0.250	0.080	-0.217	-2.465	-20.303	8.236	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L038
Operator Name: Hartmann Donna
Date: 9/23/2009 Time: 9:39 AM
Actuator Coil Resistance: 6.37 Ohms, PASS
Ambient Temperature: 72.9 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.524
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.505

	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	2.096	20.307	9.688	PASS
Positio n 1	0.250	0.080	0.217	2.309	20.222	8.759	PASS
Positio n 2	0.250	-0.080	0.217	2.265	20.333	8.978	PASS
Positio n 3	-0.250	-0.080	0.217	2.306	20.318	8.813	PASS
Positio n 4	-0.250	0.080	0.217	2.318	20.014	8.633	PASS
Positio n 5	-0.250	0.080	-0.217	2.242	20.217	9.016	PASS
Positio n 6	-0.250	-0.080	-0.217	2.124	20.416	9.611	PASS
Positio n 7	0.250	-0.080	-0.217	2.285	20.413	8.932	PASS
Positio n 8	0.250	0.080	-0.217	2.168	20.050	9.250	PASS
Center	0.000	0.000	0.000	-2.220	-20.462	9.218	PASS
Positio n 1	0.250	0.080	0.217	-2.416	-20.213	8.368	PASS
Positio n 2	0.250	-0.080	0.217	-2.444	-20.357	8.329	PASS
Positio n 3	-0.250	-0.080	0.217	-2.461	-20.379	8.280	PASS
Positio n 4	-0.250	0.080	0.217	-2.427	-20.074	8.271	PASS
Positio n 5	-0.250	0.080	-0.217	-2.470	-20.592	8.338	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.431	-20.567	8.461	PASS
Positio n 7	0.250	-0.080	-0.217	-2.461	-20.427	8.300	PASS
Positio n 8	0.250	0.080	-0.217	-2.474	-20.023	8.092	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L039
Operator Name: Gordon, Matt
Date: 9/24/2009 Time: 5:00 PM
Actuator Coil Resistance: 6.33 Ohms, PASS
Ambient Temperature: 75.8 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.525
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.506

	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	2.106	20.025	9.511	PASS
Position 1	0.250	0.080	0.217	2.427	20.278	8.357	PASS
Position 2	0.250	-0.080	0.217	2.384	20.136	8.447	PASS
Position 3	-0.250	-0.080	0.217	2.330	20.084	8.619	PASS
Position 4	-0.250	0.080	0.217	2.385	19.978	8.376	PASS
Position 5	-0.250	0.080	-0.217	2.339	20.184	8.629	PASS
Position 6	-0.250	-0.080	-0.217	2.397	20.251	8.448	PASS
Position 7	0.250	-0.080	-0.217	2.278	20.230	8.881	PASS

Position 8	0.250	0.080	-0.217	2.279	20.206	8.866	PASS
Center	0.000	0.000	0.000	-2.138	-20.100	9.402	PASS
Position 1	0.250	0.080	0.217	-2.389	-20.261	8.482	PASS
Position 2	0.250	-0.080	0.217	-2.367	-20.303	8.577	PASS
Position 3	-0.250	-0.080	0.217	-2.386	-20.306	8.510	PASS
Position 4	-0.250	0.080	0.217	-2.380	-20.266	8.516	PASS
Position 5	-0.250	0.080	-0.217	-2.450	-20.386	8.320	PASS
Position 6	-0.250	-0.080	-0.217	-2.453	-20.039	8.170	PASS
Position 7	0.250	-0.080	-0.217	-2.338	-20.160	8.623	PASS
Position 8	0.250	0.080	-0.217	-2.427	-20.291	8.362	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L040
Operator Name: Gordon, Matt
Date: 9/23/2009 Time: 2:07 PM
Actuator Coil Resistance: 6.26 Ohms, PASS
Ambient Temperature: 73.2 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.523

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.504

	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	2.054	20.276	9.872	PASS
Position 1	0.250	0.080	0.217	2.325	20.052	8.624	PASS
Position 2	0.250	-0.080	0.217	2.362	20.253	8.574	PASS
Position 3	-0.250	-0.080	0.217	2.250	20.270	9.010	PASS
Position 4	-0.250	0.080	0.217	2.352	20.067	8.533	PASS
Position 5	-0.250	0.080	-0.217	2.188	20.239	9.252	PASS
Position 6	-0.250	-0.080	-0.217	2.229	20.217	9.070	PASS
Position 7	0.250	-0.080	-0.217	2.281	20.240	8.873	PASS
Position 8	0.250	0.080	-0.217	2.291	20.195	8.815	PASS
Center	0.000	0.000	0.000	-2.289	-20.402	8.914	PASS
Position 1	0.250	0.080	0.217	-2.480	-20.301	8.186	PASS
Position 2	0.250	-0.080	0.217	-2.473	-20.196	8.168	PASS
Position 3	-0.250	-0.080	0.217	-2.487	-20.299	8.161	PASS
Position 4	-0.250	0.080	0.217	-2.481	-20.183	8.136	PASS
Position 5	-0.250	0.080	-0.217	-2.472	-19.949	8.068	PASS
Position 6	-0.250	-0.080	-0.217	-2.479	-20.022	8.077	PASS
Position 7	0.250	-0.080	-0.217	-2.481	-20.022	8.069	PASS
Position 8	0.250	0.080	-0.217	-2.479	-20.009	8.070	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L041
Operator Name: Hartmann Donna
Date: 9/23/2009 Time: 10:05 AM
Actuator Coil Resistance: 6.37 Ohms, PASS
Ambient Temperature: 72.9 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.523
Y Travel Limit (inches): 0.207
Z Travel Limit (inches): 0.506

	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	2.062	20.496	9.939	PASS
Position 1	0.250	0.080	0.217	2.409	20.014	8.309	PASS
Position 2	0.250	-0.080	0.217	2.389	20.035	8.386	PASS
Position 3	-0.250	-0.080	0.217	2.511	20.050	7.985	PASS
Position 4	-0.250	0.080	0.217	2.479	20.348	8.209	PASS
Position 5	-0.250	0.080	-0.217	2.262	20.263	8.958	PASS
Position 6	-0.250	-0.080	-0.217	2.328	20.281	8.713	PASS

Positio n 7	0.250	-0.080	-0.217	2.327	20.256	8.704	PASS
Positio n 8	0.250	0.080	-0.217	2.371	20.256	8.545	PASS
Center	0.000	0.000	0.000	-2.146	-20.173	9.399	PASS
Positio n 1	0.250	0.080	0.217	-2.386	-20.300	8.507	PASS
Positio n 2	0.250	-0.080	0.217	-2.385	-20.262	8.495	PASS
Positio n 3	-0.250	-0.080	0.217	-2.337	-20.026	8.568	PASS
Positio n 4	-0.250	0.080	0.217	-2.381	-20.276	8.516	PASS
Positio n 5	-0.250	0.080	-0.217	-2.443	-20.300	8.308	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.237	-20.301	9.076	PASS
Positio n 7	0.250	-0.080	-0.217	-2.465	-20.121	8.161	PASS
Positio n 8	0.250	0.080	-0.217	-2.433	-20.353	8.364	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L042
Operator Name: Gordon, Matt
Date: 9/24/2009 Time: 4:39 PM
Actuator Coil Resistance: 6.34 Ohms, PASS
Ambient Temperature: 76.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.526

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.502

	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	2.106	20.064	9.525	PASS
Position 1	0.250	0.080	0.217	2.433	20.182	8.297	PASS
Position 2	0.250	-0.080	0.217	2.430	20.072	8.260	PASS
Position 3	-0.250	-0.080	0.217	2.470	19.940	8.073	PASS
Position 4	-0.250	0.080	0.217	2.396	20.053	8.370	PASS
Position 5	-0.250	0.080	-0.217	2.340	20.272	8.664	PASS
Position 6	-0.250	-0.080	-0.217	2.356	20.331	8.630	PASS
Position 7	0.250	-0.080	-0.217	2.187	20.363	9.310	PASS
Position 8	0.250	0.080	-0.217	2.332	20.251	8.683	PASS
Center	0.000	0.000	0.000	-2.133	-20.153	9.447	PASS
Position 1	0.250	0.080	0.217	-2.380	-20.211	8.492	PASS
Position 2	0.250	-0.080	0.217	-2.328	-20.226	8.688	PASS
Position 3	-0.250	-0.080	0.217	-2.433	-20.228	8.315	PASS
Position 4	-0.250	0.080	0.217	-2.385	-20.232	8.482	PASS
Position 5	-0.250	0.080	-0.217	-2.389	-19.963	8.356	PASS
Position 6	-0.250	-0.080	-0.217	-2.376	-20.213	8.506	PASS
Position 7	0.250	-0.080	-0.217	-2.482	-20.032	8.071	PASS

Position 8	0.250	0.080	-0.217	-2.368	-19.951	8.425	PASS
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LIGO Production Large Actuator Test Report

Actuator Serial #: L043
Operator Name: Gordon, Matt
Date: 9/24/2009 Time: 3:07 PM
Actuator Coil Resistance: 6.36 Ohms, PASS
Ambient Temperature: 75.8 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.531
Y Travel Limit (inches): 0.206
Z Travel Limit (inches): 0.505

	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	2.123	20.120	9.479	PASS
Position 1	0.250	0.080	0.217	2.406	20.330	8.450	PASS
Position 2	0.250	-0.080	0.217	2.405	20.246	8.418	PASS
Position 3	-0.250	-0.080	0.217	2.401	20.371	8.485	PASS
Position 4	-0.250	0.080	0.217	2.340	20.018	8.556	PASS
Position 5	-0.250	0.080	-0.217	2.359	20.150	8.541	PASS

Positio n 6	-0.250	-0.080	-0.217	2.273	20.247	8.907	PASS
Positio n 7	0.250	-0.080	-0.217	2.360	20.184	8.554	PASS
Positio n 8	0.250	0.080	-0.217	2.318	20.178	8.705	PASS
Center	0.000	0.000	0.000	-2.122	-20.247	9.541	PASS
Positio n 1	0.250	0.080	0.217	-2.320	-20.016	8.628	PASS
Positio n 2	0.250	-0.080	0.217	-2.312	-20.041	8.668	PASS
Positio n 3	-0.250	-0.080	0.217	-2.311	-20.154	8.721	PASS
Positio n 4	-0.250	0.080	0.217	-2.317	-20.048	8.654	PASS
Positio n 5	-0.250	0.080	-0.217	-2.411	-20.301	8.420	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.367	-20.101	8.493	PASS
Positio n 7	0.250	-0.080	-0.217	-2.350	-20.192	8.593	PASS
Positio n 8	0.250	0.080	-0.217	-2.428	-20.037	8.254	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L044
Operator Name: Gordon, Matt

Date: 9/25/2009 Time: 8:40 AM
 Actuator Coil Resistance: 6.31 Ohms, PASS
 Ambient Temperature: 70.4 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.532
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.502

	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	2.127	20.181	9.486	PASS
Positio n 1	0.250	0.080	0.217	2.386	19.989	8.378	PASS
Positio n 2	0.250	-0.080	0.217	2.432	20.262	8.331	PASS
Positio n 3	-0.250	-0.080	0.217	2.420	20.294	8.386	PASS
Positio n 4	-0.250	0.080	0.217	2.423	20.265	8.363	PASS
Positio n 5	-0.250	0.080	-0.217	2.247	19.976	8.889	PASS
Positio n 6	-0.250	-0.080	-0.217	2.306	20.379	8.839	PASS
Positio n 7	0.250	-0.080	-0.217	2.294	19.964	8.701	PASS
Positio n 8	0.250	0.080	-0.217	2.290	19.990	8.730	PASS
Center	0.000	0.000	0.000	-2.135	-20.302	9.509	PASS
Positio n 1	0.250	0.080	0.217	-2.339	-20.069	8.579	PASS
Positio n 2	0.250	-0.080	0.217	-2.325	-19.984	8.596	PASS
Positio n 3	-0.250	-0.080	0.217	-2.339	-20.138	8.609	PASS
Positio n 4	-0.250	0.080	0.217	-2.335	-20.060	8.590	PASS
Positio n 5	-0.250	0.080	-0.217	-2.382	-20.032	8.408	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.436	-20.099	8.251	PASS

Position 7	0.250	-0.080	-0.217	-2.382	-20.029	8.408	PASS
Position 8	0.250	0.080	-0.217	-2.380	-19.994	8.400	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L045

Operator Name: Gordon, Matt

Date: 9/23/2009 Time: 5:34 PM

Actuator Coil Resistance: 6.34 Ohms, PASS

Ambient Temperature: 72.2 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.501

	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	2.086	20.106	9.636	PASS
Position 1	0.250	0.080	0.217	2.410	20.258	8.407	PASS
Position 2	0.250	-0.080	0.217	2.336	20.114	8.612	PASS
Position 3	-0.250	-0.080	0.217	2.407	20.200	8.392	PASS
Position 4	-0.250	0.080	0.217	2.374	20.223	8.520	PASS

Positio n 5	-0.250	0.080	-0.217	2.330	20.257	8.692	PASS
Positio n 6	-0.250	-0.080	-0.217	2.364	20.235	8.561	PASS
Positio n 7	0.250	-0.080	-0.217	2.352	20.222	8.599	PASS
Positio n 8	0.250	0.080	-0.217	2.336	20.259	8.671	PASS
Center	0.000	0.000	0.000	-2.143	-20.239	9.445	PASS
Positio n 1	0.250	0.080	0.217	-2.339	-20.007	8.554	PASS
Positio n 2	0.250	-0.080	0.217	-2.341	-20.048	8.564	PASS
Positio n 3	-0.250	-0.080	0.217	-2.323	-20.118	8.660	PASS
Positio n 4	-0.250	0.080	0.217	-2.340	-19.985	8.542	PASS
Positio n 5	-0.250	0.080	-0.217	-2.429	-20.127	8.288	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.335	-20.015	8.572	PASS
Positio n 7	0.250	-0.080	-0.217	-2.451	-20.096	8.200	PASS
Positio n 8	0.250	0.080	-0.217	-2.392	-20.188	8.440	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L046
 Operator Name: Gordon, Matt
 Date: 9/23/2009 Time: 3:31 PM
 Actuator Coil Resistance: 6.375 Ohms, PASS
 Ambient Temperature: 74.0 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.526
 Y Travel Limit (inches): 0.206
 Z Travel Limit (inches): 0.505

	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	2.066	20.030	9.697	PASS
Position 1	0.250	0.080	0.217	2.315	20.016	8.647	PASS
Position 2	0.250	-0.080	0.217	2.485	20.181	8.122	PASS
Position 3	-0.250	-0.080	0.217	2.193	20.224	9.220	PASS
Position 4	-0.250	0.080	0.217	2.424	20.038	8.268	PASS
Position 5	-0.250	0.080	-0.217	2.355	20.077	8.527	PASS
Position 6	-0.250	-0.080	-0.217	2.313	20.121	8.698	PASS
Position 7	0.250	-0.080	-0.217	2.350	20.097	8.553	PASS
Position 8	0.250	0.080	-0.217	2.389	20.069	8.401	PASS
Center	0.000	0.000	0.000	-2.141	-20.161	9.417	PASS
Position 1	0.250	0.080	0.217	-2.335	-20.028	8.576	PASS
Position 2	0.250	-0.080	0.217	-2.397	-20.326	8.478	PASS
Position 3	-0.250	-0.080	0.217	-2.373	-20.475	8.629	PASS
Position 4	-0.250	0.080	0.217	-2.381	-20.377	8.558	PASS
Position 5	-0.250	0.080	-0.217	-2.407	-20.089	8.345	PASS

Position 6	-0.250	-0.080	-0.217	-2.381	-19.987	8.396	PASS
Position 7	0.250	-0.080	-0.217	-2.384	-20.289	8.510	PASS
Position 8	0.250	0.080	-0.217	-2.475	-20.088	8.117	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L047

Operator Name: Gordon, Matt

Date: 9/24/2009 Time: 3:34 PM

Actuator Coil Resistance: 6.34 Ohms, PASS

Ambient Temperature: 75.4 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.523

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.504

	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	2.136	20.370	9.536	PASS
Position 1	0.250	0.080	0.217	2.454	20.086	8.187	PASS
Position 2	0.250	-0.080	0.217	2.377	20.234	8.514	PASS
Position 3	-0.250	-0.080	0.217	2.359	19.939	8.452	PASS

Positio n 4	-0.250	0.080	0.217	2.429	19.928	8.204	PASS
Positio n 5	-0.250	0.080	-0.217	2.335	20.214	8.655	PASS
Positio n 6	-0.250	-0.080	-0.217	2.311	20.291	8.780	PASS
Positio n 7	0.250	-0.080	-0.217	2.369	20.270	8.556	PASS
Positio n 8	0.250	0.080	-0.217	2.363	20.211	8.554	PASS
Center	0.000	0.000	0.000	-2.114	-20.075	9.495	PASS
Positio n 1	0.250	0.080	0.217	-2.395	-20.161	8.418	PASS
Positio n 2	0.250	-0.080	0.217	-2.361	-20.035	8.486	PASS
Positio n 3	-0.250	-0.080	0.217	-2.379	-20.136	8.465	PASS
Positio n 4	-0.250	0.080	0.217	-2.390	-20.063	8.396	PASS
Positio n 5	-0.250	0.080	-0.217	-2.378	-20.139	8.469	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.374	-20.015	8.433	PASS
Positio n 7	0.250	-0.080	-0.217	-2.374	-19.948	8.404	PASS
Positio n 8	0.250	0.080	-0.217	-2.441	-20.264	8.301	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L048

Operator Name: Gordon, Matt

Date: 9/24/2009 Time: 3:52 PM

Actuator Coil Resistance: 6.32 Ohms, PASS

Ambient Temperature: 75.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.526

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.504

	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	2.134	20.311	9.518	PASS
Position 1	0.250	0.080	0.217	2.363	20.203	8.549	PASS
Position 2	0.250	-0.080	0.217	2.391	20.099	8.406	PASS
Position 3	-0.250	-0.080	0.217	2.391	19.943	8.340	PASS
Position 4	-0.250	0.080	0.217	2.382	20.279	8.515	PASS
Position 5	-0.250	0.080	-0.217	2.321	20.185	8.695	PASS
Position 6	-0.250	-0.080	-0.217	2.268	19.968	8.804	PASS
Position 7	0.250	-0.080	-0.217	2.291	19.938	8.704	PASS
Position 8	0.250	0.080	-0.217	2.366	20.190	8.535	PASS
Center	0.000	0.000	0.000	-2.138	-20.025	9.365	PASS
Position 1	0.250	0.080	0.217	-2.434	-20.319	8.349	PASS
Position 2	0.250	-0.080	0.217	-2.388	-20.004	8.376	PASS
Position 3	-0.250	-0.080	0.217	-2.392	-20.011	8.366	PASS

Position 4	-0.250	0.080	0.217	-2.380	-19.948	8.383	PASS
Position 5	-0.250	0.080	-0.217	-2.438	-20.096	8.244	PASS
Position 6	-0.250	-0.080	-0.217	-2.385	-20.031	8.399	PASS
Position 7	0.250	-0.080	-0.217	-2.429	-20.008	8.237	PASS
Position 8	0.250	0.080	-0.217	-2.440	-20.079	8.230	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L049

Operator Name: Gordon, Matt

Date: 9/24/2009 Time: 1:22 PM

Actuator Coil Resistance: 6.39 Ohms, PASS

Ambient Temperature: 74.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.528

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.508

	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	2.115	20.103	9.505	PASS
Position 1	0.250	0.080	0.217	2.395	20.120	8.401	PASS

Positio n 2	0.250	-0.080	0.217	2.418	20.092	8.310	PASS
Positio n 3	-0.250	-0.080	0.217	2.391	19.974	8.355	PASS
Positio n 4	-0.250	0.080	0.217	2.414	20.283	8.402	PASS
Positio n 5	-0.250	0.080	-0.217	2.329	20.360	8.740	PASS
Positio n 6	-0.250	-0.080	-0.217	2.282	20.037	8.782	PASS
Positio n 7	0.250	-0.080	-0.217	2.265	20.026	8.842	PASS
Positio n 8	0.250	0.080	-0.217	2.329	20.388	8.755	PASS
Center	0.000	0.000	0.000	-2.124	-20.235	9.526	PASS
Positio n 1	0.250	0.080	0.217	-2.387	-20.299	8.506	PASS
Positio n 2	0.250	-0.080	0.217	-2.341	-19.999	8.543	PASS
Positio n 3	-0.250	-0.080	0.217	-2.333	-20.032	8.585	PASS
Positio n 4	-0.250	0.080	0.217	-2.388	-20.295	8.497	PASS
Positio n 5	-0.250	0.080	-0.217	-2.387	-20.010	8.383	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.337	-20.266	8.674	PASS
Positio n 7	0.250	-0.080	-0.217	-2.430	-20.115	8.278	PASS
Positio n 8	0.250	0.080	-0.217	-2.402	-20.107	8.370	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L050

Operator Name: Gordon, Matt

Date: 9/24/2009 Time: 10:42 AM

Actuator Coil Resistance: 6.28 Ohms, PASS

Ambient Temperature: 72.5 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.533

Y Travel Limit (inches): 0.206

Z Travel Limit (inches): 0.508

	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	2.090	19.995	9.565	PASS
Position 1	0.250	0.080	0.217	2.382	20.088	8.432	PASS
Position 2	0.250	-0.080	0.217	2.446	20.214	8.263	PASS
Position 3	-0.250	-0.080	0.217	2.454	20.049	8.170	PASS
Position 4	-0.250	0.080	0.217	2.376	20.051	8.440	PASS
Position 5	-0.250	0.080	-0.217	2.350	20.145	8.571	PASS
Position 6	-0.250	-0.080	-0.217	2.362	20.560	8.704	PASS
Position 7	0.250	-0.080	-0.217	2.275	20.112	8.840	PASS
Position 8	0.250	0.080	-0.217	2.358	20.530	8.708	PASS
Center	0.000	0.000	0.000	-2.128	-20.108	9.450	PASS
Position 1	0.250	0.080	0.217	-2.391	-20.285	8.485	PASS
Position 2	0.250	-0.080	0.217	-2.340	-20.003	8.548	PASS

Position 3	-0.250	-0.080	0.217	-2.342	-20.065	8.569	PASS
Position 4	-0.250	0.080	0.217	-2.395	-20.279	8.466	PASS
Position 5	-0.250	0.080	-0.217	-2.443	-20.215	8.274	PASS
Position 6	-0.250	-0.080	-0.217	-2.332	-20.085	8.612	PASS
Position 7	0.250	-0.080	-0.217	-2.389	-20.286	8.490	PASS
Position 8	0.250	0.080	-0.217	-2.442	-20.263	8.297	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L051

Operator Name: Gordon, Matt

Date: 9/24/2009 Time: 8:35 AM

Actuator Coil Resistance: 6.38 Ohms, PASS

Ambient Temperature: 68.8 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.520

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	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	2.136	20.154	9.437	PASS

Positio n 1	0.250	0.080	0.217	2.402	20.252	8.432	PASS
Positio n 2	0.250	-0.080	0.217	2.338	20.271	8.671	PASS
Positio n 3	-0.250	-0.080	0.217	2.322	20.081	8.648	PASS
Positio n 4	-0.250	0.080	0.217	2.281	20.243	8.874	PASS
Positio n 5	-0.250	0.080	-0.217	2.367	20.215	8.541	PASS
Positio n 6	-0.250	-0.080	-0.217	2.272	20.242	8.911	PASS
Positio n 7	0.250	-0.080	-0.217	2.305	20.235	8.779	PASS
Positio n 8	0.250	0.080	-0.217	2.366	20.200	8.538	PASS
Center	0.000	0.000	0.000	-2.140	-20.262	9.468	PASS
Positio n 1	0.250	0.080	0.217	-2.314	-20.183	8.722	PASS
Positio n 2	0.250	-0.080	0.217	-2.321	-20.031	8.629	PASS
Positio n 3	-0.250	-0.080	0.217	-2.337	-20.220	8.651	PASS
Positio n 4	-0.250	0.080	0.217	-2.351	-20.290	8.631	PASS
Positio n 5	-0.250	0.080	-0.217	-2.439	-20.195	8.279	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.396	-20.441	8.533	PASS
Positio n 7	0.250	-0.080	-0.217	-2.389	-20.301	8.498	PASS
Positio n 8	0.250	0.080	-0.217	-2.444	-20.098	8.222	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L052
Operator Name: Gordon, Matt
Date: 9/25/2009 Time: 11:02 AM
Actuator Coil Resistance: 6.36 Ohms, PASS
Ambient Temperature: 74.8 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.528
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.503

	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	2.126	20.360	9.574	PASS
Position 1	0.250	0.080	0.217	2.413	19.941	8.263	PASS
Position 2	0.250	-0.080	0.217	2.345	20.187	8.608	PASS
Position 3	-0.250	-0.080	0.217	2.345	20.252	8.636	PASS
Position 4	-0.250	0.080	0.217	2.447	20.074	8.204	PASS
Position 5	-0.250	0.080	-0.217	2.282	20.064	8.791	PASS
Position 6	-0.250	-0.080	-0.217	2.338	20.185	8.633	PASS
Position 7	0.250	-0.080	-0.217	2.327	20.160	8.664	PASS
Position 8	0.250	0.080	-0.217	2.331	20.093	8.620	PASS
Center	0.000	0.000	0.000	-2.038	-20.043	9.836	PASS
Position 1	0.250	0.080	0.217	-2.300	-20.267	8.812	PASS

Position 2	0.250	-0.080	0.217	-2.355	-20.349	8.640	PASS
Position 3	-0.250	-0.080	0.217	-2.302	-20.364	8.846	PASS
Position 4	-0.250	0.080	0.217	-2.318	-20.240	8.731	PASS
Position 5	-0.250	0.080	-0.217	-2.405	-20.125	8.367	PASS
Position 6	-0.250	-0.080	-0.217	-2.236	-20.173	9.022	PASS
Position 7	0.250	-0.080	-0.217	-2.278	-20.196	8.864	PASS
Position 8	0.250	0.080	-0.217	-2.401	-20.011	8.334	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L053

Operator Name: Gordon, Matt

Date: 9/24/2009 Time: 4:23 PM

Actuator Coil Resistance: 6.36 Ohms, PASS

Ambient Temperature: 76.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.501

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/ FAIL
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Center	0.000	0.000	0.000	2.119	20.238	9.550	PASS
Positio n 1	0.250	0.080	0.217	2.374	20.239	8.527	PASS
Positio n 2	0.250	-0.080	0.217	2.425	20.364	8.397	PASS
Positio n 3	-0.250	-0.080	0.217	2.473	20.224	8.177	PASS
Positio n 4	-0.250	0.080	0.217	2.465	20.090	8.150	PASS
Positio n 5	-0.250	0.080	-0.217	2.350	20.305	8.641	PASS
Positio n 6	-0.250	-0.080	-0.217	2.362	20.312	8.598	PASS
Positio n 7	0.250	-0.080	-0.217	2.381	20.290	8.520	PASS
Positio n 8	0.250	0.080	-0.217	2.352	20.297	8.630	PASS
Center	0.000	0.000	0.000	-2.128	-20.354	9.563	PASS
Positio n 1	0.250	0.080	0.217	-2.321	-20.259	8.728	PASS
Positio n 2	0.250	-0.080	0.217	-2.332	-20.261	8.690	PASS
Positio n 3	-0.250	-0.080	0.217	-2.260	-19.972	8.839	PASS
Positio n 4	-0.250	0.080	0.217	-2.306	-20.208	8.765	PASS
Positio n 5	-0.250	0.080	-0.217	-2.375	-19.921	8.388	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.372	-20.231	8.528	PASS
Positio n 7	0.250	-0.080	-0.217	-2.380	-19.949	8.383	PASS
Positio n 8	0.250	0.080	-0.217	-2.378	-19.983	8.403	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L054
Operator Name: Gordon, Matt
Date: 9/24/2009 Time: 11:16 AM
Actuator Coil Resistance: 6.33 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.526
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.506

	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	2.145	20.082	9.361	PASS
Position 1	0.250	0.080	0.217	2.435	20.118	8.262	PASS
Position 2	0.250	-0.080	0.217	2.414	20.069	8.312	PASS
Position 3	-0.250	-0.080	0.217	2.456	20.216	8.231	PASS
Position 4	-0.250	0.080	0.217	2.381	20.109	8.447	PASS
Position 5	-0.250	0.080	-0.217	2.367	20.125	8.502	PASS
Position 6	-0.250	-0.080	-0.217	2.356	20.155	8.556	PASS
Position 7	0.250	-0.080	-0.217	2.332	20.159	8.644	PASS
Position 8	0.250	0.080	-0.217	2.411	20.495	8.501	PASS
Center	0.000	0.000	0.000	-2.096	-20.188	9.631	PASS

Position 1	0.250	0.080	0.217	-2.304	-20.078	8.713	PASS
Position 2	0.250	-0.080	0.217	-2.312	-20.250	8.757	PASS
Position 3	-0.250	-0.080	0.217	-2.296	-20.199	8.797	PASS
Position 4	-0.250	0.080	0.217	-2.349	-20.479	8.719	PASS
Position 5	-0.250	0.080	-0.217	-2.367	-20.073	8.479	PASS
Position 6	-0.250	-0.080	-0.217	-2.348	-20.380	8.680	PASS
Position 7	0.250	-0.080	-0.217	-2.348	-20.066	8.546	PASS
Position 8	0.250	0.080	-0.217	-2.349	-20.042	8.533	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L056
Operator Name: Gordon, Matt
Date: 9/24/2009 Time: 10:10 AM
Actuator Coil Resistance: 6.33 Ohms, PASS
Ambient Temperature: 72.2 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.526
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.503

	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	2.071	20.104	9.706	PASS
Positio n 1	0.250	0.080	0.217	2.386	20.019	8.390	PASS
Positio n 2	0.250	-0.080	0.217	2.382	20.124	8.449	PASS
Positio n 3	-0.250	-0.080	0.217	2.337	20.081	8.593	PASS
Positio n 4	-0.250	0.080	0.217	2.443	20.156	8.251	PASS
Positio n 5	-0.250	0.080	-0.217	2.292	20.000	8.728	PASS
Positio n 6	-0.250	-0.080	-0.217	2.351	20.487	8.715	PASS
Positio n 7	0.250	-0.080	-0.217	2.332	20.478	8.779	PASS
Positio n 8	0.250	0.080	-0.217	2.297	20.440	8.897	PASS
Center	0.000	0.000	0.000	-2.130	-20.233	9.497	PASS
Positio n 1	0.250	0.080	0.217	-2.374	-20.255	8.530	PASS
Positio n 2	0.250	-0.080	0.217	-2.380	-20.218	8.495	PASS
Positio n 3	-0.250	-0.080	0.217	-2.387	-20.322	8.513	PASS
Positio n 4	-0.250	0.080	0.217	-2.384	-20.249	8.496	PASS
Positio n 5	-0.250	0.080	-0.217	-2.383	-20.053	8.415	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.430	-20.122	8.282	PASS
Positio n 7	0.250	-0.080	-0.217	-2.483	-20.234	8.148	PASS
Positio n 8	0.250	0.080	-0.217	-2.390	-20.236	8.467	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L057
 Operator Name: Gordon, Matt
 Date: 9/23/2009 Time: 6:23 PM
 Actuator Coil Resistance: 6.37 Ohms, PASS
 Ambient Temperature: 71.8 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.530
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.503

	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	2.105	20.073	9.537	PASS
Position 1	0.250	0.080	0.217	2.420	20.311	8.393	PASS
Position 2	0.250	-0.080	0.217	2.332	20.050	8.599	PASS
Position 3	-0.250	-0.080	0.217	2.326	20.005	8.601	PASS
Position 4	-0.250	0.080	0.217	2.297	20.112	8.755	PASS
Position 5	-0.250	0.080	-0.217	2.308	20.148	8.729	PASS
Position 6	-0.250	-0.080	-0.217	2.335	20.217	8.657	PASS
Position 7	0.250	-0.080	-0.217	2.308	20.175	8.743	PASS
Position 8	0.250	0.080	-0.217	2.332	20.147	8.641	PASS

Center	0.000	0.000	0.000	-2.123	-20.187	9.510	PASS
Position 1	0.250	0.080	0.217	-2.349	-20.046	8.535	PASS
Position 2	0.250	-0.080	0.217	-2.328	-20.089	8.629	PASS
Position 3	-0.250	-0.080	0.217	-2.343	-20.066	8.566	PASS
Position 4	-0.250	0.080	0.217	-2.353	-20.013	8.506	PASS
Position 5	-0.250	0.080	-0.217	-2.443	-20.172	8.258	PASS
Position 6	-0.250	-0.080	-0.217	-2.448	-19.938	8.143	PASS
Position 7	0.250	-0.080	-0.217	-2.487	-20.275	8.152	PASS
Position 8	0.250	0.080	-0.217	-2.456	-20.159	8.210	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L058
Operator Name: Gordon, Matt
Date: 9/24/2009 Time: 1:04 PM
Actuator Coil Resistance: 6.38 Ohms, PASS
Ambient Temperature: 74.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.526
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.502

	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	2.007	20.168	10.049	PASS
Positio n 1	0.250	0.080	0.217	2.435	20.000	8.215	PASS
Positio n 2	0.250	-0.080	0.217	2.338	20.113	8.604	PASS
Positio n 3	-0.250	-0.080	0.217	2.387	20.195	8.461	PASS
Positio n 4	-0.250	0.080	0.217	2.424	20.294	8.371	PASS
Positio n 5	-0.250	0.080	-0.217	2.368	20.405	8.616	PASS
Positio n 6	-0.250	-0.080	-0.217	2.251	20.032	8.897	PASS
Positio n 7	0.250	-0.080	-0.217	2.316	20.011	8.639	PASS
Positio n 8	0.250	0.080	-0.217	2.334	20.017	8.576	PASS
Center	0.000	0.000	0.000	-2.111	-20.270	9.600	PASS
Positio n 1	0.250	0.080	0.217	-2.327	-19.992	8.592	PASS
Positio n 2	0.250	-0.080	0.217	-2.321	-20.010	8.620	PASS
Positio n 3	-0.250	-0.080	0.217	-2.329	-20.076	8.620	PASS
Positio n 4	-0.250	0.080	0.217	-2.372	-20.364	8.585	PASS
Positio n 5	-0.250	0.080	-0.217	-2.425	-20.220	8.340	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.413	-20.071	8.318	PASS
Positio n 7	0.250	-0.080	-0.217	-2.427	-20.020	8.248	PASS
Positio n 8	0.250	0.080	-0.217	-2.422	-20.271	8.369	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L059
Operator Name: Gordon, Matt
Date: 9/25/2009 Time: 8:56 AM
Actuator Coil Resistance: 6.34 Ohms, PASS
Ambient Temperature: 71.1 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.528
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.504

	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	2.123	20.091	9.465	PASS
Position 1	0.250	0.080	0.217	2.376	20.363	8.570	PASS
Position 2	0.250	-0.080	0.217	2.403	19.971	8.310	PASS
Position 3	-0.250	-0.080	0.217	2.394	20.112	8.402	PASS
Position 4	-0.250	0.080	0.217	2.332	20.112	8.626	PASS
Position 5	-0.250	0.080	-0.217	2.290	20.179	8.813	PASS
Position 6	-0.250	-0.080	-0.217	2.251	20.208	8.976	PASS
Position 7	0.250	-0.080	-0.217	2.343	20.196	8.619	PASS

Position 8	0.250	0.080	-0.217	2.331	20.186	8.659	PASS
Center	0.000	0.000	0.000	-2.139	-20.202	9.444	PASS
Position 1	0.250	0.080	0.217	-2.337	-20.077	8.590	PASS
Position 2	0.250	-0.080	0.217	-2.342	-20.016	8.546	PASS
Position 3	-0.250	-0.080	0.217	-2.330	-20.138	8.644	PASS
Position 4	-0.250	0.080	0.217	-2.326	-20.086	8.635	PASS
Position 5	-0.250	0.080	-0.217	-2.382	-20.335	8.538	PASS
Position 6	-0.250	-0.080	-0.217	-2.374	-19.991	8.421	PASS
Position 7	0.250	-0.080	-0.217	-2.449	-19.998	8.167	PASS
Position 8	0.250	0.080	-0.217	-2.375	-20.191	8.500	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L060
Operator Name: Gordon, Matt
Date: 9/23/2009 Time: 3:01 PM
Actuator Coil Resistance: 6.37 Ohms, PASS
Ambient Temperature: 74.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.518

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	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	2.116	20.017	9.462	PASS
Position 1	0.250	0.080	0.217	2.455	20.086	8.182	PASS
Position 2	0.250	-0.080	0.217	2.436	20.094	8.249	PASS
Position 3	-0.250	-0.080	0.217	2.410	20.327	8.434	PASS
Position 4	-0.250	0.080	0.217	2.506	20.088	8.016	PASS
Position 5	-0.250	0.080	-0.217	2.328	20.118	8.641	PASS
Position 6	-0.250	-0.080	-0.217	2.342	20.190	8.620	PASS
Position 7	0.250	-0.080	-0.217	2.348	20.140	8.578	PASS
Position 8	0.250	0.080	-0.217	2.432	20.509	8.433	PASS
Center	0.000	0.000	0.000	-2.139	-20.146	9.419	PASS
Position 1	0.250	0.080	0.217	-2.323	-20.030	8.622	PASS
Position 2	0.250	-0.080	0.217	-2.330	-20.081	8.617	PASS
Position 3	-0.250	-0.080	0.217	-2.388	-20.254	8.481	PASS
Position 4	-0.250	0.080	0.217	-2.366	-20.371	8.609	PASS
Position 5	-0.250	0.080	-0.217	-2.478	-20.302	8.193	PASS
Position 6	-0.250	-0.080	-0.217	-2.374	-20.130	8.478	PASS
Position 7	0.250	-0.080	-0.217	-2.340	-20.188	8.628	PASS
Position 8	0.250	0.080	-0.217	-2.375	-20.236	8.521	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L061
Operator Name: Gordon, Matt
Date: 9/23/2009 Time: 5:09 PM
Actuator Coil Resistance: 6.35 Ohms, PASS
Ambient Temperature: 72.5 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.526
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.506

	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	2.107	20.120	9.548	PASS
Position 1	0.250	0.080	0.217	2.392	20.304	8.487	PASS
Position 2	0.250	-0.080	0.217	2.447	20.130	8.226	PASS
Position 3	-0.250	-0.080	0.217	2.399	20.171	8.408	PASS
Position 4	-0.250	0.080	0.217	2.376	20.339	8.560	PASS
Position 5	-0.250	0.080	-0.217	2.354	20.205	8.582	PASS
Position 6	-0.250	-0.080	-0.217	2.356	20.261	8.600	PASS

Positio n 7	0.250	-0.080	-0.217	2.344	20.226	8.631	PASS
Positio n 8	0.250	0.080	-0.217	2.323	20.188	8.691	PASS
Center	0.000	0.000	0.000	-2.139	-20.241	9.464	PASS
Positio n 1	0.250	0.080	0.217	-2.353	-20.132	8.555	PASS
Positio n 2	0.250	-0.080	0.217	-2.343	-20.081	8.570	PASS
Positio n 3	-0.250	-0.080	0.217	-2.337	-20.141	8.619	PASS
Positio n 4	-0.250	0.080	0.217	-2.354	-20.164	8.567	PASS
Positio n 5	-0.250	0.080	-0.217	-2.435	-20.163	8.280	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.335	-20.282	8.686	PASS
Positio n 7	0.250	-0.080	-0.217	-2.320	-20.129	8.677	PASS
Positio n 8	0.250	0.080	-0.217	-2.425	-20.262	8.357	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L062
Operator Name: Gordon, Matt
Date: 9/25/2009 Time: 9:15 AM
Actuator Coil Resistance: 6.35 Ohms, PASS
Ambient Temperature: 71.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.526

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.505

	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	2.108	20.035	9.506	PASS
Position 1	0.250	0.080	0.217	2.456	19.994	8.141	PASS
Position 2	0.250	-0.080	0.217	2.390	20.074	8.398	PASS
Position 3	-0.250	-0.080	0.217	2.343	19.975	8.526	PASS
Position 4	-0.250	0.080	0.217	2.444	20.326	8.318	PASS
Position 5	-0.250	0.080	-0.217	2.376	20.203	8.504	PASS
Position 6	-0.250	-0.080	-0.217	2.328	20.253	8.700	PASS
Position 7	0.250	-0.080	-0.217	2.162	20.224	9.355	PASS
Position 8	0.250	0.080	-0.217	2.307	20.223	8.767	PASS
Center	0.000	0.000	0.000	-2.136	-20.181	9.450	PASS
Position 1	0.250	0.080	0.217	-2.364	-20.280	8.579	PASS
Position 2	0.250	-0.080	0.217	-2.358	-20.256	8.589	PASS
Position 3	-0.250	-0.080	0.217	-2.343	-20.003	8.536	PASS
Position 4	-0.250	0.080	0.217	-2.386	-20.206	8.470	PASS
Position 5	-0.250	0.080	-0.217	-2.449	-20.187	8.243	PASS
Position 6	-0.250	-0.080	-0.217	-2.325	-20.144	8.662	PASS
Position 7	0.250	-0.080	-0.217	-2.444	-20.139	8.240	PASS

Position 8	0.250	0.080	-0.217	-2.440	-20.284	8.312	PASS
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LIGO Production Large Actuator Test Report

Actuator Serial #: L063

Operator Name: Gordon, Matt

Date: 9/25/2009 Time: 9:32 AM

Actuator Coil Resistance: 6.38 Ohms, PASS

Ambient Temperature: 72.2 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

Y Travel Limit (inches): 0.206

Z Travel Limit (inches): 0.503

	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	2.099	20.146	9.600	PASS
Position 1	0.250	0.080	0.217	2.407	20.032	8.321	PASS
Position 2	0.250	-0.080	0.217	2.373	20.059	8.453	PASS
Position 3	-0.250	-0.080	0.217	2.440	20.103	8.241	PASS
Position 4	-0.250	0.080	0.217	2.386	20.110	8.429	PASS
Position 5	-0.250	0.080	-0.217	2.268	20.014	8.826	PASS

Positio n 6	-0.250	-0.080	-0.217	2.294	20.049	8.738	PASS
Positio n 7	0.250	-0.080	-0.217	2.218	20.029	9.028	PASS
Positio n 8	0.250	0.080	-0.217	2.282	20.032	8.779	PASS
Center	0.000	0.000	0.000	-2.136	-20.283	9.498	PASS
Positio n 1	0.250	0.080	0.217	-2.340	-19.958	8.531	PASS
Positio n 2	0.250	-0.080	0.217	-2.370	-20.168	8.511	PASS
Positio n 3	-0.250	-0.080	0.217	-2.377	-20.216	8.505	PASS
Positio n 4	-0.250	0.080	0.217	-2.381	-20.325	8.536	PASS
Positio n 5	-0.250	0.080	-0.217	-2.382	-20.093	8.434	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.343	-20.199	8.621	PASS
Positio n 7	0.250	-0.080	-0.217	-2.380	-20.082	8.437	PASS
Positio n 8	0.250	0.080	-0.217	-2.396	-20.220	8.438	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L064
Operator Name: Gordon, Matt

Date: 9/25/2009 Time: 9:50 AM

Actuator Coil Resistance: 6.38 Ohms, PASS

Ambient Temperature: 72.7 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.529

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.505

	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	2.060	20.179	9.794	PASS
Positio n 1	0.250	0.080	0.217	2.304	20.240	8.786	PASS
Positio n 2	0.250	-0.080	0.217	2.418	20.037	8.287	PASS
Positio n 3	-0.250	-0.080	0.217	2.360	20.129	8.531	PASS
Positio n 4	-0.250	0.080	0.217	2.378	20.114	8.460	PASS
Positio n 5	-0.250	0.080	-0.217	2.338	20.318	8.692	PASS
Positio n 6	-0.250	-0.080	-0.217	2.327	20.329	8.736	PASS
Positio n 7	0.250	-0.080	-0.217	2.344	20.289	8.656	PASS
Positio n 8	0.250	0.080	-0.217	2.341	20.305	8.673	PASS
Center	0.000	0.000	0.000	-2.132	-20.298	9.520	PASS
Positio n 1	0.250	0.080	0.217	-2.344	-20.105	8.576	PASS
Positio n 2	0.250	-0.080	0.217	-2.345	-20.166	8.598	PASS
Positio n 3	-0.250	-0.080	0.217	-2.336	-20.185	8.642	PASS
Positio n 4	-0.250	0.080	0.217	-2.336	-20.049	8.584	PASS
Positio n 5	-0.250	0.080	-0.217	-2.396	-19.974	8.337	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.326	-19.998	8.598	PASS

Position 7	0.250	-0.080	-0.217	-2.335	-20.043	8.582	PASS
Position 8	0.250	0.080	-0.217	-2.422	-20.303	8.383	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L065

Operator Name: Gordon, Matt

Date: 9/25/2009 Time: 10:09 AM

Actuator Coil Resistance: 6.36 Ohms, PASS

Ambient Temperature: 73.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.531

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.500

	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	2.093	20.037	9.574	PASS
Position 1	0.250	0.080	0.217	2.333	20.136	8.631	PASS
Position 2	0.250	-0.080	0.217	2.415	19.986	8.274	PASS
Position 3	-0.250	-0.080	0.217	2.289	20.138	8.798	PASS
Position 4	-0.250	0.080	0.217	2.436	19.941	8.184	PASS

Positio n 5	-0.250	0.080	-0.217	2.342	20.312	8.673	PASS
Positio n 6	-0.250	-0.080	-0.217	2.263	19.997	8.836	PASS
Positio n 7	0.250	-0.080	-0.217	2.258	19.971	8.845	PASS
Positio n 8	0.250	0.080	-0.217	2.319	20.296	8.751	PASS
Center	0.000	0.000	0.000	-2.130	-20.249	9.507	PASS
Positio n 1	0.250	0.080	0.217	-2.341	-19.948	8.520	PASS
Positio n 2	0.250	-0.080	0.217	-2.335	-20.083	8.601	PASS
Positio n 3	-0.250	-0.080	0.217	-2.346	-20.127	8.580	PASS
Positio n 4	-0.250	0.080	0.217	-2.365	-20.328	8.595	PASS
Positio n 5	-0.250	0.080	-0.217	-2.402	-20.243	8.429	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.303	-20.077	8.719	PASS
Positio n 7	0.250	-0.080	-0.217	-2.385	-20.002	8.385	PASS
Positio n 8	0.250	0.080	-0.217	-2.380	-20.029	8.416	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L066
 Operator Name: Gordon, Matt
 Date: 11/22/2009 Time: 2:43 PM
 Actuator Coil Resistance: 6.31 Ohms, PASS
 Ambient Temperature: 71.1 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.523
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.508

	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	2.118	19.914	9.404	PASS
Position 1	0.250	0.080	0.217	2.399	20.034	8.350	PASS
Position 2	0.250	-0.080	0.217	2.352	20.126	8.559	PASS
Position 3	-0.250	-0.080	0.217	2.357	19.929	8.454	PASS
Position 4	-0.250	0.080	0.217	2.399	20.049	8.356	PASS
Position 5	-0.250	0.080	-0.217	2.357	20.116	8.536	PASS
Position 6	-0.250	-0.080	-0.217	2.320	19.840	8.551	PASS
Position 7	0.250	-0.080	-0.217	2.372	20.178	8.506	PASS
Position 8	0.250	0.080	-0.217	2.353	20.098	8.542	PASS
Center	0.000	0.000	0.000	-2.145	-20.126	9.383	PASS
Position 1	0.250	0.080	0.217	-2.343	-19.903	8.493	PASS
Position 2	0.250	-0.080	0.217	-2.352	-19.850	8.441	PASS
Position 3	-0.250	-0.080	0.217	-2.340	-19.908	8.508	PASS
Position 4	-0.250	0.080	0.217	-2.322	-19.829	8.541	PASS
Position 5	-0.250	0.080	-0.217	-2.387	-20.067	8.408	PASS

Position 6	-0.250	-0.080	-0.217	-2.333	-19.944	8.548	PASS
Position 7	0.250	-0.080	-0.217	-2.331	-20.026	8.592	PASS
Position 8	0.250	0.080	-0.217	-2.400	-19.928	8.303	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L067

Operator Name: Gordon, Matt

Date: 11/22/2009 Time: 2:25 PM

Actuator Coil Resistance: 6.33 Ohms, PASS

Ambient Temperature: 70.7 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.536

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	2.097	20.179	9.622	PASS
Position 1	0.250	0.080	0.217	2.315	20.071	8.668	PASS
Position 2	0.250	-0.080	0.217	2.463	19.873	8.068	PASS
Position 3	-0.250	-0.080	0.217	2.420	19.989	8.262	PASS

Position 4	-0.250	0.080	0.217	2.349	20.261	8.624	PASS
Position 5	-0.250	0.080	-0.217	2.346	19.954	8.506	PASS
Position 6	-0.250	-0.080	-0.217	2.348	20.330	8.658	PASS
Position 7	0.250	-0.080	-0.217	2.298	19.941	8.679	PASS
Position 8	0.250	0.080	-0.217	2.356	19.951	8.466	PASS
Center	0.000	0.000	0.000	-2.098	-19.875	9.473	PASS
Position 1	0.250	0.080	0.217	-2.347	-20.110	8.570	PASS
Position 2	0.250	-0.080	0.217	-2.336	-20.178	8.636	PASS
Position 3	-0.250	-0.080	0.217	-2.338	-20.210	8.643	PASS
Position 4	-0.250	0.080	0.217	-2.332	-20.047	8.595	PASS
Position 5	-0.250	0.080	-0.217	-2.390	-19.869	8.314	PASS
Position 6	-0.250	-0.080	-0.217	-2.442	-19.849	8.127	PASS
Position 7	0.250	-0.080	-0.217	-2.444	-19.866	8.127	PASS
Position 8	0.250	0.080	-0.217	-2.405	-20.148	8.377	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L068

Operator Name: Gordon, Matt

Date: 11/19/2009 Time: 1:27 PM

Actuator Coil Resistance: 6.28 Ohms, PASS

Ambient Temperature: 73.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.532

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.503

	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	2.115	19.901	9.409	PASS
Position 1	0.250	0.080	0.217	2.400	20.019	8.341	PASS
Position 2	0.250	-0.080	0.217	2.462	20.068	8.150	PASS
Position 3	-0.250	-0.080	0.217	2.481	19.856	8.004	PASS
Position 4	-0.250	0.080	0.217	2.357	20.067	8.513	PASS
Position 5	-0.250	0.080	-0.217	2.355	20.115	8.540	PASS
Position 6	-0.250	-0.080	-0.217	2.394	20.089	8.390	PASS
Position 7	0.250	-0.080	-0.217	2.339	20.081	8.585	PASS
Position 8	0.250	0.080	-0.217	2.359	20.097	8.519	PASS
Center	0.000	0.000	0.000	-2.138	-19.981	9.346	PASS
Position 1	0.250	0.080	0.217	-2.392	-20.113	8.410	PASS
Position 2	0.250	-0.080	0.217	-2.374	-20.120	8.473	PASS
Position 3	-0.250	-0.080	0.217	-2.382	-19.919	8.362	PASS

Position 4	-0.250	0.080	0.217	-2.383	-20.091	8.430	PASS
Position 5	-0.250	0.080	-0.217	-2.424	-20.122	8.301	PASS
Position 6	-0.250	-0.080	-0.217	-2.395	-20.105	8.395	PASS
Position 7	0.250	-0.080	-0.217	-2.341	-19.926	8.513	PASS
Position 8	0.250	0.080	-0.217	-2.350	-19.971	8.500	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L069

Operator Name: Gordon, Matt

Date: 11/23/2009 Time: 9:41 AM

Actuator Coil Resistance: 6.29 Ohms, PASS

Ambient Temperature: 69.8 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.537

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	2.097	20.012	9.545	PASS
Position 1	0.250	0.080	0.217	2.416	19.875	8.225	PASS

Positio n 2	0.250	-0.080	0.217	2.455	20.181	8.219	PASS
Positio n 3	-0.250	-0.080	0.217	2.459	20.100	8.172	PASS
Positio n 4	-0.250	0.080	0.217	2.414	19.993	8.284	PASS
Positio n 5	-0.250	0.080	-0.217	2.354	20.190	8.575	PASS
Positio n 6	-0.250	-0.080	-0.217	2.314	19.838	8.571	PASS
Positio n 7	0.250	-0.080	-0.217	2.358	20.184	8.562	PASS
Positio n 8	0.250	0.080	-0.217	2.349	20.176	8.590	PASS
Center	0.000	0.000	0.000	-2.141	-20.164	9.417	PASS
Positio n 1	0.250	0.080	0.217	-2.309	-19.953	8.641	PASS
Positio n 2	0.250	-0.080	0.217	-2.342	-20.027	8.549	PASS
Positio n 3	-0.250	-0.080	0.217	-2.335	-20.096	8.606	PASS
Positio n 4	-0.250	0.080	0.217	-2.330	-19.953	8.565	PASS
Positio n 5	-0.250	0.080	-0.217	-2.382	-19.978	8.388	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.455	-19.908	8.111	PASS
Positio n 7	0.250	-0.080	-0.217	-2.425	-20.078	8.279	PASS
Positio n 8	0.250	0.080	-0.217	-2.440	-20.100	8.238	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L0070

Operator Name: Gordon, Matt

Date: 11/20/2009 Time: 4:51 PM

Actuator Coil Resistance: 6.33 Ohms, PASS

Ambient Temperature: 70.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.533

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.508

	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	2.112	20.066	9.502	PASS
Position 1	0.250	0.080	0.217	2.374	20.016	8.432	PASS
Position 2	0.250	-0.080	0.217	2.490	20.088	8.067	PASS
Position 3	-0.250	-0.080	0.217	2.342	20.088	8.577	PASS
Position 4	-0.250	0.080	0.217	2.387	20.197	8.461	PASS
Position 5	-0.250	0.080	-0.217	2.347	20.289	8.646	PASS
Position 6	-0.250	-0.080	-0.217	2.338	20.346	8.701	PASS
Position 7	0.250	-0.080	-0.217	2.221	19.924	8.970	PASS
Position 8	0.250	0.080	-0.217	2.297	19.891	8.660	PASS
Center	0.000	0.000	0.000	-2.140	-20.193	9.435	PASS
Position 1	0.250	0.080	0.217	-2.335	-19.933	8.535	PASS
Position 2	0.250	-0.080	0.217	-2.338	-19.945	8.532	PASS

Position 3	-0.250	-0.080	0.217	-2.339	-19.970	8.539	PASS
Position 4	-0.250	0.080	0.217	-2.341	-19.919	8.509	PASS
Position 5	-0.250	0.080	-0.217	-2.390	-20.039	8.385	PASS
Position 6	-0.250	-0.080	-0.217	-2.333	-19.924	8.541	PASS
Position 7	0.250	-0.080	-0.217	-2.335	-19.873	8.511	PASS
Position 8	0.250	0.080	-0.217	-2.396	-19.959	8.330	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L071

Operator Name: Gordon, Matt

Date: 11/19/2009 Time: 11:12 AM

Actuator Coil Resistance: 6.37 Ohms, PASS

Ambient Temperature: 72.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

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	2.068	20.027	9.685	PASS

Positio n 1	0.250	0.080	0.217	2.378	20.054	8.433	PASS
Positio n 2	0.250	-0.080	0.217	2.395	19.983	8.344	PASS
Positio n 3	-0.250	-0.080	0.217	2.358	19.882	8.431	PASS
Positio n 4	-0.250	0.080	0.217	2.326	20.131	8.654	PASS
Positio n 5	-0.250	0.080	-0.217	2.285	20.156	8.821	PASS
Positio n 6	-0.250	-0.080	-0.217	2.273	20.255	8.913	PASS
Positio n 7	0.250	-0.080	-0.217	2.286	20.167	8.822	PASS
Positio n 8	0.250	0.080	-0.217	2.354	20.159	8.564	PASS
Center	0.000	0.000	0.000	-2.186	-20.165	9.224	PASS
Positio n 1	0.250	0.080	0.217	-2.380	-19.955	8.383	PASS
Positio n 2	0.250	-0.080	0.217	-2.390	-19.995	8.367	PASS
Positio n 3	-0.250	-0.080	0.217	-2.401	-19.999	8.331	PASS
Positio n 4	-0.250	0.080	0.217	-2.399	-19.952	8.317	PASS
Positio n 5	-0.250	0.080	-0.217	-2.391	-19.990	8.360	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.390	-20.237	8.467	PASS
Positio n 7	0.250	-0.080	-0.217	-2.397	-20.184	8.421	PASS
Positio n 8	0.250	0.080	-0.217	-2.500	-20.263	8.107	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L072

Operator Name: Gordon, Matt

Date: 11/22/2009 Time: 2:06 PM

Actuator Coil Resistance: 6.35 Ohms, PASS

Ambient Temperature: 71.8 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.537

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.510

	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	2.124	20.034	9.433	PASS
Position 1	0.250	0.080	0.217	2.382	19.919	8.361	PASS
Position 2	0.250	-0.080	0.217	2.363	19.992	8.461	PASS
Position 3	-0.250	-0.080	0.217	2.287	19.892	8.698	PASS
Position 4	-0.250	0.080	0.217	2.348	19.899	8.473	PASS
Position 5	-0.250	0.080	-0.217	2.342	20.077	8.573	PASS
Position 6	-0.250	-0.080	-0.217	2.372	20.257	8.539	PASS
Position 7	0.250	-0.080	-0.217	2.299	19.870	8.643	PASS
Position 8	0.250	0.080	-0.217	2.357	20.100	8.527	PASS
Center	0.000	0.000	0.000	-2.138	-20.179	9.437	PASS
Position 1	0.250	0.080	0.217	-2.364	-19.905	8.422	PASS

Position 2	0.250	-0.080	0.217	-2.347	-19.919	8.488	PASS
Position 3	-0.250	-0.080	0.217	-2.336	-19.907	8.522	PASS
Position 4	-0.250	0.080	0.217	-2.339	-19.911	8.514	PASS
Position 5	-0.250	0.080	-0.217	-2.395	-19.926	8.321	PASS
Position 6	-0.250	-0.080	-0.217	-2.338	-19.923	8.521	PASS
Position 7	0.250	-0.080	-0.217	-2.331	-20.058	8.605	PASS
Position 8	0.250	0.080	-0.217	-2.382	-19.992	8.393	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L073

Operator Name: Gordon, Matt

Date: 11/22/2009 Time: 1:47 PM

Actuator Coil Resistance: 6.34 Ohms, PASS

Ambient Temperature: 71.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.528

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
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Center	0.000	0.000	0.000	2.126	20.029	9.421	PASS
Positio n 1	0.250	0.080	0.217	2.383	20.002	8.393	PASS
Positio n 2	0.250	-0.080	0.217	2.318	20.112	8.677	PASS
Positio n 3	-0.250	-0.080	0.217	2.332	20.014	8.583	PASS
Positio n 4	-0.250	0.080	0.217	2.363	19.900	8.421	PASS
Positio n 5	-0.250	0.080	-0.217	2.388	20.081	8.411	PASS
Positio n 6	-0.250	-0.080	-0.217	2.290	19.882	8.683	PASS
Positio n 7	0.250	-0.080	-0.217	2.323	19.853	8.545	PASS
Positio n 8	0.250	0.080	-0.217	2.369	20.064	8.468	PASS
Center	0.000	0.000	0.000	-2.139	-20.190	9.438	PASS
Positio n 1	0.250	0.080	0.217	-2.333	-19.879	8.519	PASS
Positio n 2	0.250	-0.080	0.217	-2.315	-19.987	8.633	PASS
Positio n 3	-0.250	-0.080	0.217	-2.361	-19.908	8.434	PASS
Positio n 4	-0.250	0.080	0.217	-2.337	-19.860	8.498	PASS
Positio n 5	-0.250	0.080	-0.217	-2.390	-19.875	8.315	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.318	-19.916	8.593	PASS
Positio n 7	0.250	-0.080	-0.217	-2.324	-20.040	8.624	PASS
Positio n 8	0.250	0.080	-0.217	-2.383	-19.943	8.368	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L074
Operator Name: Gordon, Matt
Date: 11/23/2009 Time: 9:58 AM
Actuator Coil Resistance: 6.27 Ohms, PASS
Ambient Temperature: 70.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.540
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.508

	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	2.165	20.162	9.312	PASS
Position 1	0.250	0.080	0.217	2.400	19.829	8.263	PASS
Position 2	0.250	-0.080	0.217	2.317	20.066	8.660	PASS
Position 3	-0.250	-0.080	0.217	2.435	19.884	8.166	PASS
Position 4	-0.250	0.080	0.217	2.407	19.998	8.309	PASS
Position 5	-0.250	0.080	-0.217	2.358	19.892	8.437	PASS
Position 6	-0.250	-0.080	-0.217	2.326	19.954	8.578	PASS
Position 7	0.250	-0.080	-0.217	2.374	19.944	8.402	PASS
Position 8	0.250	0.080	-0.217	2.341	19.912	8.506	PASS
Center	0.000	0.000	0.000	-2.141	-19.851	9.272	PASS

Position 1	0.250	0.080	0.217	-2.397	-20.117	8.393	PASS
Position 2	0.250	-0.080	0.217	-2.393	-20.091	8.397	PASS
Position 3	-0.250	-0.080	0.217	-2.382	-20.108	8.442	PASS
Position 4	-0.250	0.080	0.217	-2.387	-20.096	8.418	PASS
Position 5	-0.250	0.080	-0.217	-2.440	-20.112	8.242	PASS
Position 6	-0.250	-0.080	-0.217	-2.342	-20.020	8.549	PASS
Position 7	0.250	-0.080	-0.217	-2.331	-19.944	8.555	PASS
Position 8	0.250	0.080	-0.217	-2.432	-20.074	8.253	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L075
Operator Name: Gordon, Matt
Date: 11/22/2009 Time: 1:30 PM
Actuator Coil Resistance: 6.32 Ohms, PASS
Ambient Temperature: 70.4 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.532
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.506

	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	2.104	19.900	9.460	PASS
Positio n 1	0.250	0.080	0.217	2.502	20.176	8.065	PASS
Positio n 2	0.250	-0.080	0.217	2.463	20.012	8.124	PASS
Positio n 3	-0.250	-0.080	0.217	2.393	19.956	8.339	PASS
Positio n 4	-0.250	0.080	0.217	2.433	20.013	8.225	PASS
Positio n 5	-0.250	0.080	-0.217	2.374	20.014	8.432	PASS
Positio n 6	-0.250	-0.080	-0.217	2.379	20.049	8.427	PASS
Positio n 7	0.250	-0.080	-0.217	2.378	20.053	8.434	PASS
Positio n 8	0.250	0.080	-0.217	2.369	20.050	8.464	PASS
Center	0.000	0.000	0.000	-2.138	-20.068	9.386	PASS
Positio n 1	0.250	0.080	0.217	-2.343	-19.842	8.469	PASS
Positio n 2	0.250	-0.080	0.217	-2.330	-19.958	8.566	PASS
Positio n 3	-0.250	-0.080	0.217	-2.394	-20.112	8.402	PASS
Positio n 4	-0.250	0.080	0.217	-2.384	-20.196	8.471	PASS
Positio n 5	-0.250	0.080	-0.217	-2.385	-19.858	8.327	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.452	-19.870	8.104	PASS
Positio n 7	0.250	-0.080	-0.217	-2.433	-20.053	8.242	PASS
Positio n 8	0.250	0.080	-0.217	-2.388	-19.899	8.333	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L076
 Operator Name: Gordon, Matt
 Date: 11/19/2009 Time: 1:03 PM
 Actuator Coil Resistance: 6.31 Ohms, PASS
 Ambient Temperature: 71.3 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.534
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.508

	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	2.180	20.252	9.290	PASS
Position 1	0.250	0.080	0.217	2.470	19.942	8.075	PASS
Position 2	0.250	-0.080	0.217	2.410	20.072	8.328	PASS
Position 3	-0.250	-0.080	0.217	2.466	19.892	8.068	PASS
Position 4	-0.250	0.080	0.217	2.346	19.936	8.499	PASS
Position 5	-0.250	0.080	-0.217	2.390	20.063	8.394	PASS
Position 6	-0.250	-0.080	-0.217	2.281	20.048	8.790	PASS
Position 7	0.250	-0.080	-0.217	2.364	20.047	8.480	PASS
Position 8	0.250	0.080	-0.217	2.370	20.079	8.472	PASS

Center	0.000	0.000	0.000	-2.116	-19.955	9.432	PASS
Position 1	0.250	0.080	0.217	-2.360	-20.079	8.506	PASS
Position 2	0.250	-0.080	0.217	-2.358	-20.111	8.528	PASS
Position 3	-0.250	-0.080	0.217	-2.354	-20.144	8.557	PASS
Position 4	-0.250	0.080	0.217	-2.359	-20.057	8.504	PASS
Position 5	-0.250	0.080	-0.217	-2.367	-20.041	8.468	PASS
Position 6	-0.250	-0.080	-0.217	-2.472	-19.827	8.021	PASS
Position 7	0.250	-0.080	-0.217	-2.417	-19.999	8.273	PASS
Position 8	0.250	0.080	-0.217	-2.376	-20.140	8.476	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L077
Operator Name: Gordon, Matt
Date: 11/19/2009 Time: 10:40 AM
Actuator Coil Resistance: 6.34 Ohms, PASS
Ambient Temperature: 70.7 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.529
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.503

	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	2.106	20.123	9.554	PASS
Positio n 1	0.250	0.080	0.217	2.384	20.211	8.477	PASS
Positio n 2	0.250	-0.080	0.217	2.419	20.196	8.348	PASS
Positio n 3	-0.250	-0.080	0.217	2.443	20.029	8.199	PASS
Positio n 4	-0.250	0.080	0.217	2.421	20.220	8.353	PASS
Positio n 5	-0.250	0.080	-0.217	2.341	20.300	8.672	PASS
Positio n 6	-0.250	-0.080	-0.217	2.340	20.344	8.694	PASS
Positio n 7	0.250	-0.080	-0.217	2.314	20.270	8.762	PASS
Positio n 8	0.250	0.080	-0.217	2.325	20.280	8.724	PASS
Center	0.000	0.000	0.000	-2.147	-20.254	9.434	PASS
Positio n 1	0.250	0.080	0.217	-2.347	-20.059	8.547	PASS
Positio n 2	0.250	-0.080	0.217	-2.344	-19.984	8.527	PASS
Positio n 3	-0.250	-0.080	0.217	-2.353	-20.025	8.511	PASS
Positio n 4	-0.250	0.080	0.217	-2.374	-20.448	8.612	PASS
Positio n 5	-0.250	0.080	-0.217	-2.398	-20.010	8.344	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.480	-20.001	8.064	PASS
Positio n 7	0.250	-0.080	-0.217	-2.298	-20.203	8.792	PASS
Positio n 8	0.250	0.080	-0.217	-2.397	-19.959	8.325	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L078
 Operator Name: Gordon, Matt
 Date: 11/22/2009 Time: 12:32 PM
 Actuator Coil Resistance: 6.31 Ohms, PASS
 Ambient Temperature: 71.5 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.525
 Y Travel Limit (inches): 0.206
 Z Travel Limit (inches): 0.505

	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	2.119	20.085	9.476	PASS
Position 1	0.250	0.080	0.217	2.365	19.842	8.392	PASS
Position 2	0.250	-0.080	0.217	2.300	20.040	8.713	PASS
Position 3	-0.250	-0.080	0.217	2.366	19.937	8.427	PASS
Position 4	-0.250	0.080	0.217	2.395	20.081	8.386	PASS
Position 5	-0.250	0.080	-0.217	2.307	19.924	8.637	PASS
Position 6	-0.250	-0.080	-0.217	2.308	20.015	8.673	PASS
Position 7	0.250	-0.080	-0.217	2.315	20.004	8.640	PASS

Position 8	0.250	0.080	-0.217	2.308	19.924	8.632	PASS
Center	0.000	0.000	0.000	-2.090	-19.828	9.486	PASS
Position 1	0.250	0.080	0.217	-2.340	-19.977	8.539	PASS
Position 2	0.250	-0.080	0.217	-2.328	-20.105	8.637	PASS
Position 3	-0.250	-0.080	0.217	-2.347	-19.997	8.520	PASS
Position 4	-0.250	0.080	0.217	-2.334	-19.896	8.525	PASS
Position 5	-0.250	0.080	-0.217	-2.352	-20.138	8.561	PASS
Position 6	-0.250	-0.080	-0.217	-2.290	-20.084	8.771	PASS
Position 7	0.250	-0.080	-0.217	-2.315	-19.873	8.584	PASS
Position 8	0.250	0.080	-0.217	-2.385	-20.156	8.451	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L079
Operator Name: Gordon, Matt
Date: 11/22/2009 Time: 12:11 PM
Actuator Coil Resistance: 6.35 Ohms, PASS
Ambient Temperature: 71.5 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.529

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	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	2.131	20.042	9.403	PASS
Position 1	0.250	0.080	0.217	2.443	19.868	8.132	PASS
Position 2	0.250	-0.080	0.217	2.345	20.039	8.544	PASS
Position 3	-0.250	-0.080	0.217	2.349	20.082	8.549	PASS
Position 4	-0.250	0.080	0.217	2.440	19.904	8.158	PASS
Position 5	-0.250	0.080	-0.217	2.290	19.935	8.704	PASS
Position 6	-0.250	-0.080	-0.217	2.318	19.980	8.618	PASS
Position 7	0.250	-0.080	-0.217	2.320	19.962	8.606	PASS
Position 8	0.250	0.080	-0.217	2.332	19.977	8.567	PASS
Center	0.000	0.000	0.000	-2.131	-20.200	9.480	PASS
Position 1	0.250	0.080	0.217	-2.328	-19.855	8.527	PASS
Position 2	0.250	-0.080	0.217	-2.338	-19.941	8.530	PASS
Position 3	-0.250	-0.080	0.217	-2.336	-19.906	8.522	PASS
Position 4	-0.250	0.080	0.217	-2.336	-19.800	8.478	PASS
Position 5	-0.250	0.080	-0.217	-2.383	-19.879	8.342	PASS
Position 6	-0.250	-0.080	-0.217	-2.297	-20.108	8.753	PASS
Position 7	0.250	-0.080	-0.217	-2.280	-20.002	8.773	PASS
Position 8	0.250	0.080	-0.217	-2.427	-19.941	8.218	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L080
 Operator Name: Gordon, Matt
 Date: 11/19/2009 Time: 10:15 AM
 Actuator Coil Resistance: 6.33 Ohms, PASS
 Ambient Temperature: 69.7 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.533
 Y Travel Limit (inches): 0.207
 Z Travel Limit (inches): 0.503

	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	2.113	20.057	9.490	PASS
Position 1	0.250	0.080	0.217	2.467	20.063	8.133	PASS
Position 2	0.250	-0.080	0.217	2.430	20.187	8.308	PASS
Position 3	-0.250	-0.080	0.217	2.403	20.000	8.322	PASS
Position 4	-0.250	0.080	0.217	2.440	20.050	8.217	PASS
Position 5	-0.250	0.080	-0.217	2.370	20.287	8.561	PASS
Position 6	-0.250	-0.080	-0.217	2.341	19.967	8.530	PASS

Positio n 7	0.250	-0.080	-0.217	2.323	19.929	8.581	PASS
Positio n 8	0.250	0.080	-0.217	2.380	20.300	8.530	PASS
Center	0.000	0.000	0.000	-2.127	-20.233	9.511	PASS
Positio n 1	0.250	0.080	0.217	-2.326	-19.873	8.545	PASS
Positio n 2	0.250	-0.080	0.217	-2.317	-19.930	8.602	PASS
Positio n 3	-0.250	-0.080	0.217	-2.324	-19.961	8.589	PASS
Positio n 4	-0.250	0.080	0.217	-2.325	-19.857	8.541	PASS
Positio n 5	-0.250	0.080	-0.217	-2.421	-19.997	8.258	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.419	-20.064	8.295	PASS
Positio n 7	0.250	-0.080	-0.217	-2.403	-20.096	8.362	PASS
Positio n 8	0.250	0.080	-0.217	-2.403	-19.974	8.310	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L081
Operator Name: Gordon, Matt
Date: 11/22/2009 Time: 10:52 AM
Actuator Coil Resistance: 6.30 Ohms, PASS
Ambient Temperature: 70.4 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.528

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.505

	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	2.150	19.818	9.218	PASS
Position 1	0.250	0.080	0.217	2.428	19.954	8.219	PASS
Position 2	0.250	-0.080	0.217	2.413	19.961	8.273	PASS
Position 3	-0.250	-0.080	0.217	2.280	20.037	8.789	PASS
Position 4	-0.250	0.080	0.217	2.393	19.929	8.327	PASS
Position 5	-0.250	0.080	-0.217	2.306	19.965	8.658	PASS
Position 6	-0.250	-0.080	-0.217	2.446	20.049	8.196	PASS
Position 7	0.250	-0.080	-0.217	2.403	20.037	8.338	PASS
Position 8	0.250	0.080	-0.217	2.363	19.973	8.454	PASS
Center	0.000	0.000	0.000	-2.134	-19.953	9.351	PASS
Position 1	0.250	0.080	0.217	-2.389	-20.122	8.423	PASS
Position 2	0.250	-0.080	0.217	-2.331	-19.873	8.526	PASS
Position 3	-0.250	-0.080	0.217	-2.346	-19.890	8.477	PASS
Position 4	-0.250	0.080	0.217	-2.372	-20.080	8.467	PASS
Position 5	-0.250	0.080	-0.217	-2.396	-19.846	8.282	PASS
Position 6	-0.250	-0.080	-0.217	-2.295	-20.065	8.745	PASS
Position 7	0.250	-0.080	-0.217	-2.328	-19.881	8.538	PASS

Position 8	0.250	0.080	-0.217	-2.399	-19.844	8.270	PASS
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LIGO Production Large Actuator Test Report

Actuator Serial #: L082

Operator Name: Gordon, Matt

Date: 11/22/2009 Time: 10:34 AM

Actuator Coil Resistance: 6.35 Ohms, PASS

Ambient Temperature: 70.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

Y Travel Limit (inches): 0.205

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	2.107	20.154	9.565	PASS
Position 1	0.250	0.080	0.217	2.424	20.136	8.305	PASS
Position 2	0.250	-0.080	0.217	2.398	20.067	8.369	PASS
Position 3	-0.250	-0.080	0.217	2.394	20.175	8.426	PASS
Position 4	-0.250	0.080	0.217	2.403	20.018	8.329	PASS
Position 5	-0.250	0.080	-0.217	2.298	20.076	8.736	PASS

Positio n 6	-0.250	-0.080	-0.217	2.308	20.113	8.716	PASS
Positio n 7	0.250	-0.080	-0.217	2.297	20.092	8.747	PASS
Positio n 8	0.250	0.080	-0.217	2.309	20.085	8.700	PASS
Center	0.000	0.000	0.000	-2.090	-19.879	9.512	PASS
Positio n 1	0.250	0.080	0.217	-2.348	-20.003	8.519	PASS
Positio n 2	0.250	-0.080	0.217	-2.340	-20.017	8.556	PASS
Positio n 3	-0.250	-0.080	0.217	-2.349	-20.052	8.535	PASS
Positio n 4	-0.250	0.080	0.217	-2.367	-19.977	8.440	PASS
Positio n 5	-0.250	0.080	-0.217	-2.340	-19.824	8.472	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.399	-19.964	8.321	PASS
Positio n 7	0.250	-0.080	-0.217	-2.334	-20.077	8.602	PASS
Positio n 8	0.250	0.080	-0.217	-2.343	-19.933	8.507	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L083
Operator Name: Gordon, Matt

Date: 11/21/2009 Time: 5:52 PM
 Actuator Coil Resistance: 6.27 Ohms, PASS
 Ambient Temperature: 69.7 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.527
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.508

	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	1.998	19.985	10.003	PASS
Positio n 1	0.250	0.080	0.217	2.420	20.090	8.303	PASS
Positio n 2	0.250	-0.080	0.217	2.204	20.040	9.091	PASS
Positio n 3	-0.250	-0.080	0.217	2.491	20.085	8.063	PASS
Positio n 4	-0.250	0.080	0.217	2.260	19.838	8.779	PASS
Positio n 5	-0.250	0.080	-0.217	2.356	20.035	8.502	PASS
Positio n 6	-0.250	-0.080	-0.217	2.390	20.132	8.423	PASS
Positio n 7	0.250	-0.080	-0.217	2.393	20.128	8.412	PASS
Positio n 8	0.250	0.080	-0.217	2.304	20.046	8.699	PASS
Center	0.000	0.000	0.000	-2.130	-20.149	9.458	PASS
Positio n 1	0.250	0.080	0.217	-2.336	-19.987	8.558	PASS
Positio n 2	0.250	-0.080	0.217	-2.347	-20.059	8.548	PASS
Positio n 3	-0.250	-0.080	0.217	-2.353	-20.042	8.516	PASS
Positio n 4	-0.250	0.080	0.217	-2.347	-19.965	8.505	PASS
Positio n 5	-0.250	0.080	-0.217	-2.432	-19.992	8.219	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.333	-20.094	8.613	PASS

Position 7	0.250	-0.080	-0.217	-2.344	-19.920	8.499	PASS
Position 8	0.250	0.080	-0.217	-2.327	-19.977	8.586	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L084

Operator Name: Gordon, Matt

Date: 11/22/2009 Time: 10:15 AM

Actuator Coil Resistance: 6.35 Ohms, PASS

Ambient Temperature: 69.7 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.523

Y Travel Limit (inches): 0.204

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	2.111	20.054	9.500	PASS
Position 1	0.250	0.080	0.217	2.326	19.924	8.565	PASS
Position 2	0.250	-0.080	0.217	2.334	20.214	8.661	PASS
Position 3	-0.250	-0.080	0.217	2.459	20.173	8.204	PASS
Position 4	-0.250	0.080	0.217	2.343	19.939	8.509	PASS

Positio n 5	-0.250	0.080	-0.217	2.291	20.133	8.787	PASS
Positio n 6	-0.250	-0.080	-0.217	2.331	20.199	8.666	PASS
Positio n 7	0.250	-0.080	-0.217	2.212	20.181	9.125	PASS
Positio n 8	0.250	0.080	-0.217	2.342	20.135	8.596	PASS
Center	0.000	0.000	0.000	-2.157	-20.191	9.362	PASS
Positio n 1	0.250	0.080	0.217	-2.352	-20.015	8.511	PASS
Positio n 2	0.250	-0.080	0.217	-2.353	-20.116	8.548	PASS
Positio n 3	-0.250	-0.080	0.217	-2.351	-20.110	8.554	PASS
Positio n 4	-0.250	0.080	0.217	-2.342	-19.999	8.541	PASS
Positio n 5	-0.250	0.080	-0.217	-2.398	-19.989	8.335	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.350	-20.118	8.561	PASS
Positio n 7	0.250	-0.080	-0.217	-2.489	-20.081	8.067	PASS
Positio n 8	0.250	0.080	-0.217	-2.406	-19.914	8.277	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L085

Operator Name: Gordon, Matt

Date: 11/21/2009 Time: 4:32 PM

Actuator Coil Resistance: 6.26 Ohms, PASS

Ambient Temperature: 70.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.532

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.140	20.198	9.437	PASS
Positi on 1	0.250	0.080	0.217	2.364	20.133	8.515	PASS
Positi on 2	0.250	-0.080	0.217	2.322	20.107	8.660	PASS
Positi on 3	-0.250	-0.080	0.217	2.316	20.053	8.658	PASS
Positi on 4	-0.250	0.080	0.217	2.385	19.971	8.375	PASS
Positi on 5	-0.250	0.080	-0.217	2.403	20.228	8.418	PASS
Positi on 6	-0.250	-0.080	-0.217	2.294	19.912	8.680	PASS
Positi on 7	0.250	-0.080	-0.217	2.342	19.900	8.498	PASS
Positi on 8	0.250	0.080	-0.217	2.328	19.889	8.543	PASS
Cente r	0.000	0.000	0.000	-2.182	-19.89 0	9.116	PASS

Position 1	0.250	0.080	0.217	-2.440	-20.182	8.270	PASS
Position 2	0.250	-0.080	0.217	-2.374	-19.877	8.372	PASS
Position 3	-0.250	-0.080	0.217	-2.366	-19.889	8.405	PASS
Position 4	-0.250	0.080	0.217	-2.418	-20.133	8.328	PASS
Position 5	-0.250	0.080	-0.217	-2.464	-19.917	8.082	PASS
Position 6	-0.250	-0.080	-0.217	-2.413	-20.074	8.319	PASS
Position 7	0.250	-0.080	-0.217	-2.331	-20.081	8.616	PASS
Position 8	0.250	0.080	-0.217	-2.461	-20.045	8.145	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L086
 Operator Name: Gordon, Matt
 Date: 11/21/2009 Time: 4:28 PM

Actuator Coil Resistance: 6.26 Ohms, PASS

Ambient Temperature: 70.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.534

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	-0.003	0.004	-1.283	FAIL
Position 1	0.250	0.080	0.217	2.482	19.922	8.026	PASS
Position 2	0.250	-0.080	0.217	2.430	20.027	8.242	PASS
Position 3	-0.250	-0.080	0.217	2.492	19.903	7.986	PASS
Position 4	-0.250	0.080	0.217	2.487	19.875	7.991	PASS
Position 5	-0.250	0.080	-0.217	2.328	20.171	8.664	PASS
Position 6	-0.250	-0.080	-0.217	2.379	19.919	8.372	PASS
Position 7	0.250	-0.080	-0.217	2.358	19.897	8.438	PASS
Position 8	0.250	0.080	-0.217	2.391	20.186	8.444	PASS
Center	0.000	0.000	0.000	-2.107	-20.176	9.575	PASS
Position 1	0.250	0.080	0.217	-2.313	-19.856	8.583	PASS
Position 2	0.250	-0.080	0.217	-2.361	-20.159	8.540	PASS
Position 3	-0.250	-0.080	0.217	-2.322	-19.861	8.553	PASS
Position 4	-0.250	0.080	0.217	-2.307	-19.896	8.625	PASS
Position 5	-0.250	0.080	-0.217	-2.408	-20.228	8.400	PASS
Position 6	-0.250	-0.080	-0.217	-2.457	-20.140	8.196	PASS

Position 7	0.250	-0.080	-0.217	-2.407	-19.966	8.295	PASS
Position 8	0.250	0.080	-0.217	-2.404	-20.119	8.367	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L087

Operator Name: Gordon, Matt

Date: 11/22/2009 Time: 11:48 AM

Actuator Coil Resistance: 6.28 Ohms, PASS

Ambient Temperature: 71.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.526

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.508

	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	2.159	19.981	9.253	PASS
Position 1	0.250	0.080	0.217	2.459	20.163	8.200	PASS
Position 2	0.250	-0.080	0.217	2.437	20.008	8.210	PASS
Position 3	-0.250	-0.080	0.217	2.462	20.063	8.150	PASS
Position 4	-0.250	0.080	0.217	2.448	20.043	8.187	PASS

Positio n 5	-0.250	0.080	-0.217	2.381	19.866	8.344	PASS
Positio n 6	-0.250	-0.080	-0.217	2.319	19.896	8.581	PASS
Positio n 7	0.250	-0.080	-0.217	2.412	19.867	8.237	PASS
Positio n 8	0.250	0.080	-0.217	2.397	19.871	8.289	PASS
Center	0.000	0.000	0.000	-2.192	-20.018	9.131	PASS
Positio n 1	0.250	0.080	0.217	-2.386	-20.092	8.420	PASS
Positio n 2	0.250	-0.080	0.217	-2.385	-20.071	8.416	PASS
Positio n 3	-0.250	-0.080	0.217	-2.341	-20.184	8.621	PASS
Positio n 4	-0.250	0.080	0.217	-2.388	-20.045	8.392	PASS
Positio n 5	-0.250	0.080	-0.217	-2.448	-19.898	8.129	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.387	-20.118	8.430	PASS
Positio n 7	0.250	-0.080	-0.217	-2.408	-19.952	8.285	PASS
Positio n 8	0.250	0.080	-0.217	-2.490	-19.908	7.996	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L088
 Operator Name: Gordon, Matt
 Date: 11/21/2009 Time: 4:48 PM
 Actuator Coil Resistance: 6.31 Ohms, PASS
 Ambient Temperature: 70.0 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.530
 Y Travel Limit (inches): 0.206
 Z Travel Limit (inches): 0.506

	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	2.095	19.996	9.543	PASS
Position 1	0.250	0.080	0.217	2.412	19.987	8.285	PASS
Position 2	0.250	-0.080	0.217	2.479	20.195	8.148	PASS
Position 3	-0.250	-0.080	0.217	2.336	20.208	8.652	PASS
Position 4	-0.250	0.080	0.217	2.394	20.165	8.425	PASS
Position 5	-0.250	0.080	-0.217	2.300	19.857	8.632	PASS
Position 6	-0.250	-0.080	-0.217	2.283	19.891	8.711	PASS
Position 7	0.250	-0.080	-0.217	2.309	19.878	8.608	PASS
Position 8	0.250	0.080	-0.217	2.304	19.866	8.623	PASS
Center	0.000	0.000	0.000	-2.153	-20.133	9.349	PASS
Position 1	0.250	0.080	0.217	-2.337	-19.872	8.502	PASS
Position 2	0.250	-0.080	0.217	-2.339	-19.922	8.519	PASS
Position 3	-0.250	-0.080	0.217	-2.341	-19.923	8.509	PASS
Position 4	-0.250	0.080	0.217	-2.347	-19.848	8.458	PASS
Position 5	-0.250	0.080	-0.217	-2.390	-20.022	8.379	PASS

Position 6	-0.250	-0.080	-0.217	-2.334	-19.843	8.501	PASS
Position 7	0.250	-0.080	-0.217	-2.397	-20.139	8.403	PASS
Position 8	0.250	0.080	-0.217	-2.370	-19.972	8.427	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L089

Operator Name: Gordon, Matt

Date: 11/21/2009 Time: 5:14 PM

Actuator Coil Resistance: 6.24 Ohms, PASS

Ambient Temperature: 70.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.530

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	2.105	19.858	9.434	PASS
Position 1	0.250	0.075	0.215	2.433	20.137	8.277	PASS
Position 2	0.250	-0.075	0.215	2.474	19.958	8.067	PASS
Position 3	-0.250	-0.075	0.215	2.471	19.972	8.082	PASS

Position 4	-0.250	0.075	0.215	2.434	19.821	8.142	PASS
Position 5	-0.250	0.075	-0.215	2.397	20.145	8.404	PASS
Position 6	-0.250	-0.075	-0.215	2.383	20.202	8.478	PASS
Position 7	0.250	-0.075	-0.215	2.379	20.175	8.481	PASS
Position 8	0.250	0.075	-0.215	2.371	20.164	8.504	PASS
Center	0.000	0.000	0.000	-2.135	-19.992	9.366	PASS
Position 1	0.250	0.075	0.215	-2.401	-20.112	8.378	PASS
Position 2	0.250	-0.075	0.215	-2.371	-20.212	8.526	PASS
Position 3	-0.250	-0.075	0.215	-2.361	-20.185	8.548	PASS
Position 4	-0.250	0.075	0.215	-2.390	-19.976	8.357	PASS
Position 5	-0.250	0.075	-0.215	-2.447	-20.196	8.255	PASS
Position 6	-0.250	-0.075	-0.215	-2.336	-19.989	8.556	PASS
Position 7	0.250	-0.075	-0.215	-2.344	-19.825	8.456	PASS
Position 8	0.250	0.075	-0.215	-2.425	-20.174	8.318	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L0091

Operator Name: Gordon, Matt

Date: 11/21/2009 Time: 11:30 AM

Actuator Coil Resistance: 6.23 Ohms, PASS

Ambient Temperature: 69.5 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.524

Y Travel Limit (inches): 0.206

Z Travel Limit (inches): 0.505

	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	2.138	19.902	9.307	PASS
Position 1	0.250	0.080	0.217	2.380	20.038	8.420	PASS
Position 2	0.250	-0.080	0.217	2.535	19.943	7.867	PASS
Position 3	-0.250	-0.080	0.217	2.442	20.063	8.217	PASS
Position 4	-0.250	0.080	0.217	2.434	20.188	8.295	PASS
Position 5	-0.250	0.080	-0.217	2.350	19.948	8.489	PASS
Position 6	-0.250	-0.080	-0.217	2.347	20.049	8.541	PASS
Position 7	0.250	-0.080	-0.217	2.338	20.040	8.573	PASS
Position 8	0.250	0.080	-0.217	2.363	19.948	8.443	PASS
Center	0.000	0.000	0.000	-2.153	-20.004	9.292	PASS
Position 1	0.250	0.080	0.217	-2.397	-20.173	8.416	PASS
Position 2	0.250	-0.080	0.217	-2.396	-20.291	8.467	PASS
Position 3	-0.250	-0.080	0.217	-2.405	-20.116	8.364	PASS

Position 4	-0.250	0.080	0.217	-2.398	-20.106	8.383	PASS
Position 5	-0.250	0.080	-0.217	-2.447	-20.010	8.176	PASS
Position 6	-0.250	-0.080	-0.217	-2.343	-20.064	8.562	PASS
Position 7	0.250	-0.080	-0.217	-2.347	-20.063	8.549	PASS
Position 8	0.250	0.080	-0.217	-2.448	-20.089	8.207	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L092

Operator Name: Gordon, Matt

Date: 11/19/2009 Time: 9:41 AM

Actuator Coil Resistance: 6.28 Ohms, PASS

Ambient Temperature: 67.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.539

Y Travel Limit (inches): 0.206

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	2.094	20.091	9.595	PASS
Position 1	0.250	0.080	0.217	2.387	20.164	8.445	PASS

Positio n 2	0.250	-0.080	0.217	2.535	20.259	7.993	PASS
Positio n 3	-0.250	-0.080	0.217	2.455	20.207	8.232	PASS
Positio n 4	-0.250	0.080	0.217	2.389	20.124	8.424	PASS
Positio n 5	-0.250	0.080	-0.217	2.355	20.312	8.626	PASS
Positio n 6	-0.250	-0.080	-0.217	2.317	19.977	8.622	PASS
Positio n 7	0.250	-0.080	-0.217	2.237	19.956	8.919	PASS
Positio n 8	0.250	0.080	-0.217	2.282	19.943	8.741	PASS
Center	0.000	0.000	0.000	-2.144	-20.234	9.436	PASS
Positio n 1	0.250	0.080	0.217	-2.350	-19.957	8.491	PASS
Positio n 2	0.250	-0.080	0.217	-2.386	-20.322	8.517	PASS
Positio n 3	-0.250	-0.080	0.217	-2.348	-19.984	8.512	PASS
Positio n 4	-0.250	0.080	0.217	-2.341	-19.976	8.533	PASS
Positio n 5	-0.250	0.080	-0.217	-2.454	-20.133	8.205	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.411	-19.944	8.271	PASS
Positio n 7	0.250	-0.080	-0.217	-2.281	-19.961	8.750	PASS
Positio n 8	0.250	0.080	-0.217	-2.396	-20.261	8.457	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L0093

Operator Name: Gordon, Matt

Date: 11/21/2009 Time: 11:03 AM

Actuator Coil Resistance: 6.29 Ohms, PASS

Ambient Temperature: 68.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.529

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.504

	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	2.090	20.064	9.600	PASS
Position 1	0.250	0.080	0.217	2.412	20.182	8.366	PASS
Position 2	0.250	-0.080	0.217	2.338	20.068	8.584	PASS
Position 3	-0.250	-0.080	0.217	2.361	19.946	8.448	PASS
Position 4	-0.250	0.080	0.217	2.358	20.090	8.519	PASS
Position 5	-0.250	0.080	-0.217	2.349	20.131	8.569	PASS
Position 6	-0.250	-0.080	-0.217	2.337	20.143	8.619	PASS
Position 7	0.250	-0.080	-0.217	2.358	20.140	8.542	PASS
Position 8	0.250	0.080	-0.217	2.358	20.165	8.552	PASS
Center	0.000	0.000	0.000	-2.143	-20.185	9.421	PASS
Position 1	0.250	0.080	0.217	-2.331	-20.141	8.642	PASS
Position 2	0.250	-0.080	0.217	-2.342	-20.073	8.571	PASS

Position 3	-0.250	-0.080	0.217	-2.336	-20.096	8.603	PASS
Position 4	-0.250	0.080	0.217	-2.342	-20.108	8.585	PASS
Position 5	-0.250	0.080	-0.217	-2.441	-20.050	8.214	PASS
Position 6	-0.250	-0.080	-0.217	-2.346	-20.145	8.588	PASS
Position 7	0.250	-0.080	-0.217	-2.441	-20.106	8.238	PASS
Position 8	0.250	0.080	-0.217	-2.346	-20.068	8.554	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L0094

Operator Name: Gordon, Matt

Date: 11/20/2009 Time: 5:22 PM

Actuator Coil Resistance: 6.34 Ohms, PASS

Ambient Temperature: 71.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.530

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.508

	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	2.149	20.116	9.360	PASS

Positio n 1	0.250	0.080	0.217	2.450	20.057	8.186	PASS
Positio n 2	0.250	-0.080	0.217	2.394	20.060	8.380	PASS
Positio n 3	-0.250	-0.080	0.217	2.412	19.964	8.278	PASS
Positio n 4	-0.250	0.080	0.217	2.399	20.205	8.421	PASS
Positio n 5	-0.250	0.080	-0.217	2.345	20.269	8.642	PASS
Positio n 6	-0.250	-0.080	-0.217	2.320	19.940	8.594	PASS
Positio n 7	0.250	-0.080	-0.217	2.358	20.321	8.617	PASS
Positio n 8	0.250	0.080	-0.217	2.305	20.284	8.800	PASS
Center	0.000	0.000	0.000	-2.135	-20.258	9.488	PASS
Positio n 1	0.250	0.080	0.217	-2.345	-20.046	8.549	PASS
Positio n 2	0.250	-0.080	0.217	-2.332	-20.093	8.615	PASS
Positio n 3	-0.250	-0.080	0.217	-2.342	-20.129	8.595	PASS
Positio n 4	-0.250	0.080	0.217	-2.323	-20.007	8.611	PASS
Positio n 5	-0.250	0.080	-0.217	-2.378	-19.943	8.387	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.325	-20.055	8.624	PASS
Positio n 7	0.250	-0.080	-0.217	-2.333	-20.035	8.588	PASS
Positio n 8	0.250	0.080	-0.217	-2.433	-20.038	8.237	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L095
Operator Name: Gordon, Matt
Date: 11/22/2009 Time: 11:21 AM
Actuator Coil Resistance: 6.27 Ohms, PASS
Ambient Temperature: 70.7 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.524
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	2.118	19.874	9.382	PASS
Position 1	0.250	0.080	0.217	2.401	19.915	8.293	PASS
Position 2	0.250	-0.080	0.217	2.406	20.033	8.325	PASS
Position 3	-0.250	-0.080	0.217	2.363	19.965	8.448	PASS
Position 4	-0.250	0.080	0.217	2.451	19.903	8.121	PASS
Position 5	-0.250	0.080	-0.217	2.317	20.167	8.704	PASS
Position 6	-0.250	-0.080	-0.217	2.342	19.912	8.502	PASS
Position 7	0.250	-0.080	-0.217	2.297	19.891	8.661	PASS
Position 8	0.250	0.080	-0.217	2.297	19.802	8.619	PASS
Center	0.000	0.000	0.000	-2.152	-20.047	9.315	PASS
Position 1	0.250	0.080	0.217	-2.390	-20.095	8.407	PASS

Position 2	0.250	-0.080	0.217	-2.388	-20.177	8.448	PASS
Position 3	-0.250	-0.080	0.217	-2.341	-19.827	8.468	PASS
Position 4	-0.250	0.080	0.217	-2.389	-20.050	8.393	PASS
Position 5	-0.250	0.080	-0.217	-2.357	-19.984	8.480	PASS
Position 6	-0.250	-0.080	-0.217	-2.326	-19.915	8.563	PASS
Position 7	0.250	-0.080	-0.217	-2.333	-20.031	8.587	PASS
Position 8	0.250	0.080	-0.217	-2.379	-20.141	8.465	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L096

Operator Name: Gordon, Matt

Date: 11/23/2009 Time: 3:50 PM

Actuator Coil Resistance: 6.26 Ohms, PASS

Ambient Temperature: 71.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.530

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
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Center	0.000	0.000	0.000	2.166	19.838	9.157	PASS
Positio n 1	0.250	0.080	0.217	2.432	19.970	8.210	PASS
Positio n 2	0.250	-0.080	0.217	2.457	20.105	8.181	PASS
Positio n 3	-0.250	-0.080	0.217	2.483	19.833	7.988	PASS
Positio n 4	-0.250	0.080	0.217	2.370	20.083	8.475	PASS
Positio n 5	-0.250	0.080	-0.217	2.415	19.910	8.244	PASS
Positio n 6	-0.250	-0.080	-0.217	2.402	19.955	8.308	PASS
Positio n 7	0.250	-0.080	-0.217	2.347	19.957	8.502	PASS
Positio n 8	0.250	0.080	-0.217	2.441	19.943	8.168	PASS
Center	0.000	0.000	0.000	-2.198	-19.963	9.082	PASS
Positio n 1	0.250	0.080	0.217	-2.394	-19.887	8.307	PASS
Positio n 2	0.250	-0.080	0.217	-2.404	-19.854	8.260	PASS
Positio n 3	-0.250	-0.080	0.217	-2.398	-19.915	8.306	PASS
Positio n 4	-0.250	0.080	0.217	-2.388	-19.850	8.314	PASS
Positio n 5	-0.250	0.080	-0.217	-2.435	-20.088	8.251	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.402	-20.006	8.330	PASS
Positio n 7	0.250	-0.080	-0.217	-2.386	-20.119	8.434	PASS
Positio n 8	0.250	0.080	-0.217	-2.399	-19.872	8.284	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L097
Operator Name: Gordon, Matt
Date: 1/30/2010 Time: 12:35 PM
Actuator Coil Resistance: 6.33 Ohms, PASS
Ambient Temperature: 65.2 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.527
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.506

	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	2.146	19.916	9.282	PASS
Position 1	0.250	0.080	0.217	2.447	19.968	8.160	PASS
Position 2	0.250	-0.080	0.217	2.381	20.118	8.451	PASS
Position 3	-0.250	-0.080	0.217	2.338	19.854	8.491	PASS
Position 4	-0.250	0.080	0.217	2.446	19.933	8.149	PASS
Position 5	-0.250	0.080	-0.217	2.291	19.831	8.654	PASS
Position 6	-0.250	-0.080	-0.217	2.307	19.994	8.666	PASS
Position 7	0.250	-0.080	-0.217	2.296	19.907	8.670	PASS
Position 8	0.250	0.080	-0.217	2.312	19.834	8.577	PASS
Center	0.000	0.000	0.000	-2.133	-20.056	9.402	PASS

Position 1	0.250	0.080	0.217	-2.397	-20.101	8.385	PASS
Position 2	0.250	-0.080	0.217	-2.392	-20.153	8.424	PASS
Position 3	-0.250	-0.080	0.217	-2.390	-20.140	8.427	PASS
Position 4	-0.250	0.080	0.217	-2.387	-20.048	8.399	PASS
Position 5	-0.250	0.080	-0.217	-2.372	-19.915	8.395	PASS
Position 6	-0.250	-0.080	-0.217	-2.330	-20.079	8.617	PASS
Position 7	0.250	-0.080	-0.217	-2.330	-20.208	8.671	PASS
Position 8	0.250	0.080	-0.217	-2.390	-19.870	8.313	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L098
Operator Name: Gordon, Matt
Date: 1/30/2010 Time: 12:14 PM
Actuator Coil Resistance: 6.34 Ohms, PASS
Ambient Temperature: 65.2 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.534
Y Travel Limit (inches): 0.206

Z Travel Limit (inches): 0.505

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.089	20.197	9.668	PASS
Positi on 1	0.250	0.080	0.217	2.417	19.913	8.238	PASS
Positi on 2	0.250	-0.080	0.217	2.244	20.084	8.949	PASS
Positi on 3	-0.250	-0.080	0.217	2.336	19.837	8.491	PASS
Positi on 4	-0.250	0.080	0.217	2.430	19.836	8.163	PASS
Positi on 5	-0.250	0.080	-0.217	2.399	19.830	8.266	PASS
Positi on 6	-0.250	-0.080	-0.217	2.390	19.903	8.326	PASS
Positi on 7	0.250	-0.080	-0.217	2.313	19.872	8.592	PASS
Positi on 8	0.250	0.080	-0.217	2.309	19.846	8.597	PASS
Cente r	0.000	0.000	0.000	-2.184	-19.90 7	9.113	PASS
Positi on 1	0.250	0.080	0.217	-2.426	-20.15 8	8.310	PASS
Positi on 2	0.250	-0.080	0.217	-2.382	-19.82 4	8.321	PASS
Positi on 3	-0.250	-0.080	0.217	-2.391	-19.82 2	8.291	PASS
Positi on 4	-0.250	0.080	0.217	-2.451	-20.15 0	8.222	PASS

Position 5	-0.250	0.080	-0.217	-2.471	-19.912	8.059	PASS
Position 6	-0.250	-0.080	-0.217	-2.341	-20.054	8.566	PASS
Position 7	0.250	-0.080	-0.217	-2.333	-19.965	8.559	PASS
Position 8	0.250	0.080	-0.217	-2.444	-19.930	8.155	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L099

Operator Name: Gordon, Matt

Date: 1/28/2010 Time: 2:36 PM

Actuator Coil Resistance: 6.46 Ohms, PASS

Ambient Temperature: 72.0 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.528

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.503

	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	2.212	20.140	9.105	PASS

Positio n 1	0.250	0.080	0.217	2.471	19.901	8.053	PASS
Positio n 2	0.250	-0.080	0.217	2.522	19.829	7.862	PASS
Positio n 3	-0.250	-0.080	0.217	2.361	20.214	8.560	PASS
Positio n 4	-0.250	0.080	0.217	2.435	19.882	8.164	PASS
Positio n 5	-0.250	0.080	-0.217	2.406	20.182	8.388	PASS
Positio n 6	-0.250	-0.080	-0.217	2.393	19.836	8.289	PASS
Positio n 7	0.250	-0.080	-0.217	2.498	20.181	8.080	PASS
Positio n 8	0.250	0.080	-0.217	2.379	20.193	8.488	PASS
Center	0.000	0.000	0.000	-2.084	-19.815	9.507	PASS
Positio n 1	0.250	0.080	0.217	-2.326	-20.170	8.673	PASS
Positio n 2	0.250	-0.080	0.217	-2.325	-20.098	8.645	PASS
Positio n 3	-0.250	-0.080	0.217	-2.320	-20.092	8.662	PASS
Positio n 4	-0.250	0.080	0.217	-2.319	-20.121	8.678	PASS
Positio n 5	-0.250	0.080	-0.217	-2.274	-20.169	8.869	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.266	-20.020	8.835	PASS
Positio n 7	0.250	-0.080	-0.217	-2.278	-20.211	8.872	PASS
Positio n 8	0.250	0.080	-0.217	-2.275	-19.999	8.789	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L100
Operator Name: Gordon, Matt
Date: 1/30/2010 Time: 11:57 AM
Actuator Coil Resistance: 6.32 Ohms, PASS
Ambient Temperature: 65.2 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.540
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.505

	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	2.151	19.991	9.294	PASS
Position 1	0.250	0.080	0.217	2.442	19.968	8.177	PASS
Position 2	0.250	-0.080	0.217	2.407	19.821	8.235	PASS
Position 3	-0.250	-0.080	0.217	2.469	20.115	8.146	PASS
Position 4	-0.250	0.080	0.217	2.468	20.011	8.109	PASS
Position 5	-0.250	0.080	-0.217	2.330	19.839	8.515	PASS
Position 6	-0.250	-0.080	-0.217	2.318	19.858	8.568	PASS
Position 7	0.250	-0.080	-0.217	2.436	20.230	8.304	PASS
Position 8	0.250	0.080	-0.217	2.435	20.266	8.323	PASS
Center	0.000	0.000	0.000	-2.195	-20.186	9.196	PASS
Position 1	0.250	0.080	0.217	-2.371	-19.894	8.390	PASS

Position 2	0.250	-0.080	0.217	-2.396	-19.876	8.295	PASS
Position 3	-0.250	-0.080	0.217	-2.397	-19.872	8.289	PASS
Position 4	-0.250	0.080	0.217	-2.415	-19.867	8.227	PASS
Position 5	-0.250	0.080	-0.217	-2.436	-19.964	8.196	PASS
Position 6	-0.250	-0.080	-0.217	-2.439	-19.873	8.150	PASS
Position 7	0.250	-0.080	-0.217	-2.455	-19.852	8.087	PASS
Position 8	0.250	0.080	-0.217	-2.455	-19.841	8.082	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L101

Operator Name: Gordon, Matt

Date: 1/28/2010 Time: 3:42 PM

Actuator Coil Resistance: 6.35 Ohms, PASS

Ambient Temperature: 70.7 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.533

Y Travel Limit (inches): 0.206

Z Travel Limit (inches): 0.508

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/FAIL
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Center	0.000	0.000	0.000	2.231	20.149	9.031	PASS
Positio n 1	0.250	0.080	0.217	2.314	19.910	8.604	PASS
Positio n 2	0.250	-0.080	0.217	2.455	19.976	8.139	PASS
Positio n 3	-0.250	-0.080	0.217	2.431	20.004	8.230	PASS
Positio n 4	-0.250	0.080	0.217	2.493	19.880	7.975	PASS
Positio n 5	-0.250	0.080	-0.217	2.500	20.162	8.065	PASS
Positio n 6	-0.250	-0.080	-0.217	2.302	20.187	8.771	PASS
Positio n 7	0.250	-0.080	-0.217	2.434	20.165	8.285	PASS
Positio n 8	0.250	0.080	-0.217	2.426	20.159	8.308	PASS
Center	0.000	0.000	0.000	-2.174	-19.839	9.124	PASS
Positio n 1	0.250	0.080	0.217	-2.438	-20.184	8.279	PASS
Positio n 2	0.250	-0.080	0.217	-2.440	-20.145	8.256	PASS
Positio n 3	-0.250	-0.080	0.217	-2.437	-20.143	8.266	PASS
Positio n 4	-0.250	0.080	0.217	-2.438	-20.148	8.264	PASS
Positio n 5	-0.250	0.080	-0.217	-2.487	-19.827	7.972	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.493	-20.052	8.044	PASS
Positio n 7	0.250	-0.080	-0.217	-2.493	-20.105	8.065	PASS
Positio n 8	0.250	0.080	-0.217	-2.438	-19.878	8.155	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L102
Operator Name: Gordon, Matt
Date: 1/28/2010 Time: 4:02 PM
Actuator Coil Resistance: 6.42 Ohms, PASS
Ambient Temperature: 70.6 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.534
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.508

	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	2.174	20.031	9.214	PASS
Position 1	0.250	0.080	0.217	2.356	20.013	8.493	PASS
Position 2	0.250	-0.080	0.217	2.432	19.912	8.187	PASS
Position 3	-0.250	-0.080	0.217	2.502	20.168	8.061	PASS
Position 4	-0.250	0.080	0.217	2.485	19.919	8.014	PASS
Position 5	-0.250	0.080	-0.217	2.400	20.091	8.372	PASS
Position 6	-0.250	-0.080	-0.217	2.397	20.093	8.381	PASS
Position 7	0.250	-0.080	-0.217	2.408	20.079	8.339	PASS
Position 8	0.250	0.080	-0.217	2.393	20.106	8.402	PASS
Center	0.000	0.000	0.000	-2.182	-20.139	9.230	PASS

Position 1	0.250	0.080	0.217	-2.384	-20.083	8.424	PASS
Position 2	0.250	-0.080	0.217	-2.387	-19.979	8.371	PASS
Position 3	-0.250	-0.080	0.217	-2.373	-19.977	8.419	PASS
Position 4	-0.250	0.080	0.217	-2.369	-20.062	8.468	PASS
Position 5	-0.250	0.080	-0.217	-2.390	-20.147	8.429	PASS
Position 6	-0.250	-0.080	-0.217	-2.340	-19.954	8.529	PASS
Position 7	0.250	-0.080	-0.217	-2.360	-19.825	8.399	PASS
Position 8	0.250	0.080	-0.217	-2.391	-20.214	8.456	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L103
Operator Name: Gordon, Matt
Date: 1/30/2010 Time: 11:35 AM
Actuator Coil Resistance: 6.58 Ohms, PASS
Ambient Temperature: 65.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.539
Y Travel Limit (inches): 0.205
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	2.139	20.040	9.370	PASS
Position 1	0.250	0.080	0.217	2.344	19.930	8.501	PASS
Position 2	0.250	-0.080	0.217	2.441	19.825	8.121	PASS
Position 3	-0.250	-0.080	0.217	2.396	19.836	8.279	PASS
Position 4	-0.250	0.080	0.217	2.400	20.006	8.336	PASS
Position 5	-0.250	0.080	-0.217	2.388	20.275	8.490	PASS
Position 6	-0.250	-0.080	-0.217	2.350	19.952	8.491	PASS
Position 7	0.250	-0.080	-0.217	2.210	19.927	9.018	PASS
Position 8	0.250	0.080	-0.217	2.310	19.924	8.624	PASS
Center	0.000	0.000	0.000	-2.148	-20.213	9.409	PASS
Position 1	0.250	0.080	0.217	-2.346	-19.938	8.500	PASS
Position 2	0.250	-0.080	0.217	-2.346	-19.968	8.512	PASS
Position 3	-0.250	-0.080	0.217	-2.348	-19.995	8.517	PASS
Position 4	-0.250	0.080	0.217	-2.351	-19.881	8.456	PASS
Position 5	-0.250	0.080	-0.217	-2.400	-20.030	8.347	PASS
Position 6	-0.250	-0.080	-0.217	-2.302	-20.267	8.806	PASS
Position 7	0.250	-0.080	-0.217	-2.259	-20.282	8.978	PASS
Position 8	0.250	0.080	-0.217	-2.275	-19.880	8.737	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L104
 Operator Name: Gordon, Matt
 Date: 1/30/2010 Time: 11:18 AM
 Actuator Coil Resistance: 6.44 Ohms, PASS
 Ambient Temperature: 65.5 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.535
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.510

	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	2.140	20.183	9.432	PASS
Position 1	0.250	0.080	0.217	2.383	19.935	8.366	PASS
Position 2	0.250	-0.080	0.217	2.384	19.836	8.322	PASS
Position 3	-0.250	-0.080	0.217	2.498	19.986	8.002	PASS
Position 4	-0.250	0.080	0.217	2.443	19.906	8.148	PASS
Position 5	-0.250	0.080	-0.217	2.413	19.959	8.270	PASS
Position 6	-0.250	-0.080	-0.217	2.343	20.025	8.547	PASS
Position 7	0.250	-0.080	-0.217	2.360	19.957	8.456	PASS
Position 8	0.250	0.080	-0.217	2.332	19.936	8.548	PASS

Center	0.000	0.000	0.000	-2.148	-19.883	9.257	PASS
Position 1	0.250	0.080	0.217	-2.402	-20.051	8.348	PASS
Position 2	0.250	-0.080	0.217	-2.401	-20.136	8.385	PASS
Position 3	-0.250	-0.080	0.217	-2.375	-20.149	8.484	PASS
Position 4	-0.250	0.080	0.217	-2.391	-20.020	8.372	PASS
Position 5	-0.250	0.080	-0.217	-2.441	-19.879	8.145	PASS
Position 6	-0.250	-0.080	-0.217	-2.348	-20.093	8.557	PASS
Position 7	0.250	-0.080	-0.217	-2.349	-19.828	8.441	PASS
Position 8	0.250	0.080	-0.217	-2.347	-19.900	8.478	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L105
Operator Name: Gordon, Matt
Date: 1/30/2010 Time: 11:00 AM
Actuator Coil Resistance: 6.42 Ohms, PASS
Ambient Temperature: 65.5 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.528
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.501

	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	2.091	19.971	9.552	PASS
Positio n 1	0.250	0.080	0.217	2.408	20.114	8.352	PASS
Positio n 2	0.250	-0.080	0.217	2.415	20.040	8.297	PASS
Positio n 3	-0.250	-0.080	0.217	2.422	19.881	8.209	PASS
Positio n 4	-0.250	0.080	0.217	2.404	20.053	8.343	PASS
Positio n 5	-0.250	0.080	-0.217	2.368	20.150	8.508	PASS
Positio n 6	-0.250	-0.080	-0.217	2.369	20.161	8.510	PASS
Positio n 7	0.250	-0.080	-0.217	2.313	20.143	8.709	PASS
Positio n 8	0.250	0.080	-0.217	2.371	20.149	8.498	PASS
Center	0.000	0.000	0.000	-2.137	-20.140	9.426	PASS
Positio n 1	0.250	0.080	0.217	-2.322	-19.908	8.574	PASS
Positio n 2	0.250	-0.080	0.217	-2.337	-19.951	8.538	PASS
Positio n 3	-0.250	-0.080	0.217	-2.312	-19.978	8.641	PASS
Positio n 4	-0.250	0.080	0.217	-2.323	-19.876	8.556	PASS
Positio n 5	-0.250	0.080	-0.217	-2.331	-19.820	8.504	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.324	-20.119	8.657	PASS
Positio n 7	0.250	-0.080	-0.217	-2.332	-19.940	8.552	PASS
Positio n 8	0.250	0.080	-0.217	-2.388	-19.877	8.323	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L106
 Operator Name: Gordon, Matt
 Date: 1/30/2010 Time: 10:42 AM
 Actuator Coil Resistance: 6.52 Ohms, PASS
 Ambient Temperature: 65.2 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.538
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.504

	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	1.977	19.981	10.107	PASS
Position 1	0.250	0.080	0.217	2.300	20.153	8.763	PASS
Position 2	0.250	-0.080	0.217	2.274	19.892	8.749	PASS
Position 3	-0.250	-0.080	0.217	2.297	19.955	8.687	PASS
Position 4	-0.250	0.080	0.217	2.262	19.882	8.791	PASS
Position 5	-0.250	0.080	-0.217	2.267	20.090	8.862	PASS
Position 6	-0.250	-0.080	-0.217	2.198	20.104	9.147	PASS
Position 7	0.250	-0.080	-0.217	2.280	20.076	8.804	PASS

Position 8	0.250	0.080	-0.217	2.273	20.078	8.834	PASS
Center	0.000	0.000	0.000	-2.240	-20.083	8.966	PASS
Position 1	0.250	0.080	0.217	-2.435	-19.920	8.180	PASS
Position 2	0.250	-0.080	0.217	-2.445	-19.992	8.176	PASS
Position 3	-0.250	-0.080	0.217	-2.451	-19.991	8.158	PASS
Position 4	-0.250	0.080	0.217	-2.449	-19.918	8.135	PASS
Position 5	-0.250	0.080	-0.217	-2.499	-19.883	7.956	PASS
Position 6	-0.250	-0.080	-0.217	-2.495	-20.008	8.021	PASS
Position 7	0.250	-0.080	-0.217	-2.448	-19.927	8.141	PASS
Position 8	0.250	0.080	-0.217	-2.498	-20.059	8.030	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L107
Operator Name: Gordon, Matt
Date: 1/30/2010 Time: 10:22 AM
Actuator Coil Resistance: 6.58 Ohms, PASS
Ambient Temperature: 64.8 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.528

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.503

	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	2.132	20.032	9.395	PASS
Position 1	0.250	0.080	0.217	2.492	20.073	8.056	PASS
Position 2	0.250	-0.080	0.217	2.388	20.005	8.377	PASS
Position 3	-0.250	-0.080	0.217	2.440	20.121	8.247	PASS
Position 4	-0.250	0.080	0.217	2.438	20.132	8.258	PASS
Position 5	-0.250	0.080	-0.217	2.353	19.924	8.467	PASS
Position 6	-0.250	-0.080	-0.217	2.342	19.957	8.520	PASS
Position 7	0.250	-0.080	-0.217	2.248	19.911	8.855	PASS
Position 8	0.250	0.080	-0.217	2.272	19.901	8.760	PASS
Center	0.000	0.000	0.000	-2.121	-20.176	9.513	PASS
Position 1	0.250	0.080	0.217	-2.326	-19.937	8.572	PASS
Position 2	0.250	-0.080	0.217	-2.317	-19.980	8.622	PASS
Position 3	-0.250	-0.080	0.217	-2.335	-20.027	8.577	PASS
Position 4	-0.250	0.080	0.217	-2.323	-19.921	8.577	PASS
Position 5	-0.250	0.080	-0.217	-2.387	-19.898	8.335	PASS
Position 6	-0.250	-0.080	-0.217	-2.290	-20.108	8.780	PASS
Position 7	0.250	-0.080	-0.217	-2.340	-20.136	8.606	PASS
Position 8	0.250	0.080	-0.217	-2.377	-19.817	8.336	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L108

Operator Name: Gordon, Matt

Date: 1/30/2010 Time: 10:04 AM

Actuator Coil Resistance: 6.45 Ohms, PASS

Ambient Temperature: 64.8 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.505

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Center	0.000	0.000	0.000	2.160	20.166	9.338	PASS
Position 1	0.250	0.080	0.217	2.438	20.105	8.248	PASS
Position 2	0.250	-0.080	0.217	2.343	20.061	8.564	PASS
Position 3	-0.250	-0.080	0.217	2.419	20.092	8.304	PASS

Position 4	-0.250	0.080	0.217	2.325	19.824	8.528	PASS
Position 5	-0.250	0.080	-0.217	2.438	20.170	8.274	PASS
Position 6	-0.250	-0.080	-0.217	2.349	19.889	8.469	PASS
Position 7	0.250	-0.080	-0.217	2.347	19.852	8.459	PASS
Position 8	0.250	0.080	-0.217	2.360	19.801	8.389	PASS
Center	0.000	0.000	0.000	-2.149	-19.854	9.237	PASS
Position 1	0.250	0.080	0.217	-2.343	-19.805	8.453	PASS
Position 2	0.250	-0.080	0.217	-2.347	-19.830	8.448	PASS
Position 3	-0.250	-0.080	0.217	-2.347	-19.812	8.442	PASS
Position 4	-0.250	0.080	0.217	-2.401	-20.180	8.406	PASS
Position 5	-0.250	0.080	-0.217	-2.439	-19.872	8.147	PASS
Position 6	-0.250	-0.080	-0.217	-2.392	-20.185	8.437	PASS
Position 7	0.250	-0.080	-0.217	-2.408	-19.942	8.282	PASS
Position 8	0.250	0.080	-0.217	-2.410	-19.890	8.254	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L109
Operator Name: Gordon, Matt
Date: 1/30/2010 Time: 9:43 AM
Actuator Coil Resistance: 6.50 Ohms, PASS
Ambient Temperature: 64.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.540
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.505

	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	2.099	19.815	9.441	PASS
Position 1	0.250	0.080	0.217	2.448	20.096	8.209	PASS
Position 2	0.250	-0.080	0.217	2.400	20.085	8.367	PASS
Position 3	-0.250	-0.080	0.217	2.382	20.155	8.462	PASS
Position 4	-0.250	0.080	0.217	2.422	19.831	8.188	PASS
Position 5	-0.250	0.080	-0.217	2.360	20.146	8.535	PASS
Position 6	-0.250	-0.080	-0.217	2.363	20.216	8.555	PASS
Position 7	0.250	-0.080	-0.217	2.380	20.173	8.475	PASS
Position 8	0.250	0.080	-0.217	2.380	20.176	8.478	PASS

Center	0.000	0.000	0.000	-2.201	-19.957	9.067	PASS
Position 1	0.250	0.080	0.217	-2.444	-19.918	8.151	PASS
Position 2	0.250	-0.080	0.217	-2.440	-19.978	8.187	PASS
Position 3	-0.250	-0.080	0.217	-2.432	-19.970	8.213	PASS
Position 4	-0.250	0.080	0.217	-2.445	-19.878	8.132	PASS
Position 5	-0.250	0.080	-0.217	-2.412	-19.952	8.273	PASS
Position 6	-0.250	-0.080	-0.217	-2.397	-19.912	8.307	PASS
Position 7	0.250	-0.080	-0.217	-2.396	-20.031	8.361	PASS
Position 8	0.250	0.080	-0.217	-2.380	-19.967	8.389	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L110
Operator Name: Gordon, Matt
Date: 1/30/2010 Time: 9:21 AM
Actuator Coil Resistance: 6.22 Ohms, PASS
Ambient Temperature: 64.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.538
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.508

	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	2.204	20.185	9.157	PASS
Positio n 1	0.250	0.080	0.217	2.423	19.961	8.240	PASS
Positio n 2	0.250	-0.080	0.217	2.463	19.988	8.114	PASS
Positio n 3	-0.250	-0.080	0.217	2.398	19.956	8.321	PASS
Positio n 4	-0.250	0.080	0.217	2.400	19.829	8.260	PASS
Positio n 5	-0.250	0.080	-0.217	2.385	19.955	8.368	PASS
Positio n 6	-0.250	-0.080	-0.217	2.364	20.086	8.496	PASS
Positio n 7	0.250	-0.080	-0.217	2.396	20.056	8.371	PASS
Positio n 8	0.250	0.080	-0.217	2.367	19.940	8.426	PASS
Center	0.000	0.000	0.000	-2.197	-19.887	9.053	PASS
Positio n 1	0.250	0.080	0.217	-2.447	-19.965	8.157	PASS
Positio n 2	0.250	-0.080	0.217	-2.442	-20.029	8.201	PASS
Positio n 3	-0.250	-0.080	0.217	-2.442	-20.004	8.191	PASS
Positio n 4	-0.250	0.080	0.217	-2.448	-19.930	8.141	PASS
Positio n 5	-0.250	0.080	-0.217	-2.457	-19.852	8.079	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.418	-19.914	8.236	PASS
Positio n 7	0.250	-0.080	-0.217	-2.406	-20.097	8.352	PASS
Positio n 8	0.250	0.080	-0.217	-2.451	-19.853	8.100	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L111
 Operator Name: Gordon, Matt
 Date: 1/30/2010 Time: 9:01 AM
 Actuator Coil Resistance: 6.24 Ohms, PASS
 Ambient Temperature: 64.1 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.530
 Y Travel Limit (inches): 0.206
 Z Travel Limit (inches): 0.503

	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	2.193	19.894	9.070	PASS
Position 1	0.250	0.080	0.217	2.447	19.831	8.105	PASS
Position 2	0.250	-0.080	0.217	2.515	20.086	7.986	PASS
Position 3	-0.250	-0.080	0.217	2.447	19.817	8.100	PASS
Position 4	-0.250	0.080	0.217	2.444	19.998	8.182	PASS
Position 5	-0.250	0.080	-0.217	2.437	20.007	8.209	PASS
Position 6	-0.250	-0.080	-0.217	2.446	20.171	8.247	PASS
Position 7	0.250	-0.080	-0.217	2.420	20.119	8.315	PASS

Position 8	0.250	0.080	-0.217	2.435	20.008	8.216	PASS
Center	0.000	0.000	0.000	-2.150	-20.061	9.332	PASS
Position 1	0.250	0.080	0.217	-2.345	-19.876	8.478	PASS
Position 2	0.250	-0.080	0.217	-2.358	-19.960	8.464	PASS
Position 3	-0.250	-0.080	0.217	-2.352	-19.821	8.427	PASS
Position 4	-0.250	0.080	0.217	-2.393	-20.156	8.424	PASS
Position 5	-0.250	0.080	-0.217	-2.399	-19.924	8.306	PASS
Position 6	-0.250	-0.080	-0.217	-2.342	-19.956	8.520	PASS
Position 7	0.250	-0.080	-0.217	-2.379	-20.060	8.433	PASS
Position 8	0.250	0.080	-0.217	-2.404	-19.823	8.245	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L112
Operator Name: Gordon, Matt
Date: 1/28/2010 Time: 2:55 PM
Actuator Coil Resistance: 6.26 Ohms, PASS
Ambient Temperature: 72.0 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.534

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.503

	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	2.148	20.036	9.326	PASS
Position 1	0.250	0.080	0.217	2.402	19.942	8.302	PASS
Position 2	0.250	-0.080	0.217	2.316	20.064	8.664	PASS
Position 3	-0.250	-0.080	0.217	2.330	19.814	8.503	PASS
Position 4	-0.250	0.080	0.217	2.406	19.932	8.284	PASS
Position 5	-0.250	0.080	-0.217	2.365	20.100	8.500	PASS
Position 6	-0.250	-0.080	-0.217	2.406	20.168	8.383	PASS
Position 7	0.250	-0.080	-0.217	2.404	20.159	8.386	PASS
Position 8	0.250	0.080	-0.217	2.391	20.118	8.413	PASS
Center	0.000	0.000	0.000	-2.200	-20.141	9.155	PASS
Position 1	0.250	0.080	0.217	-2.390	-19.955	8.350	PASS
Position 2	0.250	-0.080	0.217	-2.406	-19.995	8.311	PASS
Position 3	-0.250	-0.080	0.217	-2.378	-20.004	8.412	PASS
Position 4	-0.250	0.080	0.217	-2.391	-19.927	8.335	PASS
Position 5	-0.250	0.080	-0.217	-2.397	-20.048	8.365	PASS
Position 6	-0.250	-0.080	-0.217	-2.392	-19.857	8.303	PASS
Position 7	0.250	-0.080	-0.217	-2.359	-20.080	8.511	PASS
Position 8	0.250	0.080	-0.217	-2.444	-19.925	8.154	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L113

Operator Name: Gordon, Matt

Date: 1/29/2010 Time: 4:55 PM

Actuator Coil Resistance: 6.36 Ohms, PASS

Ambient Temperature: 70.7 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.540

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Center	0.000	0.000	0.000	2.153	19.887	9.236	PASS
Position 1	0.250	0.080	0.217	2.336	19.840	8.495	PASS
Position 2	0.250	-0.080	0.217	2.330	19.894	8.538	PASS
Position 3	-0.250	-0.080	0.217	2.349	20.100	8.558	PASS

Position 4	-0.250	0.080	0.217	2.414	19.820	8.211	PASS
Position 5	-0.250	0.080	-0.217	2.318	19.919	8.595	PASS
Position 6	-0.250	-0.080	-0.217	2.415	20.051	8.302	PASS
Position 7	0.250	-0.080	-0.217	2.428	19.973	8.226	PASS
Position 8	0.250	0.080	-0.217	2.385	19.926	8.354	PASS
Center	0.000	0.000	0.000	-2.185	-20.012	9.158	PASS
Position 1	0.250	0.080	0.217	-2.426	-20.112	8.291	PASS
Position 2	0.250	-0.080	0.217	-2.379	-19.897	8.364	PASS
Position 3	-0.250	-0.080	0.217	-2.402	-19.961	8.311	PASS
Position 4	-0.250	0.080	0.217	-2.436	-20.065	8.238	PASS
Position 5	-0.250	0.080	-0.217	-2.468	-20.106	8.148	PASS
Position 6	-0.250	-0.080	-0.217	-2.437	-20.025	8.217	PASS
Position 7	0.250	-0.080	-0.217	-2.339	-20.000	8.550	PASS
Position 8	0.250	0.080	-0.217	-2.496	-20.141	8.068	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L114
Operator Name: Gordon, Matt
Date: 1/29/2010 Time: 4:36 PM
Actuator Coil Resistance: 6.38 Ohms, PASS
Ambient Temperature: 70.7 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.529
Y Travel Limit (inches): 0.206
Z Travel Limit (inches): 0.506

	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	2.184	20.131	9.216	PASS
Position 1	0.250	0.080	0.217	2.433	20.032	8.232	PASS
Position 2	0.250	-0.080	0.217	2.465	19.837	8.047	PASS
Position 3	-0.250	-0.080	0.217	2.300	20.107	8.743	PASS
Position 4	-0.250	0.080	0.217	2.371	20.046	8.456	PASS
Position 5	-0.250	0.080	-0.217	2.437	20.099	8.248	PASS
Position 6	-0.250	-0.080	-0.217	2.351	19.839	8.439	PASS
Position 7	0.250	-0.080	-0.217	2.362	19.808	8.387	PASS
Position 8	0.250	0.080	-0.217	2.384	20.083	8.425	PASS

Center	0.000	0.000	0.000	-2.144	-19.812	9.241	PASS
Position 1	0.250	0.080	0.217	-2.383	-20.031	8.405	PASS
Position 2	0.250	-0.080	0.217	-2.343	-19.820	8.458	PASS
Position 3	-0.250	-0.080	0.217	-2.343	-19.801	8.453	PASS
Position 4	-0.250	0.080	0.217	-2.394	-20.022	8.362	PASS
Position 5	-0.250	0.080	-0.217	-2.439	-19.878	8.151	PASS
Position 6	-0.250	-0.080	-0.217	-2.308	-20.087	8.705	PASS
Position 7	0.250	-0.080	-0.217	-2.328	-20.162	8.659	PASS
Position 8	0.250	0.080	-0.217	-2.432	-19.823	8.152	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L115
Operator Name: Gordon, Matt
Date: 1/29/2010 Time: 4:19 PM
Actuator Coil Resistance: 6.35 Ohms, PASS
Ambient Temperature: 71.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.540
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.505

	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	2.201	20.062	9.114	PASS
Positio n 1	0.250	0.080	0.217	2.469	20.001	8.100	PASS
Positio n 2	0.250	-0.080	0.217	2.431	20.118	8.275	PASS
Positio n 3	-0.250	-0.080	0.217	2.484	19.943	8.028	PASS
Positio n 4	-0.250	0.080	0.217	2.430	19.869	8.176	PASS
Positio n 5	-0.250	0.080	-0.217	2.455	20.123	8.198	PASS
Positio n 6	-0.250	-0.080	-0.217	2.368	19.930	8.418	PASS
Positio n 7	0.250	-0.080	-0.217	2.410	20.182	8.373	PASS
Positio n 8	0.250	0.080	-0.217	2.413	20.164	8.356	PASS
Center	0.000	0.000	0.000	-2.126	-19.807	9.318	PASS
Positio n 1	0.250	0.080	0.217	-2.373	-19.823	8.353	PASS
Positio n 2	0.250	-0.080	0.217	-2.405	-19.968	8.303	PASS
Positio n 3	-0.250	-0.080	0.217	-2.322	-20.238	8.717	PASS
Positio n 4	-0.250	0.080	0.217	-2.367	-19.801	8.364	PASS
Positio n 5	-0.250	0.080	-0.217	-2.412	-19.850	8.229	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.320	-19.949	8.598	PASS
Positio n 7	0.250	-0.080	-0.217	-2.349	-20.078	8.546	PASS
Positio n 8	0.250	0.080	-0.217	-2.407	-19.930	8.281	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L116
 Operator Name: Gordon, Matt
 Date: 1/29/2010 Time: 3:50 PM
 Actuator Coil Resistance: 6.35 Ohms, PASS
 Ambient Temperature: 71.3 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.526
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.506

	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	2.145	20.129	9.384	PASS
Position 1	0.250	0.080	0.217	2.331	19.913	8.541	PASS
Position 2	0.250	-0.080	0.217	2.403	20.034	8.337	PASS
Position 3	-0.250	-0.080	0.217	2.405	20.147	8.378	PASS
Position 4	-0.250	0.080	0.217	2.358	19.923	8.448	PASS
Position 5	-0.250	0.080	-0.217	2.407	20.083	8.342	PASS
Position 6	-0.250	-0.080	-0.217	2.294	20.159	8.786	PASS
Position 7	0.250	-0.080	-0.217	2.417	20.140	8.331	PASS

Position 8	0.250	0.080	-0.217	2.398	20.084	8.376	PASS
Center	0.000	0.000	0.000	-2.200	-20.213	9.189	PASS
Position 1	0.250	0.080	0.217	-2.383	-20.116	8.442	PASS
Position 2	0.250	-0.080	0.217	-2.387	-20.126	8.431	PASS
Position 3	-0.250	-0.080	0.217	-2.347	-19.806	8.438	PASS
Position 4	-0.250	0.080	0.217	-2.393	-20.100	8.401	PASS
Position 5	-0.250	0.080	-0.217	-2.399	-19.952	8.316	PASS
Position 6	-0.250	-0.080	-0.217	-2.352	-19.806	8.420	PASS
Position 7	0.250	-0.080	-0.217	-2.397	-19.902	8.302	PASS
Position 8	0.250	0.080	-0.217	-2.352	-19.840	8.437	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L117
Operator Name: Gordon, Matt
Date: 1/29/2010 Time: 3:32 PM
Actuator Coil Resistance: 6.4033 Ohms, PASS
Ambient Temperature: 71.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.536

Y Travel Limit (inches): 0.206

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	2.173	20.053	9.230	PASS
Position 1	0.250	0.080	0.217	2.380	19.930	8.374	PASS
Position 2	0.250	-0.080	0.217	2.365	20.045	8.474	PASS
Position 3	-0.250	-0.080	0.217	2.466	19.849	8.049	PASS
Position 4	-0.250	0.080	0.217	2.401	19.884	8.281	PASS
Position 5	-0.250	0.080	-0.217	2.381	20.116	8.448	PASS
Position 6	-0.250	-0.080	-0.217	2.336	19.884	8.512	PASS
Position 7	0.250	-0.080	-0.217	2.367	19.842	8.382	PASS
Position 8	0.250	0.080	-0.217	2.365	20.108	8.501	PASS
Center	0.000	0.000	0.000	-2.182	-20.159	9.239	PASS
Position 1	0.250	0.080	0.217	-2.388	-19.991	8.371	PASS
Position 2	0.250	-0.080	0.217	-2.385	-19.995	8.384	PASS
Position 3	-0.250	-0.080	0.217	-2.399	-19.993	8.335	PASS
Position 4	-0.250	0.080	0.217	-2.375	-19.909	8.383	PASS
Position 5	-0.250	0.080	-0.217	-2.434	-19.973	8.205	PASS
Position 6	-0.250	-0.080	-0.217	-2.373	-20.015	8.433	PASS
Position 7	0.250	-0.080	-0.217	-2.392	-20.075	8.391	PASS
Position 8	0.250	0.080	-0.217	-2.440	-19.919	8.163	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L118
 Operator Name: Gordon, Matt
 Date: 1/29/2010 Time: 3:09 PM
 Actuator Coil Resistance: 6.40 Ohms, PASS
 Ambient Temperature: 70.7 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.537
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.504

	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	2.035	19.828	9.744	PASS
Position 1	0.250	0.080	0.217	2.415	20.078	8.313	PASS
Position 2	0.250	-0.080	0.217	2.428	19.974	8.226	PASS
Position 3	-0.250	-0.080	0.217	2.307	19.895	8.622	PASS
Position 4	-0.250	0.080	0.217	2.376	19.923	8.384	PASS
Position 5	-0.250	0.080	-0.217	2.304	20.032	8.693	PASS
Position 6	-0.250	-0.080	-0.217	2.312	20.146	8.714	PASS

Position 7	0.250	-0.080	-0.217	2.315	20.119	8.690	PASS
Position 8	0.250	0.080	-0.217	2.326	20.039	8.614	PASS
Center	0.000	0.000	0.000	-2.180	-19.964	9.157	PASS
Position 1	0.250	0.080	0.217	-2.413	-20.075	8.320	PASS
Position 2	0.250	-0.080	0.217	-2.414	-20.143	8.344	PASS
Position 3	-0.250	-0.080	0.217	-2.405	-20.116	8.366	PASS
Position 4	-0.250	0.080	0.217	-2.429	-20.017	8.242	PASS
Position 5	-0.250	0.080	-0.217	-2.485	-20.136	8.102	PASS
Position 6	-0.250	-0.080	-0.217	-2.361	-19.970	8.458	PASS
Position 7	0.250	-0.080	-0.217	-2.347	-20.274	8.638	PASS
Position 8	0.250	0.080	-0.217	-2.475	-20.099	8.122	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L119
Operator Name: Gordon, Matt
Date: 1/29/2010 Time: 2:48 PM
Actuator Coil Resistance: 6.39 Ohms, PASS
Ambient Temperature: 70.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.537

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.505

	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	2.126	20.067	9.438	PASS
Position 1	0.250	0.080	0.217	2.394	19.896	8.312	PASS
Position 2	0.250	-0.080	0.217	2.431	19.864	8.170	PASS
Position 3	-0.250	-0.080	0.217	2.451	19.947	8.140	PASS
Position 4	-0.250	0.080	0.217	2.404	19.809	8.240	PASS
Position 5	-0.250	0.080	-0.217	2.370	20.163	8.506	PASS
Position 6	-0.250	-0.080	-0.217	2.390	20.151	8.433	PASS
Position 7	0.250	-0.080	-0.217	2.360	20.101	8.517	PASS
Position 8	0.250	0.080	-0.217	2.410	20.156	8.363	PASS
Center	0.000	0.000	0.000	-2.193	-20.190	9.205	PASS
Position 1	0.250	0.080	0.217	-2.398	-20.039	8.357	PASS
Position 2	0.250	-0.080	0.217	-2.383	-20.068	8.421	PASS
Position 3	-0.250	-0.080	0.217	-2.377	-20.076	8.446	PASS
Position 4	-0.250	0.080	0.217	-2.386	-20.009	8.384	PASS
Position 5	-0.250	0.080	-0.217	-2.344	-19.979	8.523	PASS
Position 6	-0.250	-0.080	-0.217	-2.341	-20.140	8.602	PASS
Position 7	0.250	-0.080	-0.217	-2.330	-20.046	8.603	PASS

Position 8	0.250	0.080	-0.217	-2.389	-20.185	8.450	PASS
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LIGO Production Large Actuator Test Report

Actuator Serial #: L120

Operator Name: Gordon, Matt

Date: 1/29/2010 Time: 10:16 AM

Actuator Coil Resistance: 6.41 Ohms, PASS

Ambient Temperature: 69.8 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.542

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.503

	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	2.082	19.861	9.538	PASS
Position 1	0.250	0.080	0.217	2.398	20.094	8.379	PASS
Position 2	0.250	-0.080	0.217	2.414	19.877	8.235	PASS
Position 3	-0.250	-0.080	0.217	2.408	20.201	8.388	PASS
Position 4	-0.250	0.080	0.217	2.367	20.094	8.490	PASS
Position 5	-0.250	0.080	-0.217	2.349	19.926	8.482	PASS

Positio n 6	-0.250	-0.080	-0.217	2.333	20.105	8.617	PASS
Positio n 7	0.250	-0.080	-0.217	2.354	20.087	8.534	PASS
Positio n 8	0.250	0.080	-0.217	2.342	19.929	8.511	PASS
Center	0.000	0.000	0.000	-2.149	-19.985	9.299	PASS
Positio n 1	0.250	0.080	0.217	-2.329	-19.849	8.524	PASS
Positio n 2	0.250	-0.080	0.217	-2.343	-19.862	8.479	PASS
Positio n 3	-0.250	-0.080	0.217	-2.345	-19.875	8.476	PASS
Positio n 4	-0.250	0.080	0.217	-2.381	-20.200	8.484	PASS
Positio n 5	-0.250	0.080	-0.217	-2.456	-19.939	8.118	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.344	-20.143	8.594	PASS
Positio n 7	0.250	-0.080	-0.217	-2.389	-19.982	8.366	PASS
Positio n 8	0.250	0.080	-0.217	-2.436	-20.056	8.235	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L121
Operator Name: Gordon, Matt

Date: 1/29/2010 Time: 2:30 PM

Actuator Coil Resistance: 6.39 Ohms, PASS

Ambient Temperature: 70.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

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	2.093	19.827	9.472	PASS
Positio n 1	0.250	0.080	0.217	2.459	20.096	8.173	PASS
Positio n 2	0.250	-0.080	0.217	2.309	20.084	8.697	PASS
Positio n 3	-0.250	-0.080	0.217	2.347	20.006	8.523	PASS
Positio n 4	-0.250	0.080	0.217	2.381	19.918	8.367	PASS
Positio n 5	-0.250	0.080	-0.217	2.465	20.007	8.115	PASS
Positio n 6	-0.250	-0.080	-0.217	2.352	20.078	8.537	PASS
Positio n 7	0.250	-0.080	-0.217	2.337	20.054	8.583	PASS
Positio n 8	0.250	0.080	-0.217	2.402	20.027	8.339	PASS
Center	0.000	0.000	0.000	-2.138	-19.938	9.324	PASS
Positio n 1	0.250	0.080	0.217	-2.392	-20.103	8.403	PASS
Positio n 2	0.250	-0.080	0.217	-2.388	-20.186	8.452	PASS
Positio n 3	-0.250	-0.080	0.217	-2.409	-20.178	8.376	PASS
Positio n 4	-0.250	0.080	0.217	-2.393	-20.057	8.380	PASS
Positio n 5	-0.250	0.080	-0.217	-2.397	-20.053	8.365	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.335	-20.023	8.577	PASS

Position 7	0.250	-0.080	-0.217	-2.335	-20.067	8.595	PASS
Position 8	0.250	0.080	-0.217	-2.443	-20.152	8.249	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L122

Operator Name: Gordon, Matt

Date: 1/29/2010 Time: 2:05 PM

Actuator Coil Resistance: 6.41 Ohms, PASS

Ambient Temperature: 71.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.538

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.503

	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	2.234	20.058	8.980	PASS
Position 1	0.250	0.080	0.217	2.494	19.847	7.958	PASS
Position 2	0.250	-0.080	0.217	2.430	20.178	8.305	PASS
Position 3	-0.250	-0.080	0.217	2.405	20.111	8.361	PASS
Position 4	-0.250	0.080	0.217	2.529	19.910	7.874	PASS

Position 5	-0.250	0.080	-0.217	2.426	20.093	8.281	PASS
Position 6	-0.250	-0.080	-0.217	2.490	20.172	8.100	PASS
Position 7	0.250	-0.080	-0.217	2.498	20.158	8.070	PASS
Position 8	0.250	0.080	-0.217	2.466	20.090	8.145	PASS
Center	0.000	0.000	0.000	-2.114	-20.153	9.533	PASS
Position 1	0.250	0.080	0.217	-2.324	-19.964	8.590	PASS
Position 2	0.250	-0.080	0.217	-2.316	-19.978	8.626	PASS
Position 3	-0.250	-0.080	0.217	-2.304	-19.989	8.674	PASS
Position 4	-0.250	0.080	0.217	-2.307	-19.932	8.641	PASS
Position 5	-0.250	0.080	-0.217	-2.299	-19.802	8.614	PASS
Position 6	-0.250	-0.080	-0.217	-2.246	-20.019	8.915	PASS
Position 7	0.250	-0.080	-0.217	-2.315	-20.040	8.655	PASS
Position 8	0.250	0.080	-0.217	-2.314	-19.822	8.565	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L123
 Operator Name: Gordon, Matt
 Date: 1/29/2010 Time: 9:50 AM
 Actuator Coil Resistance: 6.37 Ohms, PASS
 Ambient Temperature: 68.8 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.527
 Y Travel Limit (inches): 0.206
 Z Travel Limit (inches): 0.504

	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	2.140	20.071	9.381	PASS
Position 1	0.250	0.080	0.217	2.482	19.941	8.035	PASS
Position 2	0.250	-0.080	0.217	2.382	20.189	8.476	PASS
Position 3	-0.250	-0.080	0.217	2.373	20.021	8.438	PASS
Position 4	-0.250	0.080	0.217	2.508	20.133	8.026	PASS
Position 5	-0.250	0.080	-0.217	2.313	19.837	8.575	PASS
Position 6	-0.250	-0.080	-0.217	2.357	19.946	8.461	PASS
Position 7	0.250	-0.080	-0.217	2.305	19.917	8.640	PASS
Position 8	0.250	0.080	-0.217	2.324	19.847	8.539	PASS
Center	0.000	0.000	0.000	-2.150	-19.813	9.214	PASS
Position 1	0.250	0.080	0.217	-2.415	-19.973	8.271	PASS
Position 2	0.250	-0.080	0.217	-2.419	-20.019	8.275	PASS
Position 3	-0.250	-0.080	0.217	-2.410	-20.052	8.321	PASS
Position 4	-0.250	0.080	0.217	-2.400	-19.930	8.306	PASS
Position 5	-0.250	0.080	-0.217	-2.388	-19.810	8.296	PASS

Position 6	-0.250	-0.080	-0.217	-2.354	-20.098	8.537	PASS
Position 7	0.250	-0.080	-0.217	-2.367	-19.917	8.414	PASS
Position 8	0.250	0.080	-0.217	-2.406	-20.144	8.371	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L124

Operator Name: Gordon, Matt

Date: 1/29/2010 Time: 1:42 PM

Actuator Coil Resistance: 6.38 Ohms, PASS

Ambient Temperature: 71.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.524

Y Travel Limit (inches): 0.204

Z Travel Limit (inches): 0.503

	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	2.102	20.007	9.517	PASS
Position 1	0.250	0.080	0.217	2.357	19.991	8.481	PASS
Position 2	0.250	-0.080	0.217	2.338	19.969	8.542	PASS
Position 3	-0.250	-0.080	0.217	2.337	19.874	8.503	PASS

Position 4	-0.250	0.080	0.217	2.419	20.103	8.311	PASS
Position 5	-0.250	0.080	-0.217	2.341	19.891	8.497	PASS
Position 6	-0.250	-0.080	-0.217	2.263	19.984	8.831	PASS
Position 7	0.250	-0.080	-0.217	2.366	19.982	8.445	PASS
Position 8	0.250	0.080	-0.217	2.364	19.896	8.416	PASS
Center	0.000	0.000	0.000	-2.196	-20.108	9.159	PASS
Position 1	0.250	0.080	0.217	-2.386	-19.802	8.300	PASS
Position 2	0.250	-0.080	0.217	-2.394	-19.839	8.288	PASS
Position 3	-0.250	-0.080	0.217	-2.389	-19.832	8.300	PASS
Position 4	-0.250	0.080	0.217	-2.440	-20.124	8.248	PASS
Position 5	-0.250	0.080	-0.217	-2.434	-19.872	8.163	PASS
Position 6	-0.250	-0.080	-0.217	-2.354	-19.969	8.484	PASS
Position 7	0.250	-0.080	-0.217	-2.316	-20.239	8.740	PASS
Position 8	0.250	0.080	-0.217	-2.441	-20.005	8.195	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L125

Operator Name: Gordon, Matt

Date: 1/28/2010 Time: 3:17 PM

Actuator Coil Resistance: 6.31 Ohms, PASS

Ambient Temperature: 71.6 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.525

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	2.148	20.130	9.373	PASS
Position 1	0.250	0.080	0.217	2.403	19.869	8.269	PASS
Position 2	0.250	-0.080	0.217	2.480	19.937	8.040	PASS
Position 3	-0.250	-0.080	0.217	2.460	20.050	8.151	PASS
Position 4	-0.250	0.080	0.217	2.303	19.863	8.626	PASS
Position 5	-0.250	0.080	-0.217	2.345	19.929	8.497	PASS
Position 6	-0.250	-0.080	-0.217	2.295	19.972	8.703	PASS
Position 7	0.250	-0.080	-0.217	2.361	19.943	8.448	PASS
Position 8	0.250	0.080	-0.217	2.366	19.926	8.421	PASS
Center	0.000	0.000	0.000	-2.136	-19.803	9.270	PASS
Position 1	0.250	0.080	0.217	-2.394	-19.972	8.342	PASS
Position 2	0.250	-0.080	0.217	-2.394	-19.963	8.338	PASS
Position 3	-0.250	-0.080	0.217	-2.393	-20.057	8.382	PASS

Position 4	-0.250	0.080	0.217	-2.375	-19.922	8.389	PASS
Position 5	-0.250	0.080	-0.217	-2.440	-20.009	8.201	PASS
Position 6	-0.250	-0.080	-0.217	-2.337	-19.807	8.476	PASS
Position 7	0.250	-0.080	-0.217	-2.345	-19.978	8.520	PASS
Position 8	0.250	0.080	-0.217	-2.458	-20.091	8.174	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L126

Operator Name: Gordon, Matt

Date: 1/29/2010 Time: 11:27 AM

Actuator Coil Resistance: 6.50 Ohms, PASS

Ambient Temperature: 69.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.536

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	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	2.110	19.911	9.435	PASS
Position 1	0.250	0.080	0.217	2.406	19.973	8.303	PASS

Positio n 2	0.250	-0.080	0.217	2.388	20.149	8.437	PASS
Positio n 3	-0.250	-0.080	0.217	2.415	20.096	8.320	PASS
Positio n 4	-0.250	0.080	0.217	2.395	19.886	8.303	PASS
Positio n 5	-0.250	0.080	-0.217	2.379	20.056	8.432	PASS
Positio n 6	-0.250	-0.080	-0.217	2.346	20.114	8.574	PASS
Positio n 7	0.250	-0.080	-0.217	2.321	20.076	8.649	PASS
Positio n 8	0.250	0.080	-0.217	2.336	20.062	8.590	PASS
Center	0.000	0.000	0.000	-2.149	-20.055	9.333	PASS
Positio n 1	0.250	0.080	0.217	-2.382	-20.218	8.487	PASS
Positio n 2	0.250	-0.080	0.217	-2.339	-19.911	8.512	PASS
Positio n 3	-0.250	-0.080	0.217	-2.347	-19.903	8.480	PASS
Positio n 4	-0.250	0.080	0.217	-2.390	-20.178	8.444	PASS
Positio n 5	-0.250	0.080	-0.217	-2.442	-20.210	8.277	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.355	-19.866	8.436	PASS
Positio n 7	0.250	-0.080	-0.217	-2.360	-19.801	8.389	PASS
Positio n 8	0.250	0.080	-0.217	-2.444	-20.160	8.247	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L127

Operator Name: Gordon, Matt

Date: 1/29/2010 Time: 11:06 AM

Actuator Coil Resistance: 6.33 Ohms, PASS

Ambient Temperature: 69.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.531

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	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	2.310	19.898	8.615	PASS
Position 1	0.250	0.080	0.217	2.455	19.934	8.120	PASS
Position 2	0.250	-0.080	0.217	2.392	20.241	8.461	PASS
Position 3	-0.250	-0.080	0.217	2.442	19.970	8.179	PASS
Position 4	-0.250	0.080	0.217	2.473	20.181	8.161	PASS
Position 5	-0.250	0.080	-0.217	2.408	19.861	8.247	PASS
Position 6	-0.250	-0.080	-0.217	2.399	19.914	8.300	PASS
Position 7	0.250	-0.080	-0.217	2.432	19.874	8.172	PASS
Position 8	0.250	0.080	-0.217	2.385	19.869	8.331	PASS
Center	0.000	0.000	0.000	-2.157	-20.000	9.272	PASS
Position 1	0.250	0.080	0.217	-2.371	-19.921	8.401	PASS
Position 2	0.250	-0.080	0.217	-2.375	-20.025	8.430	PASS

Position 3	-0.250	-0.080	0.217	-2.374	-19.971	8.413	PASS
Position 4	-0.250	0.080	0.217	-2.373	-19.854	8.367	PASS
Position 5	-0.250	0.080	-0.217	-2.422	-19.807	8.178	PASS
Position 6	-0.250	-0.080	-0.217	-2.371	-19.843	8.370	PASS
Position 7	0.250	-0.080	-0.217	-2.414	-19.951	8.265	PASS
Position 8	0.250	0.080	-0.217	-2.421	-19.897	8.218	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L128

Operator Name: Gordon, Matt

Date: 1/29/2010 Time: 10:46 AM

Actuator Coil Resistance: 6.27 Ohms, PASS

Ambient Temperature: 69.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.530

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.508

	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	2.147	20.116	9.368	PASS

Positio n 1	0.250	0.080	0.217	2.386	20.070	8.412	PASS
Positio n 2	0.250	-0.080	0.217	2.336	20.198	8.646	PASS
Positio n 3	-0.250	-0.080	0.217	2.352	20.165	8.574	PASS
Positio n 4	-0.250	0.080	0.217	2.362	19.834	8.397	PASS
Positio n 5	-0.250	0.080	-0.217	2.361	20.090	8.508	PASS
Positio n 6	-0.250	-0.080	-0.217	2.375	19.892	8.375	PASS
Positio n 7	0.250	-0.080	-0.217	2.378	19.863	8.352	PASS
Positio n 8	0.250	0.080	-0.217	2.374	20.106	8.469	PASS
Center	0.000	0.000	0.000	-2.151	-19.801	9.206	PASS
Positio n 1	0.250	0.080	0.217	-2.390	-20.087	8.406	PASS
Positio n 2	0.250	-0.080	0.217	-2.388	-20.124	8.426	PASS
Positio n 3	-0.250	-0.080	0.217	-2.380	-20.144	8.464	PASS
Positio n 4	-0.250	0.080	0.217	-2.384	-20.044	8.407	PASS
Positio n 5	-0.250	0.080	-0.217	-2.446	-20.035	8.191	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.353	-19.873	8.447	PASS
Positio n 7	0.250	-0.080	-0.217	-2.346	-20.050	8.547	PASS
Positio n 8	0.250	0.080	-0.217	-2.468	-19.822	8.032	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L129
Operator Name: Gordon, Matt
Date: 4/12/2010 Time: 11:45 AM
Actuator Coil Resistance: 6.38 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.533
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.501

	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	2.182	20.143	9.232	PASS
Position 1	0.250	0.080	0.217	2.432	20.095	8.264	PASS
Position 2	0.250	-0.080	0.217	2.337	20.192	8.640	PASS
Position 3	-0.250	-0.080	0.217	2.317	19.826	8.555	PASS
Position 4	-0.250	0.080	0.217	2.445	20.087	8.214	PASS
Position 5	-0.250	0.080	-0.217	2.387	20.102	8.421	PASS
Position 6	-0.250	-0.080	-0.217	2.360	19.932	8.446	PASS
Position 7	0.250	-0.080	-0.217	2.350	19.800	8.425	PASS
Position 8	0.250	0.080	-0.217	2.405	20.116	8.366	PASS
Center	0.000	0.000	0.000	-2.192	-20.214	9.222	PASS
Position 1	0.250	0.080	0.217	-2.363	-20.120	8.514	PASS

Position 2	0.250	-0.080	0.217	-2.366	-20.136	8.510	PASS
Position 3	-0.250	-0.080	0.217	-2.362	-20.151	8.532	PASS
Position 4	-0.250	0.080	0.217	-2.364	-20.070	8.489	PASS
Position 5	-0.250	0.080	-0.217	-2.479	-19.909	8.030	PASS
Position 6	-0.250	-0.080	-0.217	-2.329	-20.098	8.628	PASS
Position 7	0.250	-0.080	-0.217	-2.303	-20.191	8.767	PASS
Position 8	0.250	0.080	-0.217	-2.416	-19.978	8.270	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L130

Operator Name: Gordon, Matt

Date: 4/12/2010 Time: 1:52 PM

Actuator Coil Resistance: 6.41 Ohms, PASS

Ambient Temperature: 73.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.540

Y Travel Limit (inches): 0.208

Z Travel Limit (inches): 0.506

	X Position (in)	Y Position (in)	Z Position (in)	Current (A)	Force (lbs)	Force Constant (lbs/A)	PASS/ FAIL
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Center	0.000	0.000	0.000	2.078	19.807	9.530	PASS
Positio n 1	0.250	0.080	0.217	2.432	19.914	8.189	PASS
Positio n 2	0.250	-0.080	0.217	2.372	19.861	8.375	PASS
Positio n 3	-0.250	-0.080	0.217	2.326	19.866	8.541	PASS
Positio n 4	-0.250	0.080	0.217	2.390	19.921	8.335	PASS
Positio n 5	-0.250	0.080	-0.217	2.330	19.864	8.526	PASS
Positio n 6	-0.250	-0.080	-0.217	2.303	19.975	8.672	PASS
Positio n 7	0.250	-0.080	-0.217	2.329	19.986	8.580	PASS
Positio n 8	0.250	0.080	-0.217	2.299	19.887	8.651	PASS
Center	0.000	0.000	0.000	-2.145	-19.908	9.283	PASS
Positio n 1	0.250	0.080	0.217	-2.376	-20.120	8.467	PASS
Positio n 2	0.250	-0.080	0.217	-2.345	-19.858	8.468	PASS
Positio n 3	-0.250	-0.080	0.217	-2.354	-19.851	8.433	PASS
Positio n 4	-0.250	0.080	0.217	-2.392	-20.076	8.393	PASS
Positio n 5	-0.250	0.080	-0.217	-2.440	-20.111	8.244	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.330	-19.833	8.513	PASS
Positio n 7	0.250	-0.080	-0.217	-2.337	-20.009	8.563	PASS
Positio n 8	0.250	0.080	-0.217	-2.452	-20.035	8.171	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L131
Operator Name: Gordon, Matt
Date: 4/12/2010 Time: 2:10 PM
Actuator Coil Resistance: 6.45 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.536
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	2.136	20.208	9.459	PASS
Position 1	0.250	0.080	0.217	2.409	20.029	8.315	PASS
Position 2	0.250	-0.080	0.217	2.437	19.837	8.141	PASS
Position 3	-0.250	-0.080	0.217	2.287	20.051	8.768	PASS
Position 4	-0.250	0.080	0.217	2.478	19.858	8.014	PASS
Position 5	-0.250	0.080	-0.217	2.306	19.961	8.656	PASS
Position 6	-0.250	-0.080	-0.217	2.402	19.902	8.286	PASS
Position 7	0.250	-0.080	-0.217	2.354	19.900	8.453	PASS
Position 8	0.250	0.080	-0.217	2.363	19.934	8.436	PASS
Center	0.000	0.000	0.000	-2.156	-19.872	9.219	PASS

Position 1	0.250	0.080	0.217	-2.378	-20.120	8.462	PASS
Position 2	0.250	-0.080	0.217	-2.395	-20.113	8.399	PASS
Position 3	-0.250	-0.080	0.217	-2.402	-20.096	8.368	PASS
Position 4	-0.250	0.080	0.217	-2.385	-20.109	8.431	PASS
Position 5	-0.250	0.080	-0.217	-2.449	-19.972	8.156	PASS
Position 6	-0.250	-0.080	-0.217	-2.352	-20.226	8.600	PASS
Position 7	0.250	-0.080	-0.217	-2.392	-20.140	8.419	PASS
Position 8	0.250	0.080	-0.217	-2.355	-19.999	8.492	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L132
Operator Name: Gordon, Matt
Date: 4/12/2010 Time: 2:29 PM
Actuator Coil Resistance: 6.44 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.539
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.508

	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	2.135	20.091	9.410	PASS
Position 1	0.250	0.080	0.217	2.411	20.048	8.314	PASS
Position 2	0.250	-0.080	0.217	2.397	19.963	8.329	PASS
Position 3	-0.250	-0.080	0.217	2.377	19.993	8.411	PASS
Position 4	-0.250	0.080	0.217	2.367	20.029	8.462	PASS
Position 5	-0.250	0.080	-0.217	2.268	19.877	8.765	PASS
Position 6	-0.250	-0.080	-0.217	2.342	19.970	8.529	PASS
Position 7	0.250	-0.080	-0.217	2.158	20.015	9.275	PASS
Position 8	0.250	0.080	-0.217	2.302	19.921	8.655	PASS
Center	0.000	0.000	0.000	-2.202	-19.808	8.995	PASS
Position 1	0.250	0.080	0.217	-2.453	-19.972	8.142	PASS
Position 2	0.250	-0.080	0.217	-2.437	-19.950	8.186	PASS
Position 3	-0.250	-0.080	0.217	-2.462	-19.988	8.119	PASS
Position 4	-0.250	0.080	0.217	-2.436	-19.905	8.170	PASS
Position 5	-0.250	0.080	-0.217	-2.490	-20.265	8.138	PASS
Position 6	-0.250	-0.080	-0.217	-2.394	-19.955	8.334	PASS
Position 7	0.250	-0.080	-0.217	-2.492	-19.880	7.979	PASS
Position 8	0.250	0.080	-0.217	-2.454	-19.924	8.118	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L133
 Operator Name: Gordon, Matt
 Date: 4/12/2010 Time: 2:51 PM
 Actuator Coil Resistance: 6.43 Ohms, PASS
 Ambient Temperature: 73.3 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.529
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.505

	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	2.126	20.274	9.535	PASS
Position 1	0.250	0.080	0.217	2.289	20.027	8.748	PASS
Position 2	0.250	-0.080	0.217	2.299	20.125	8.754	PASS
Position 3	-0.250	-0.080	0.217	2.327	20.162	8.664	PASS
Position 4	-0.250	0.080	0.217	2.361	20.035	8.487	PASS
Position 5	-0.250	0.080	-0.217	2.325	20.078	8.636	PASS
Position 6	-0.250	-0.080	-0.217	2.305	20.118	8.728	PASS
Position 7	0.250	-0.080	-0.217	2.330	20.106	8.630	PASS
Position 8	0.250	0.080	-0.217	2.263	20.082	8.872	PASS

Center	0.000	0.000	0.000	-2.177	-19.939	9.158	PASS
Position 1	0.250	0.080	0.217	-2.402	-20.166	8.394	PASS
Position 2	0.250	-0.080	0.217	-2.385	-20.043	8.405	PASS
Position 3	-0.250	-0.080	0.217	-2.411	-20.058	8.318	PASS
Position 4	-0.250	0.080	0.217	-2.409	-20.109	8.348	PASS
Position 5	-0.250	0.080	-0.217	-2.455	-20.032	8.158	PASS
Position 6	-0.250	-0.080	-0.217	-2.377	-20.023	8.426	PASS
Position 7	0.250	-0.080	-0.217	-2.473	-20.072	8.118	PASS
Position 8	0.250	0.080	-0.217	-2.476	-20.046	8.096	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L134
Operator Name: Gordon, Matt
Date: 4/12/2010 Time: 3:25 PM
Actuator Coil Resistance: 6.34 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.536
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.506

	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	2.235	20.201	9.038	PASS
Positio n 1	0.250	0.080	0.217	2.452	19.804	8.078	PASS
Positio n 2	0.250	-0.080	0.217	2.352	20.234	8.602	PASS
Positio n 3	-0.250	-0.080	0.217	2.431	19.852	8.168	PASS
Positio n 4	-0.250	0.080	0.217	2.491	19.876	7.979	PASS
Positio n 5	-0.250	0.080	-0.217	2.270	20.004	8.813	PASS
Positio n 6	-0.250	-0.080	-0.217	2.360	20.056	8.499	PASS
Positio n 7	0.250	-0.080	-0.217	2.375	20.085	8.458	PASS
Positio n 8	0.250	0.080	-0.217	2.420	19.909	8.227	PASS
Center	0.000	0.000	0.000	-2.180	-19.830	9.094	PASS
Positio n 1	0.250	0.080	0.217	-2.417	-19.986	8.270	PASS
Positio n 2	0.250	-0.080	0.217	-2.423	-19.981	8.245	PASS
Positio n 3	-0.250	-0.080	0.217	-2.422	-19.993	8.253	PASS
Positio n 4	-0.250	0.080	0.217	-2.424	-19.958	8.234	PASS
Positio n 5	-0.250	0.080	-0.217	-2.475	-19.957	8.065	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.378	-20.206	8.497	PASS
Positio n 7	0.250	-0.080	-0.217	-2.393	-20.080	8.390	PASS
Positio n 8	0.250	0.080	-0.217	-2.434	-19.845	8.153	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L135
 Operator Name: Gordon, Matt
 Date: 4/12/2010 Time: 3:44 PM
 Actuator Coil Resistance: 6.40 Ohms, PASS
 Ambient Temperature: 73.3 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.533
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.503

	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	2.067	20.189	9.768	PASS
Position 1	0.250	0.080	0.217	2.311	20.252	8.764	PASS
Position 2	0.250	-0.080	0.217	2.449	20.030	8.180	PASS
Position 3	-0.250	-0.080	0.217	2.426	20.176	8.316	PASS
Position 4	-0.250	0.080	0.217	2.393	19.802	8.275	PASS
Position 5	-0.250	0.080	-0.217	2.351	20.104	8.553	PASS
Position 6	-0.250	-0.080	-0.217	2.350	20.076	8.543	PASS
Position 7	0.250	-0.080	-0.217	2.335	20.031	8.578	PASS

Position 8	0.250	0.080	-0.217	2.378	20.088	8.447	PASS
Center	0.000	0.000	0.000	-2.142	-19.907	9.294	PASS
Position 1	0.250	0.080	0.217	-2.385	-20.071	8.417	PASS
Position 2	0.250	-0.080	0.217	-2.387	-20.073	8.410	PASS
Position 3	-0.250	-0.080	0.217	-2.382	-20.109	8.443	PASS
Position 4	-0.250	0.080	0.217	-2.386	-20.073	8.412	PASS
Position 5	-0.250	0.080	-0.217	-2.400	-19.817	8.257	PASS
Position 6	-0.250	-0.080	-0.217	-2.308	-20.008	8.668	PASS
Position 7	0.250	-0.080	-0.217	-2.330	-20.133	8.642	PASS
Position 8	0.250	0.080	-0.217	-2.437	-20.037	8.222	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L136
Operator Name: Gordon, Matt
Date: 4/12/2010 Time: 4:01 PM
Actuator Coil Resistance: 6.32 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.535

Y Travel Limit (inches): 0.206

Z Travel Limit (inches): 0.502

	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	2.207	19.907	9.018	PASS
Position 1	0.250	0.080	0.217	2.450	19.865	8.109	PASS
Position 2	0.250	-0.080	0.217	2.381	19.852	8.339	PASS
Position 3	-0.250	-0.080	0.217	2.400	19.943	8.309	PASS
Position 4	-0.250	0.080	0.217	2.329	20.190	8.671	PASS
Position 5	-0.250	0.080	-0.217	2.390	19.990	8.363	PASS
Position 6	-0.250	-0.080	-0.217	2.411	19.995	8.294	PASS
Position 7	0.250	-0.080	-0.217	2.378	19.967	8.397	PASS
Position 8	0.250	0.080	-0.217	2.389	20.023	8.381	PASS
Center	0.000	0.000	0.000	-2.191	-20.030	9.144	PASS
Position 1	0.250	0.080	0.217	-2.400	-19.905	8.295	PASS
Position 2	0.250	-0.080	0.217	-2.400	-19.868	8.277	PASS
Position 3	-0.250	-0.080	0.217	-2.395	-19.910	8.314	PASS
Position 4	-0.250	0.080	0.217	-2.386	-19.861	8.323	PASS
Position 5	-0.250	0.080	-0.217	-2.404	-19.965	8.306	PASS
Position 6	-0.250	-0.080	-0.217	-2.448	-19.868	8.116	PASS
Position 7	0.250	-0.080	-0.217	-2.433	-19.823	8.149	PASS
Position 8	0.250	0.080	-0.217	-2.395	-19.835	8.283	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L137
Operator Name: Gordon, Matt
Date: 4/12/2010 Time: 4:19 PM
Actuator Coil Resistance: 6.42 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.530
Y Travel Limit (inches): 0.206
Z Travel Limit (inches): 0.501

	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	2.136	20.167	9.443	PASS
Position 1	0.250	0.080	0.217	2.424	19.814	8.175	PASS
Position 2	0.250	-0.080	0.217	2.364	20.014	8.465	PASS
Position 3	-0.250	-0.080	0.217	2.457	19.932	8.113	PASS
Position 4	-0.250	0.080	0.217	2.377	19.909	8.375	PASS
Position 5	-0.250	0.080	-0.217	2.405	20.154	8.380	PASS
Position 6	-0.250	-0.080	-0.217	2.396	20.292	8.470	PASS

Positio n 7	0.250	-0.080	-0.217	2.340	19.887	8.497	PASS
Positio n 8	0.250	0.080	-0.217	2.379	20.175	8.481	PASS
Center	0.000	0.000	0.000	-2.145	-19.851	9.256	PASS
Positio n 1	0.250	0.080	0.217	-2.386	-20.137	8.438	PASS
Positio n 2	0.250	-0.080	0.217	-2.344	-19.804	8.449	PASS
Positio n 3	-0.250	-0.080	0.217	-2.336	-19.823	8.486	PASS
Positio n 4	-0.250	0.080	0.217	-2.380	-20.078	8.436	PASS
Positio n 5	-0.250	0.080	-0.217	-2.439	-19.852	8.139	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.385	-20.200	8.470	PASS
Positio n 7	0.250	-0.080	-0.217	-2.391	-20.109	8.410	PASS
Positio n 8	0.250	0.080	-0.217	-2.376	-19.923	8.385	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L138
Operator Name: Gordon, Matt
Date: 4/12/2010 Time: 4:35 PM
Actuator Coil Resistance: 6.33 Ohms, PASS
Ambient Temperature: 73.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.537

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	2.077	19.953	9.606	PASS
Position 1	0.250	0.080	0.217	2.475	20.077	8.111	PASS
Position 2	0.250	-0.080	0.217	2.488	20.046	8.057	PASS
Position 3	-0.250	-0.080	0.217	2.451	19.935	8.133	PASS
Position 4	-0.250	0.080	0.217	2.368	19.829	8.373	PASS
Position 5	-0.250	0.080	-0.217	2.439	20.061	8.224	PASS
Position 6	-0.250	-0.080	-0.217	2.403	20.137	8.379	PASS
Position 7	0.250	-0.080	-0.217	2.374	20.095	8.464	PASS
Position 8	0.250	0.080	-0.217	2.446	20.100	8.219	PASS
Center	0.000	0.000	0.000	-2.181	-20.035	9.186	PASS
Position 1	0.250	0.080	0.217	-2.378	-19.842	8.345	PASS
Position 2	0.250	-0.080	0.217	-2.380	-19.890	8.357	PASS
Position 3	-0.250	-0.080	0.217	-2.383	-19.963	8.378	PASS
Position 4	-0.250	0.080	0.217	-2.389	-19.808	8.292	PASS
Position 5	-0.250	0.080	-0.217	-2.483	-20.142	8.111	PASS
Position 6	-0.250	-0.080	-0.217	-2.393	-19.937	8.332	PASS
Position 7	0.250	-0.080	-0.217	-2.383	-20.250	8.498	PASS

Position 8	0.250	0.080	-0.217	-2.436	-20.141	8.267	PASS
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LIGO Production Large Actuator Test Report

Actuator Serial #: L139

Operator Name: Gordon, Matt

Date: 4/13/2010 Time: 8:42 AM

Actuator Coil Resistance: 6.44 Ohms, PASS

Ambient Temperature: 73.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.528

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.505

	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	2.090	19.807	9.479	PASS
Position 1	0.250	0.080	0.217	2.345	20.209	8.619	PASS
Position 2	0.250	-0.080	0.217	2.408	19.937	8.280	PASS
Position 3	-0.250	-0.080	0.217	2.453	19.803	8.072	PASS
Position 4	-0.250	0.080	0.217	2.349	20.125	8.567	PASS
Position 5	-0.250	0.080	-0.217	2.325	19.954	8.583	PASS

Positio n 6	-0.250	-0.080	-0.217	2.386	20.051	8.404	PASS
Positio n 7	0.250	-0.080	-0.217	2.355	20.043	8.511	PASS
Positio n 8	0.250	0.080	-0.217	2.313	19.974	8.636	PASS
Center	0.000	0.000	0.000	-2.130	-19.940	9.361	PASS
Positio n 1	0.250	0.080	0.217	-2.393	-20.070	8.388	PASS
Positio n 2	0.250	-0.080	0.217	-2.385	-20.218	8.478	PASS
Positio n 3	-0.250	-0.080	0.217	-2.339	-19.820	8.473	PASS
Positio n 4	-0.250	0.080	0.217	-2.396	-20.057	8.372	PASS
Positio n 5	-0.250	0.080	-0.217	-2.465	-19.841	8.050	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.347	-19.972	8.508	PASS
Positio n 7	0.250	-0.080	-0.217	-2.342	-19.898	8.497	PASS
Positio n 8	0.250	0.080	-0.217	-2.344	-20.002	8.534	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L140
Operator Name: Gordon, Matt

Date: 4/13/2010 Time: 8:20 AM

Actuator Coil Resistance: 6.38 Ohms, PASS

Ambient Temperature: 73.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.528

Y Travel Limit (inches): 0.206

Z Travel Limit (inches): 0.505

	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	1.976	19.883	10.062	PASS
Positio n 1	0.250	0.080	0.217	2.358	19.848	8.417	PASS
Positio n 2	0.250	-0.080	0.217	2.304	20.230	8.779	PASS
Positio n 3	-0.250	-0.080	0.217	2.264	20.204	8.925	PASS
Positio n 4	-0.250	0.080	0.217	2.274	19.819	8.714	PASS
Positio n 5	-0.250	0.080	-0.217	2.357	20.168	8.555	PASS
Positio n 6	-0.250	-0.080	-0.217	2.369	20.207	8.530	PASS
Positio n 7	0.250	-0.080	-0.217	2.368	20.173	8.520	PASS
Positio n 8	0.250	0.080	-0.217	2.365	20.201	8.542	PASS
Center	0.000	0.000	0.000	-2.153	-20.035	9.307	PASS
Positio n 1	0.250	0.080	0.217	-2.386	-20.050	8.403	PASS
Positio n 2	0.250	-0.080	0.217	-2.395	-20.148	8.412	PASS
Positio n 3	-0.250	-0.080	0.217	-2.374	-20.115	8.472	PASS
Positio n 4	-0.250	0.080	0.217	-2.382	-20.037	8.413	PASS
Positio n 5	-0.250	0.080	-0.217	-2.378	-19.919	8.377	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.290	-20.186	8.816	PASS

Position 7	0.250	-0.080	-0.217	-2.356	-20.337	8.633	PASS
Position 8	0.250	0.080	-0.217	-2.429	-20.126	8.286	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L141

Operator Name: Gordon, Matt

Date: 4/13/2010 Time: 9:12 AM

Actuator Coil Resistance: 6.44 Ohms, PASS

Ambient Temperature: 73.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.532

Y Travel Limit (inches): 0.205

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	2.140	19.874	9.286	PASS
Position 1	0.250	0.080	0.217	2.349	20.190	8.597	PASS
Position 2	0.250	-0.080	0.217	2.378	19.846	8.345	PASS
Position 3	-0.250	-0.080	0.217	2.401	20.137	8.387	PASS
Position 4	-0.250	0.080	0.217	2.357	19.851	8.421	PASS

Positio n 5	-0.250	0.080	-0.217	2.385	20.030	8.398	PASS
Positio n 6	-0.250	-0.080	-0.217	2.386	19.990	8.378	PASS
Positio n 7	0.250	-0.080	-0.217	2.359	19.952	8.458	PASS
Positio n 8	0.250	0.080	-0.217	2.380	20.024	8.415	PASS
Center	0.000	0.000	0.000	-2.106	-19.976	9.485	PASS
Positio n 1	0.250	0.080	0.217	-2.361	-20.161	8.540	PASS
Positio n 2	0.250	-0.080	0.217	-2.299	-19.850	8.633	PASS
Positio n 3	-0.250	-0.080	0.217	-2.293	-19.878	8.667	PASS
Positio n 4	-0.250	0.080	0.217	-2.355	-20.194	8.574	PASS
Positio n 5	-0.250	0.080	-0.217	-2.354	-19.839	8.429	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.476	-19.883	8.029	PASS
Positio n 7	0.250	-0.080	-0.217	-2.443	-20.006	8.189	PASS
Positio n 8	0.250	0.080	-0.217	-2.406	-20.045	8.332	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L143

Operator Name: Gordon, Matt

Date: 4/13/2010 Time: 9:32 AM

Actuator Coil Resistance: 6.36 Ohms, PASS

Ambient Temperature: 73.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.533

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.508

	X Position (in)	Y Position (in)	Z Position (in)	Curren t (A)	Force (lbs)	Force Constant (lbs/ A)	PASS/ FAIL
Cente r	0.000	0.000	0.000	2.170	19.984	9.210	PASS
Positi on 1	0.250	0.080	0.217	2.432	20.040	8.240	PASS
Positi on 2	0.250	-0.080	0.217	2.331	20.051	8.600	PASS
Positi on 3	-0.250	-0.080	0.217	2.333	20.229	8.672	PASS
Positi on 4	-0.250	0.080	0.217	2.323	19.874	8.557	PASS
Positi on 5	-0.250	0.080	-0.217	2.500	20.150	8.061	PASS
Positi on 6	-0.250	-0.080	-0.217	2.318	19.835	8.555	PASS
Positi on 7	0.250	-0.080	-0.217	2.454	20.215	8.237	PASS
Positi on 8	0.250	0.080	-0.217	2.401	20.138	8.387	PASS
Cente r	0.000	0.000	0.000	-2.190	-20.125	9.188	PASS

Position 1	0.250	0.080	0.217	-2.380	-19.879	8.354	PASS
Position 2	0.250	-0.080	0.217	-2.381	-19.912	8.364	PASS
Position 3	-0.250	-0.080	0.217	-2.384	-19.940	8.365	PASS
Position 4	-0.250	0.080	0.217	-2.386	-19.848	8.320	PASS
Position 5	-0.250	0.080	-0.217	-2.444	-19.969	8.171	PASS
Position 6	-0.250	-0.080	-0.217	-2.338	-20.136	8.613	PASS
Position 7	0.250	-0.080	-0.217	-2.394	-19.903	8.312	PASS
Position 8	0.250	0.080	-0.217	-2.433	-19.953	8.200	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L144
 Operator Name: Gordon, Matt
 Date: 4/13/2010 Time: 9:52 AM

Actuator Coil Resistance: 6.39 Ohms, PASS

Ambient Temperature: 73.31 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.526

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.508

	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	2.135	20.077	9.402	PASS
Position 1	0.250	0.080	0.217	2.340	20.168	8.618	PASS
Position 2	0.250	-0.080	0.217	2.293	20.221	8.820	PASS
Position 3	-0.250	-0.080	0.217	2.284	20.009	8.759	PASS
Position 4	-0.250	0.080	0.217	2.332	19.957	8.557	PASS
Position 5	-0.250	0.080	-0.217	2.355	19.891	8.446	PASS
Position 6	-0.250	-0.080	-0.217	2.207	19.995	9.061	PASS
Position 7	0.250	-0.080	-0.217	2.261	19.982	8.839	PASS
Position 8	0.250	0.080	-0.217	2.379	19.893	8.363	PASS
Center	0.000	0.000	0.000	-2.155	-19.806	9.193	PASS
Position 1	0.250	0.080	0.217	-2.390	-19.935	8.341	PASS
Position 2	0.250	-0.080	0.217	-2.402	-19.935	8.300	PASS
Position 3	-0.250	-0.080	0.217	-2.411	-19.945	8.273	PASS
Position 4	-0.250	0.080	0.217	-2.409	-19.915	8.267	PASS
Position 5	-0.250	0.080	-0.217	-2.463	-19.923	8.089	PASS
Position 6	-0.250	-0.080	-0.217	-2.292	-20.057	8.750	PASS

Position 7	0.250	-0.080	-0.217	-2.306	-20.142	8.736	PASS
Position 8	0.250	0.080	-0.217	-2.453	-19.905	8.114	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L145

Operator Name: Gordon, Matt

Date: 4/13/2010 Time: 11:44 AM

Actuator Coil Resistance: 6.45 Ohms, PASS

Ambient Temperature: 73.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.526

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.506

	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	2.213	19.801	8.946	PASS
Position 1	0.250	0.080	0.217	2.427	19.895	8.199	PASS
Position 2	0.250	-0.080	0.217	2.412	20.142	8.350	PASS
Position 3	-0.250	-0.080	0.217	2.490	20.021	8.041	PASS
Position 4	-0.250	0.080	0.217	2.419	20.004	8.268	PASS

Positio n 5	-0.250	0.080	-0.217	2.395	19.980	8.342	PASS
Positio n 6	-0.250	-0.080	-0.217	2.369	19.995	8.439	PASS
Positio n 7	0.250	-0.080	-0.217	2.326	19.973	8.589	PASS
Positio n 8	0.250	0.080	-0.217	2.308	19.980	8.658	PASS
Center	0.000	0.000	0.000	-2.128	-19.921	9.359	PASS
Positio n 1	0.250	0.080	0.217	-2.381	-20.071	8.430	PASS
Positio n 2	0.250	-0.080	0.217	-2.387	-19.975	8.367	PASS
Positio n 3	-0.250	-0.080	0.217	-2.351	-20.158	8.573	PASS
Positio n 4	-0.250	0.080	0.217	-2.386	-20.138	8.442	PASS
Positio n 5	-0.250	0.080	-0.217	-2.488	-20.076	8.069	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.438	-19.943	8.180	PASS
Positio n 7	0.250	-0.080	-0.217	-2.344	-19.968	8.520	PASS
Positio n 8	0.250	0.080	-0.217	-2.483	-20.072	8.084	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L146
 Operator Name: Gordon, Matt
 Date: 4/13/2010 Time: 11:16 AM
 Actuator Coil Resistance: 6.35 Ohms, PASS
 Ambient Temperature: 73.1 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.536
 Y Travel Limit (inches): 0.206
 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	2.175	20.105	9.243	PASS
Position 1	0.250	0.080	0.217	2.360	20.184	8.554	PASS
Position 2	0.250	-0.080	0.217	2.368	19.881	8.396	PASS
Position 3	-0.250	-0.080	0.217	2.360	19.821	8.397	PASS
Position 4	-0.250	0.080	0.217	2.469	19.996	8.099	PASS
Position 5	-0.250	0.080	-0.217	2.373	19.833	8.358	PASS
Position 6	-0.250	-0.080	-0.217	2.385	19.878	8.336	PASS
Position 7	0.250	-0.080	-0.217	2.417	19.852	8.212	PASS
Position 8	0.250	0.080	-0.217	2.423	19.854	8.194	PASS
Center	0.000	0.000	0.000	-2.165	-20.194	9.326	PASS
Position 1	0.250	0.080	0.217	-2.377	-20.002	8.416	PASS
Position 2	0.250	-0.080	0.217	-2.362	-19.962	8.452	PASS
Position 3	-0.250	-0.080	0.217	-2.367	-19.969	8.435	PASS
Position 4	-0.250	0.080	0.217	-2.355	-19.975	8.483	PASS
Position 5	-0.250	0.080	-0.217	-2.457	-20.074	8.171	PASS

Position 6	-0.250	-0.080	-0.217	-2.414	-19.846	8.223	PASS
Position 7	0.250	-0.080	-0.217	-2.454	-20.118	8.197	PASS
Position 8	0.250	0.080	-0.217	-2.457	-20.067	8.167	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L147

Operator Name: Gordon, Matt

Date: 4/14/2010 Time: 8:18 AM

Actuator Coil Resistance: 6.43 Ohms, PASS

Ambient Temperature: 72.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.540

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.500

	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	2.119	19.855	9.370	PASS
Position 1	0.250	0.080	0.217	2.376	20.096	8.459	PASS
Position 2	0.250	-0.080	0.217	2.301	19.872	8.635	PASS
Position 3	-0.250	-0.080	0.217	2.323	19.841	8.540	PASS

Position 4	-0.250	0.080	0.217	2.321	20.140	8.679	PASS
Position 5	-0.250	0.080	-0.217	2.325	20.022	8.611	PASS
Position 6	-0.250	-0.080	-0.217	2.358	19.982	8.473	PASS
Position 7	0.250	-0.080	-0.217	2.306	19.986	8.666	PASS
Position 8	0.250	0.080	-0.217	2.355	20.010	8.498	PASS
Center	0.000	0.000	0.000	-2.145	-19.962	9.306	PASS
Position 1	0.250	0.080	0.217	-2.346	-19.836	8.454	PASS
Position 2	0.250	-0.080	0.217	-2.338	-19.865	8.498	PASS
Position 3	-0.250	-0.080	0.217	-2.342	-19.879	8.489	PASS
Position 4	-0.250	0.080	0.217	-2.386	-20.184	8.458	PASS
Position 5	-0.250	0.080	-0.217	-2.440	-20.047	8.216	PASS
Position 6	-0.250	-0.080	-0.217	-2.447	-19.810	8.097	PASS
Position 7	0.250	-0.080	-0.217	-2.440	-19.914	8.160	PASS
Position 8	0.250	0.080	-0.217	-2.433	-20.117	8.269	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L148

Operator Name: Gordon, Matt

Date: 4/13/2010 Time: 1:24 PM

Actuator Coil Resistance: 6.33 Ohms, PASS

Ambient Temperature: 73.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.527

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.504

	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	2.227	20.180	9.060	PASS
Position 1	0.250	0.080	0.217	2.452	19.955	8.138	PASS
Position 2	0.250	-0.080	0.217	2.500	19.989	7.996	PASS
Position 3	-0.250	-0.080	0.217	2.428	20.212	8.325	PASS
Position 4	-0.250	0.080	0.217	2.465	20.167	8.182	PASS
Position 5	-0.250	0.080	-0.217	2.367	19.865	8.391	PASS
Position 6	-0.250	-0.080	-0.217	2.466	20.152	8.173	PASS
Position 7	0.250	-0.080	-0.217	2.510	20.155	8.029	PASS
Position 8	0.250	0.080	-0.217	2.450	19.886	8.118	PASS
Center	0.000	0.000	0.000	-2.162	-19.820	9.169	PASS
Position 1	0.250	0.080	0.217	-2.407	-20.073	8.339	PASS
Position 2	0.250	-0.080	0.217	-2.405	-20.135	8.371	PASS
Position 3	-0.250	-0.080	0.217	-2.402	-20.148	8.387	PASS

Position 4	-0.250	0.080	0.217	-2.415	-20.055	8.305	PASS
Position 5	-0.250	0.080	-0.217	-2.469	-20.134	8.155	PASS
Position 6	-0.250	-0.080	-0.217	-2.355	-20.138	8.552	PASS
Position 7	0.250	-0.080	-0.217	-2.461	-20.034	8.142	PASS
Position 8	0.250	0.080	-0.217	-2.398	-19.913	8.306	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L149

Operator Name: Gordon, Matt

Date: 4/13/2010 Time: 1:52 PM

Actuator Coil Resistance: 6.41 Ohms, PASS

Ambient Temperature: 72.9 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.531

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	2.105	19.844	9.428	PASS
Position 1	0.250	0.080	0.217	2.460	19.818	8.054	PASS

Positio n 2	0.250	-0.080	0.217	2.458	19.916	8.104	PASS
Positio n 3	-0.250	-0.080	0.217	2.393	19.978	8.348	PASS
Positio n 4	-0.250	0.080	0.217	2.354	19.963	8.481	PASS
Positio n 5	-0.250	0.080	-0.217	2.321	20.117	8.669	PASS
Positio n 6	-0.250	-0.080	-0.217	2.368	20.202	8.530	PASS
Positio n 7	0.250	-0.080	-0.217	2.344	20.086	8.571	PASS
Positio n 8	0.250	0.080	-0.217	2.322	20.084	8.648	PASS
Center	0.000	0.000	0.000	-2.200	-19.981	9.082	PASS
Positio n 1	0.250	0.080	0.217	-2.390	-20.097	8.410	PASS
Positio n 2	0.250	-0.080	0.217	-2.393	-20.015	8.364	PASS
Positio n 3	-0.250	-0.080	0.217	-2.413	-20.085	8.322	PASS
Positio n 4	-0.250	0.080	0.217	-2.382	-20.061	8.420	PASS
Positio n 5	-0.250	0.080	-0.217	-2.434	-20.156	8.282	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.484	-19.812	7.975	PASS
Positio n 7	0.250	-0.080	-0.217	-2.349	-20.098	8.555	PASS
Positio n 8	0.250	0.080	-0.217	-2.492	-20.016	8.031	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L150

Operator Name: Gordon, Matt

Date: 4/13/2010 Time: 2:31 PM

Actuator Coil Resistance: 6.4 Ohms, PASS

Ambient Temperature: 72.7 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.531

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.499

	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	2.134	19.854	9.303	PASS
Position 1	0.250	0.080	0.217	2.407	19.891	8.263	PASS
Position 2	0.250	-0.080	0.217	2.405	19.920	8.282	PASS
Position 3	-0.250	-0.080	0.217	2.441	19.932	8.166	PASS
Position 4	-0.250	0.080	0.217	2.397	19.982	8.336	PASS
Position 5	-0.250	0.080	-0.217	2.356	20.015	8.496	PASS
Position 6	-0.250	-0.080	-0.217	2.428	20.146	8.298	PASS
Position 7	0.250	-0.080	-0.217	2.313	20.197	8.732	PASS
Position 8	0.250	0.080	-0.217	2.381	20.003	8.401	PASS
Center	0.000	0.000	0.000	-2.155	-19.996	9.280	PASS
Position 1	0.250	0.080	0.217	-2.390	-20.160	8.434	PASS
Position 2	0.250	-0.080	0.217	-2.373	-20.103	8.473	PASS

Position 3	-0.250	-0.080	0.217	-2.412	-20.120	8.342	PASS
Position 4	-0.250	0.080	0.217	-2.391	-20.107	8.411	PASS
Position 5	-0.250	0.080	-0.217	-2.442	-20.004	8.192	PASS
Position 6	-0.250	-0.080	-0.217	-2.494	-19.824	7.948	PASS
Position 7	0.250	-0.080	-0.217	-2.490	-20.053	8.053	PASS
Position 8	0.250	0.080	-0.217	-2.494	-20.076	8.049	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L151

Operator Name: Gordon, Matt

Date: 4/13/2010 Time: 2:53 PM

Actuator Coil Resistance: 6.37 Ohms, PASS

Ambient Temperature: 73.1 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.538

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.504

	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	2.116	20.012	9.458	PASS

Positio n 1	0.250	0.080	0.217	2.461	20.048	8.147	PASS
Positio n 2	0.250	-0.080	0.217	2.419	19.899	8.225	PASS
Positio n 3	-0.250	-0.080	0.217	2.409	19.980	8.294	PASS
Positio n 4	-0.250	0.080	0.217	2.452	20.048	8.175	PASS
Positio n 5	-0.250	0.080	-0.217	2.435	20.085	8.248	PASS
Positio n 6	-0.250	-0.080	-0.217	2.404	20.160	8.388	PASS
Positio n 7	0.250	-0.080	-0.217	2.423	20.164	8.322	PASS
Positio n 8	0.250	0.080	-0.217	2.443	20.137	8.244	PASS
Center	0.000	0.000	0.000	-2.204	-20.154	9.146	PASS
Positio n 1	0.250	0.080	0.217	-2.392	-19.931	8.332	PASS
Positio n 2	0.250	-0.080	0.217	-2.394	-19.952	8.335	PASS
Positio n 3	-0.250	-0.080	0.217	-2.395	-19.991	8.347	PASS
Positio n 4	-0.250	0.080	0.217	-2.394	-19.913	8.319	PASS
Positio n 5	-0.250	0.080	-0.217	-2.454	-19.861	8.093	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.490	-20.153	8.093	PASS
Positio n 7	0.250	-0.080	-0.217	-2.487	-20.045	8.060	PASS
Positio n 8	0.250	0.080	-0.217	-2.443	-19.820	8.113	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L152
Operator Name: Gordon, Matt
Date: 4/13/2010 Time: 3:19 PM
Actuator Coil Resistance: 6.36 Ohms, PASS
Ambient Temperature: 73.1 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.529
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.500

	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	2.172	20.167	9.283	PASS
Position 1	0.250	0.080	0.217	2.463	19.884	8.073	PASS
Position 2	0.250	-0.080	0.217	2.406	19.920	8.279	PASS
Position 3	-0.250	-0.080	0.217	2.366	20.012	8.458	PASS
Position 4	-0.250	0.080	0.217	2.408	19.981	8.297	PASS
Position 5	-0.250	0.080	-0.217	2.404	20.145	8.379	PASS
Position 6	-0.250	-0.080	-0.217	2.336	20.227	8.659	PASS
Position 7	0.250	-0.080	-0.217	2.401	20.162	8.396	PASS
Position 8	0.250	0.080	-0.217	2.432	20.159	8.289	PASS
Center	0.000	0.000	0.000	-2.126	-19.842	9.334	PASS
Position 1	0.250	0.080	0.217	-2.400	-20.197	8.417	PASS

Position 2	0.250	-0.080	0.217	-2.336	-19.818	8.485	PASS
Position 3	-0.250	-0.080	0.217	-2.358	-19.848	8.417	PASS
Position 4	-0.250	0.080	0.217	-2.393	-20.150	8.420	PASS
Position 5	-0.250	0.080	-0.217	-2.483	-20.140	8.112	PASS
Position 6	-0.250	-0.080	-0.217	-2.396	-20.130	8.402	PASS
Position 7	0.250	-0.080	-0.217	-2.398	-20.078	8.371	PASS
Position 8	0.250	0.080	-0.217	-2.402	-20.004	8.327	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L153
Operator Name: Gordon, Matt
Date: 4/13/2010 Time: 3:39 PM
Actuator Coil Resistance: 6.36 Ohms, PASS
Ambient Temperature: 73.1 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.534
Y Travel Limit (inches): 0.205
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
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Center	0.000	0.000	0.000	2.110	20.145	9.547	PASS
Positio n 1	0.250	0.080	0.217	2.400	19.911	8.295	PASS
Positio n 2	0.250	-0.080	0.217	2.468	19.955	8.084	PASS
Positio n 3	-0.250	-0.080	0.217	2.446	20.074	8.208	PASS
Positio n 4	-0.250	0.080	0.217	2.421	20.110	8.306	PASS
Positio n 5	-0.250	0.080	-0.217	2.370	19.967	8.424	PASS
Positio n 6	-0.250	-0.080	-0.217	2.401	20.048	8.351	PASS
Positio n 7	0.250	-0.080	-0.217	2.343	20.048	8.555	PASS
Positio n 8	0.250	0.080	-0.217	2.426	19.970	8.230	PASS
Center	0.000	0.000	0.000	-2.134	-19.893	9.321	PASS
Positio n 1	0.250	0.080	0.217	-2.385	-20.051	8.408	PASS
Positio n 2	0.250	-0.080	0.217	-2.391	-20.036	8.379	PASS
Positio n 3	-0.250	-0.080	0.217	-2.376	-20.104	8.460	PASS
Positio n 4	-0.250	0.080	0.217	-2.387	-20.034	8.395	PASS
Positio n 5	-0.250	0.080	-0.217	-2.438	-20.042	8.219	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.388	-20.187	8.453	PASS
Positio n 7	0.250	-0.080	-0.217	-2.341	-19.892	8.497	PASS
Positio n 8	0.250	0.080	-0.217	-2.383	-19.891	8.348	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L154
Operator Name: Gordon, Matt
Date: 4/13/2010 Time: 4:53 PM
Actuator Coil Resistance: 6.38 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.531
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.508

	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	2.052	19.802	9.649	PASS
Position 1	0.250	0.080	0.217	2.433	20.145	8.280	PASS
Position 2	0.250	-0.080	0.217	2.461	20.274	8.237	PASS
Position 3	-0.250	-0.080	0.217	2.354	20.081	8.531	PASS
Position 4	-0.250	0.080	0.217	2.416	19.817	8.201	PASS
Position 5	-0.250	0.080	-0.217	2.391	19.937	8.339	PASS
Position 6	-0.250	-0.080	-0.217	2.273	20.109	8.847	PASS
Position 7	0.250	-0.080	-0.217	2.369	20.127	8.497	PASS
Position 8	0.250	0.080	-0.217	2.328	19.951	8.569	PASS
Center	0.000	0.000	0.000	-2.140	-19.936	9.317	PASS

Position 1	0.250	0.080	0.217	-2.379	-20.129	8.460	PASS
Position 2	0.250	-0.080	0.217	-2.392	-20.153	8.427	PASS
Position 3	-0.250	-0.080	0.217	-2.392	-20.139	8.419	PASS
Position 4	-0.250	0.080	0.217	-2.387	-20.064	8.406	PASS
Position 5	-0.250	0.080	-0.217	-2.442	-19.869	8.137	PASS
Position 6	-0.250	-0.080	-0.217	-2.345	-20.030	8.542	PASS
Position 7	0.250	-0.080	-0.217	-2.488	-19.868	7.987	PASS
Position 8	0.250	0.080	-0.217	-2.478	-20.119	8.118	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L155
Operator Name: Gordon, Matt
Date: 4/13/2010 Time: 5:29 PM
Actuator Coil Resistance: 6.39 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.535
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.503

	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	2.152	20.196	9.386	PASS
Positio n 1	0.250	0.080	0.217	2.459	20.088	8.171	PASS
Positio n 2	0.250	-0.080	0.217	2.456	20.066	8.170	PASS
Positio n 3	-0.250	-0.080	0.217	2.429	20.042	8.252	PASS
Positio n 4	-0.250	0.080	0.217	2.429	20.114	8.280	PASS
Positio n 5	-0.250	0.080	-0.217	2.428	19.941	8.213	PASS
Positio n 6	-0.250	-0.080	-0.217	2.266	20.105	8.874	PASS
Positio n 7	0.250	-0.080	-0.217	2.384	20.062	8.417	PASS
Positio n 8	0.250	0.080	-0.217	2.415	19.950	8.262	PASS
Center	0.000	0.000	0.000	-2.139	-19.926	9.316	PASS
Positio n 1	0.250	0.080	0.217	-2.382	-20.036	8.411	PASS
Positio n 2	0.250	-0.080	0.217	-2.385	-20.010	8.389	PASS
Positio n 3	-0.250	-0.080	0.217	-2.384	-20.071	8.420	PASS
Positio n 4	-0.250	0.080	0.217	-2.389	-20.022	8.382	PASS
Positio n 5	-0.250	0.080	-0.217	-2.422	-19.809	8.180	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.340	-20.050	8.568	PASS
Positio n 7	0.250	-0.080	-0.217	-2.335	-19.936	8.536	PASS
Positio n 8	0.250	0.080	-0.217	-2.491	-20.098	8.069	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L156
 Operator Name: Gordon, Matt
 Date: 4/13/2010 Time: 5:13 PM
 Actuator Coil Resistance: 6.37 Ohms, PASS
 Ambient Temperature: 73.3 F
 Hi Pot Test Results: 1000 MOhms, PASS
 X Travel Limit (inches): 0.548
 Y Travel Limit (inches): 0.205
 Z Travel Limit (inches): 0.505

	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	2.167	19.827	9.150	PASS
Position 1	0.250	0.080	0.217	2.401	19.864	8.275	PASS
Position 2	0.250	-0.080	0.217	2.449	19.993	8.163	PASS
Position 3	-0.250	-0.080	0.217	2.425	19.960	8.231	PASS
Position 4	-0.250	0.080	0.217	2.411	20.003	8.297	PASS
Position 5	-0.250	0.080	-0.217	2.366	20.053	8.476	PASS
Position 6	-0.250	-0.080	-0.217	2.397	19.982	8.336	PASS
Position 7	0.250	-0.080	-0.217	2.392	19.968	8.348	PASS
Position 8	0.250	0.080	-0.217	2.310	20.045	8.679	PASS

Center	0.000	0.000	0.000	-2.136	-19.963	9.346	PASS
Position 1	0.250	0.080	0.217	-2.396	-20.145	8.409	PASS
Position 2	0.250	-0.080	0.217	-2.352	-19.809	8.422	PASS
Position 3	-0.250	-0.080	0.217	-2.376	-20.217	8.508	PASS
Position 4	-0.250	0.080	0.217	-2.382	-20.116	8.444	PASS
Position 5	-0.250	0.080	-0.217	-2.422	-19.999	8.257	PASS
Position 6	-0.250	-0.080	-0.217	-2.443	-19.832	8.117	PASS
Position 7	0.250	-0.080	-0.217	-2.388	-20.056	8.397	PASS
Position 8	0.250	0.080	-0.217	-2.420	-20.121	8.316	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L157
Operator Name: Gordon, Matt
Date: 4/13/2010 Time: 6:24 PM
Actuator Coil Resistance: 6.45 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.525
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.503

	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	2.149	20.243	9.421	PASS
Positio n 1	0.250	0.080	0.217	2.399	19.973	8.325	PASS
Positio n 2	0.250	-0.080	0.217	2.464	19.933	8.090	PASS
Positio n 3	-0.250	-0.080	0.217	2.501	20.051	8.017	PASS
Positio n 4	-0.250	0.080	0.217	2.448	19.837	8.103	PASS
Positio n 5	-0.250	0.080	-0.217	2.256	20.058	8.891	PASS
Positio n 6	-0.250	-0.080	-0.217	2.348	20.112	8.564	PASS
Positio n 7	0.250	-0.080	-0.217	2.440	20.030	8.208	PASS
Positio n 8	0.250	0.080	-0.217	2.396	20.026	8.358	PASS
Center	0.000	0.000	0.000	-2.110	-19.938	9.447	PASS
Positio n 1	0.250	0.080	0.217	-2.331	-20.070	8.611	PASS
Positio n 2	0.250	-0.080	0.217	-2.369	-20.037	8.458	PASS
Positio n 3	-0.250	-0.080	0.217	-2.352	-20.018	8.512	PASS
Positio n 4	-0.250	0.080	0.217	-2.373	-19.954	8.409	PASS
Positio n 5	-0.250	0.080	-0.217	-2.328	-19.989	8.588	PASS
Positio n 6	-0.250	-0.080	-0.217	-2.430	-19.890	8.185	PASS
Positio n 7	0.250	-0.080	-0.217	-2.381	-20.149	8.463	PASS
Positio n 8	0.250	0.080	-0.217	-2.323	-19.929	8.579	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L158
Operator Name: Gordon, Matt
Date: 4/13/2010 Time: 6:04 PM
Actuator Coil Resistance: 6.42 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.531
Y Travel Limit (inches): 0.205
Z Travel Limit (inches): 0.504

	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	2.108	19.887	9.432	PASS
Position 1	0.250	0.080	0.217	2.427	19.813	8.164	PASS
Position 2	0.250	-0.080	0.217	2.339	20.005	8.551	PASS
Position 3	-0.250	-0.080	0.217	2.468	19.829	8.035	PASS
Position 4	-0.250	0.080	0.217	2.454	20.144	8.208	PASS
Position 5	-0.250	0.080	-0.217	2.312	20.163	8.720	PASS
Position 6	-0.250	-0.080	-0.217	2.267	19.813	8.738	PASS
Position 7	0.250	-0.080	-0.217	2.367	20.215	8.542	PASS

Position 8	0.250	0.080	-0.217	2.356	20.148	8.552	PASS
Center	0.000	0.000	0.000	-2.144	-20.024	9.339	PASS
Position 1	0.250	0.080	0.217	-2.369	-20.111	8.491	PASS
Position 2	0.250	-0.080	0.217	-2.387	-20.098	8.420	PASS
Position 3	-0.250	-0.080	0.217	-2.388	-20.130	8.430	PASS
Position 4	-0.250	0.080	0.217	-2.374	-20.117	8.475	PASS
Position 5	-0.250	0.080	-0.217	-2.392	-19.860	8.303	PASS
Position 6	-0.250	-0.080	-0.217	-2.437	-19.885	8.160	PASS
Position 7	0.250	-0.080	-0.217	-2.435	-20.103	8.256	PASS
Position 8	0.250	0.080	-0.217	-2.383	-19.910	8.355	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L159
Operator Name: Gordon, Matt
Date: 4/13/2010 Time: 5:48 PM
Actuator Coil Resistance: 6.37 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.533

Y Travel Limit (inches): 0.206

Z Travel Limit (inches): 0.506

	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	2.162	20.216	9.350	PASS
Position 1	0.250	0.080	0.217	2.460	20.188	8.206	PASS
Position 2	0.250	-0.080	0.217	2.447	20.153	8.235	PASS
Position 3	-0.250	-0.080	0.217	2.451	20.173	8.229	PASS
Position 4	-0.250	0.080	0.217	2.395	19.852	8.290	PASS
Position 5	-0.250	0.080	-0.217	2.387	19.972	8.369	PASS
Position 6	-0.250	-0.080	-0.217	2.357	20.018	8.491	PASS
Position 7	0.250	-0.080	-0.217	2.357	19.968	8.471	PASS
Position 8	0.250	0.080	-0.217	2.344	19.975	8.523	PASS
Center	0.000	0.000	0.000	-2.136	-19.878	9.307	PASS
Position 1	0.250	0.080	0.217	-2.392	-20.111	8.406	PASS
Position 2	0.250	-0.080	0.217	-2.390	-20.100	8.412	PASS
Position 3	-0.250	-0.080	0.217	-2.388	-20.109	8.420	PASS
Position 4	-0.250	0.080	0.217	-2.391	-20.072	8.396	PASS
Position 5	-0.250	0.080	-0.217	-2.442	-20.103	8.232	PASS
Position 6	-0.250	-0.080	-0.217	-2.440	-19.910	8.161	PASS
Position 7	0.250	-0.080	-0.217	-2.401	-20.122	8.380	PASS
Position 8	0.250	0.080	-0.217	-2.430	-20.029	8.242	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L160
Operator Name: Gordon, Matt
Date: 4/14/2010 Time: 8:00 AM
Actuator Coil Resistance: 6.41 Ohms, PASS
Ambient Temperature: 73.3 F
Hi Pot Test Results: 1000 MOhms, PASS
X Travel Limit (inches): 0.526
Y Travel Limit (inches): 0.206
Z Travel Limit (inches): 0.508

	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	2.143	19.900	9.285	PASS
Position 1	0.250	0.080	0.217	2.296	20.265	8.828	PASS
Position 2	0.250	-0.080	0.217	2.397	19.972	8.331	PASS
Position 3	-0.250	-0.080	0.217	2.474	20.054	8.105	PASS
Position 4	-0.250	0.080	0.217	2.328	20.245	8.698	PASS
Position 5	-0.250	0.080	-0.217	2.380	20.128	8.456	PASS
Position 6	-0.250	-0.080	-0.217	2.330	20.103	8.629	PASS

Position 7	0.250	-0.080	-0.217	2.228	20.087	9.015	PASS
Position 8	0.250	0.080	-0.217	2.310	20.097	8.699	PASS
Center	0.000	0.000	0.000	-2.135	-20.038	9.385	PASS
Position 1	0.250	0.080	0.217	-2.333	-19.850	8.510	PASS
Position 2	0.250	-0.080	0.217	-2.370	-20.178	8.514	PASS
Position 3	-0.250	-0.080	0.217	-2.384	-20.203	8.473	PASS
Position 4	-0.250	0.080	0.217	-2.342	-19.828	8.466	PASS
Position 5	-0.250	0.080	-0.217	-2.439	-19.830	8.130	PASS
Position 6	-0.250	-0.080	-0.217	-2.340	-19.903	8.506	PASS
Position 7	0.250	-0.080	-0.217	-2.328	-20.220	8.686	PASS
Position 8	0.250	0.080	-0.217	-2.428	-20.011	8.243	PASS

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LIGO Production Large Actuator Test Report

Actuator Serial #: L161
Operator Name: Gordon, Matt
Date: 4/13/2010 Time: 6:39 PM
Actuator Coil Resistance: 6.41 Ohms, PASS
Ambient Temperature: 73.3 F

Hi Pot Test Results: 1000 MOhms, PASS

X Travel Limit (inches): 0.529

Y Travel Limit (inches): 0.205

Z Travel Limit (inches): 0.499

	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	2.153	19.878	9.234	PASS
Position 1	0.250	0.080	0.217	2.460	19.819	8.056	PASS
Position 2	0.250	-0.080	0.217	2.398	20.071	8.370	PASS
Position 3	-0.250	-0.080	0.217	2.423	19.917	8.220	PASS
Position 4	-0.250	0.080	0.217	2.389	19.854	8.312	PASS
Position 5	-0.250	0.080	-0.217	2.361	20.072	8.501	PASS
Position 6	-0.250	-0.080	-0.217	2.336	20.042	8.581	PASS
Position 7	0.250	-0.080	-0.217	2.375	20.016	8.429	PASS
Position 8	0.250	0.080	-0.217	2.330	20.042	8.603	PASS
Center	0.000	0.000	0.000	-2.119	-19.972	9.425	PASS
Position 1	0.250	0.080	0.217	-2.329	-19.840	8.517	PASS
Position 2	0.250	-0.080	0.217	-2.357	-19.859	8.427	PASS
Position 3	-0.250	-0.080	0.217	-2.334	-19.877	8.518	PASS
Position 4	-0.250	0.080	0.217	-2.379	-20.192	8.486	PASS
Position 5	-0.250	0.080	-0.217	-2.426	-20.040	8.260	PASS
Position 6	-0.250	-0.080	-0.217	-2.427	-19.830	8.172	PASS
Position 7	0.250	-0.080	-0.217	-2.424	-19.846	8.186	PASS

Position 8	0.250	0.080	-0.217	-2.338	-19.983	8.548	PASS
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