

# MAGTROL INC

70 Gardenville Parkway  
Buffalo, New York 14224 USA

# MAGTROL SA

Route de Moncor 4B  
CH-1701 Fribourg, Switzerland

## Customer Motor Analysis

Doc. No.

**CMA 0000**

Customer

**Company XYZ**  
**101 Someplace**  
**Buffalo, NY 14224**

**Phone: XXX-XXX-XXXX**

**Contact: John Doe**

Testing Date: 1/1/2006

Testing For: Performance test, speed, torque, current

Application: Unknown

Lab Location: Buffalo NY

Tested By: XXX

Reference:

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**1. TEST PERFORMED**

The test run was a speed controlled ramp to locked rotor (closed loop).

The parameters monitored were:

- Volts
- Amps
- Torque
- Watts in

Calculated values were:

- Watts out
- Efficiency
- Horsepower

**RAMP TESTING****Average-D/U (Down/Up)**

When a motor is placed under controlled deceleration, the torque measured at any given point will be greater due to stored energy. When the motor is then accelerated, the torque measured will be less at any given point. If the deceleration and acceleration rates are equal, the corrected data is simply an average of the two curves. Because of system limitations, ramping stops at 150 rpm (with the standard 60-bit encoder).

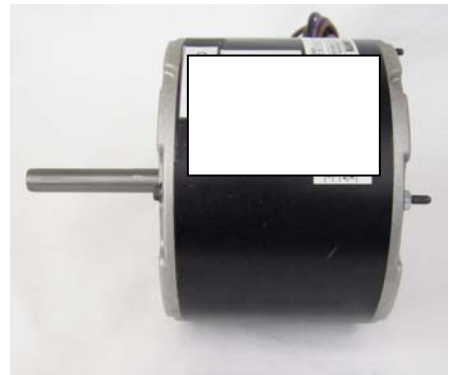
If locked rotor is specified as a minimum speed, the controller will run a separate procedure immediately after the acceleration ramp that will quickly take the motor to stall and record the data. After acquiring the locked-rotor data the motor will accelerate to its free run speed.

The inertially corrected curve is produced by matching a speed from the deceleration curve with the same speed from the acceleration curve, and averaging the associated torque data. This continues for every point on the curve. If no exact matching speed is found on the acceleration curve, the data will be interpolated to create a match. The locked-rotor point will be added to the end of the data array to construct the complete curve.

All raw data is saved in file name CMA0000\_rawdata.xls Reference graph for more characteristics of that motor.

**2. DESCRIPTION OF SAMPLES**

Motor Manufacturer: X  
 Sample Number: X  
 Cust No: X  
 Rotaton: X  
 HP: X  
 Voltage: X  
 Hz: X  
 Amps: X  
 Ph: X  
 FR: X  
 RPM: X  
 Duty: X  
 CAP: X  
 Type: X  
 INS: X  
 AMB: X  
 SF: X  
 Therm: X



Motor Number		CMA Number
1		CMA-0000-1
2		CMA-0000-2
3		CMA-0000-3
5		CMA-0000-4
7		CMA-0000-5



Motor Identification tag

**3. EQUIPMENT USED**

HD-710-6N Hysteresis Brake Dynamometer

Torque 480 oz. in (30 lb in)

RPM Max Speed 25,000

Max Power 1500W (5 min)

Max Power 935W (continuous)

Model DSP6001 High Speed Programmable Dynamometer Controller

Model 6530 High Speed Power Analyzer

Powerstat variable transformer

Type 30MB1256D-2P

Input 240VAC 50/60 Hz

Output 0-280 @56Amps 15.7KVA

M-Test 5.0 Motor Testing Software

Labview Program

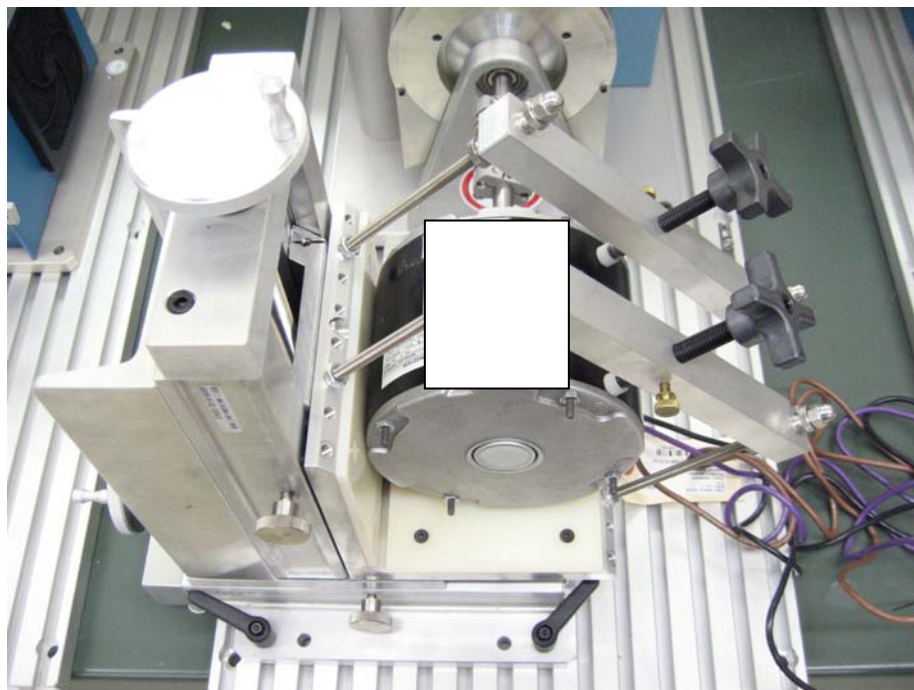
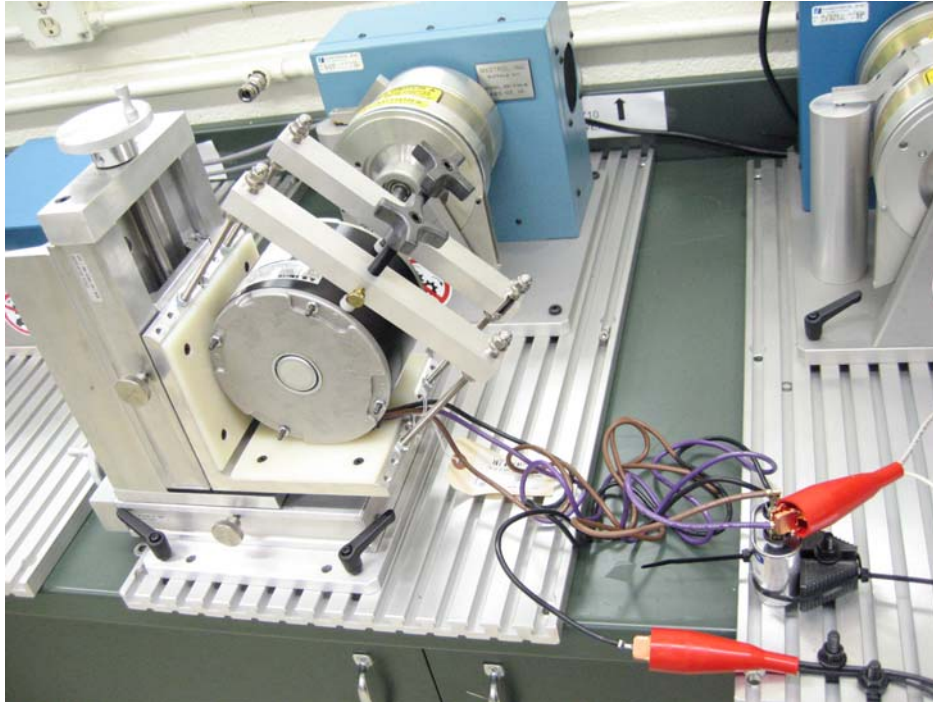
Version 1.02

AMF-2 Adjustable MotorFixture

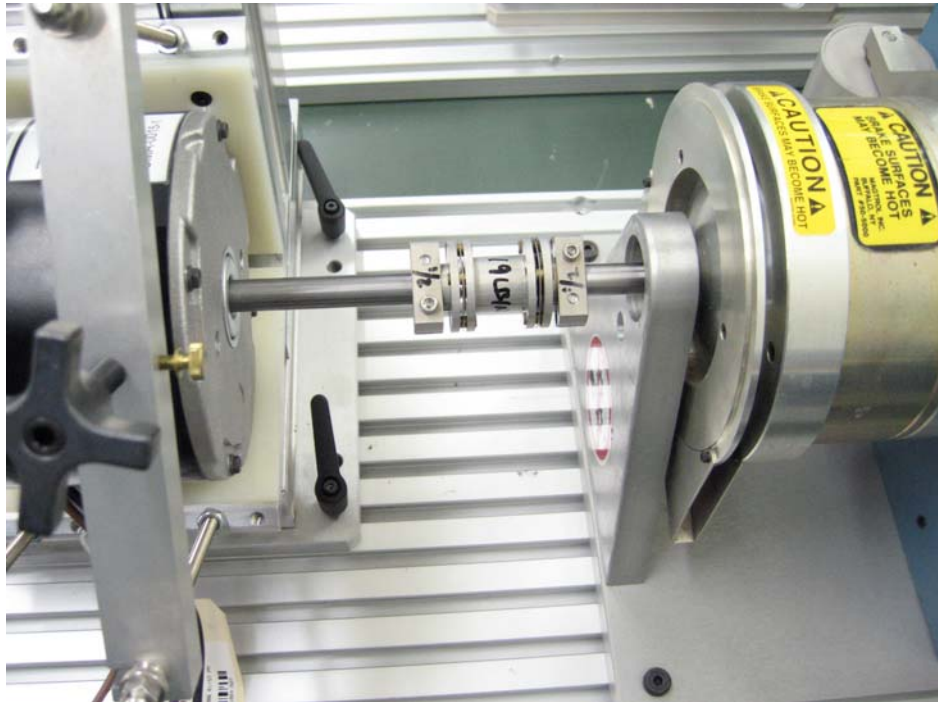
Capacitor A 5MFD cap @370VAC was used, manufacture GE.

#### 4. MOTOR SPECIMEN PREPARATION AND/OR MOUNTING TECHNIQUES

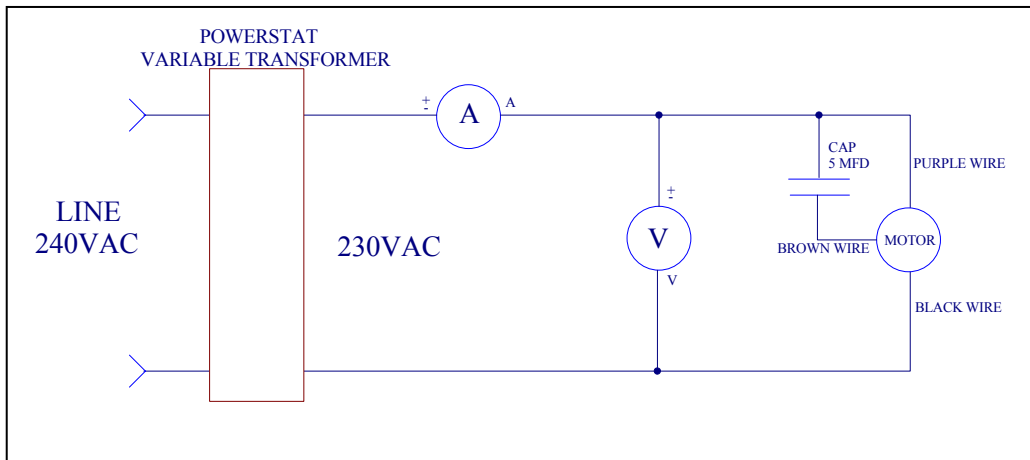
We mounted the Motors to Magtrol's AMF-2 (Adjustable Motor Fixture) then to a T-slot table base which the dyno was secured to. We had a coupling attach to the motor shaft.



Top view of motor in fixture.



Motor coupled to Dyno.



Schematic of test connections.

Voltage is measured at the motor terminals.

**5. EQUIPMENT CALIBRATION TECHNIQUES**

HD-710-6N Hysteresis Brake Dynamometer

S/N: 8903

Torque 480 oz. in (30 lb in)

RPM Max Speed 25,000

Max Power 1500W (5 min)

Max Power 935W (continuous)

Cal: 3/2/06                      Cal Due: 2/2/07    Dyno was calibrated before testing.

Model DSP6001 High Speed Programmable Dynamometer Controller

S/N:4H601578

Cal: 10/18/2005                      Cal Due: 10/18/2006

Model 6530 High Speed Power Analyzer

S/N: 4J653117

Cal 2/8/2006                      Cal Due: 2/8/2007

M-Test 5.0 Motor Testing Software

Labview Program

Version 1.03

All data and configuration files are saved for later retrieval and/or repeat testing.

Test Room

Temperature was 22 Degrees C, 36% Humidity.

Thermometer/Hygrometer

Lufft

## 6. DATA COLLECTION, CALCULATION AND ANALYSIS

All raw data is saved in file name CMA0000\_rawdata.xls Reference graph for more characteristics of that motor.

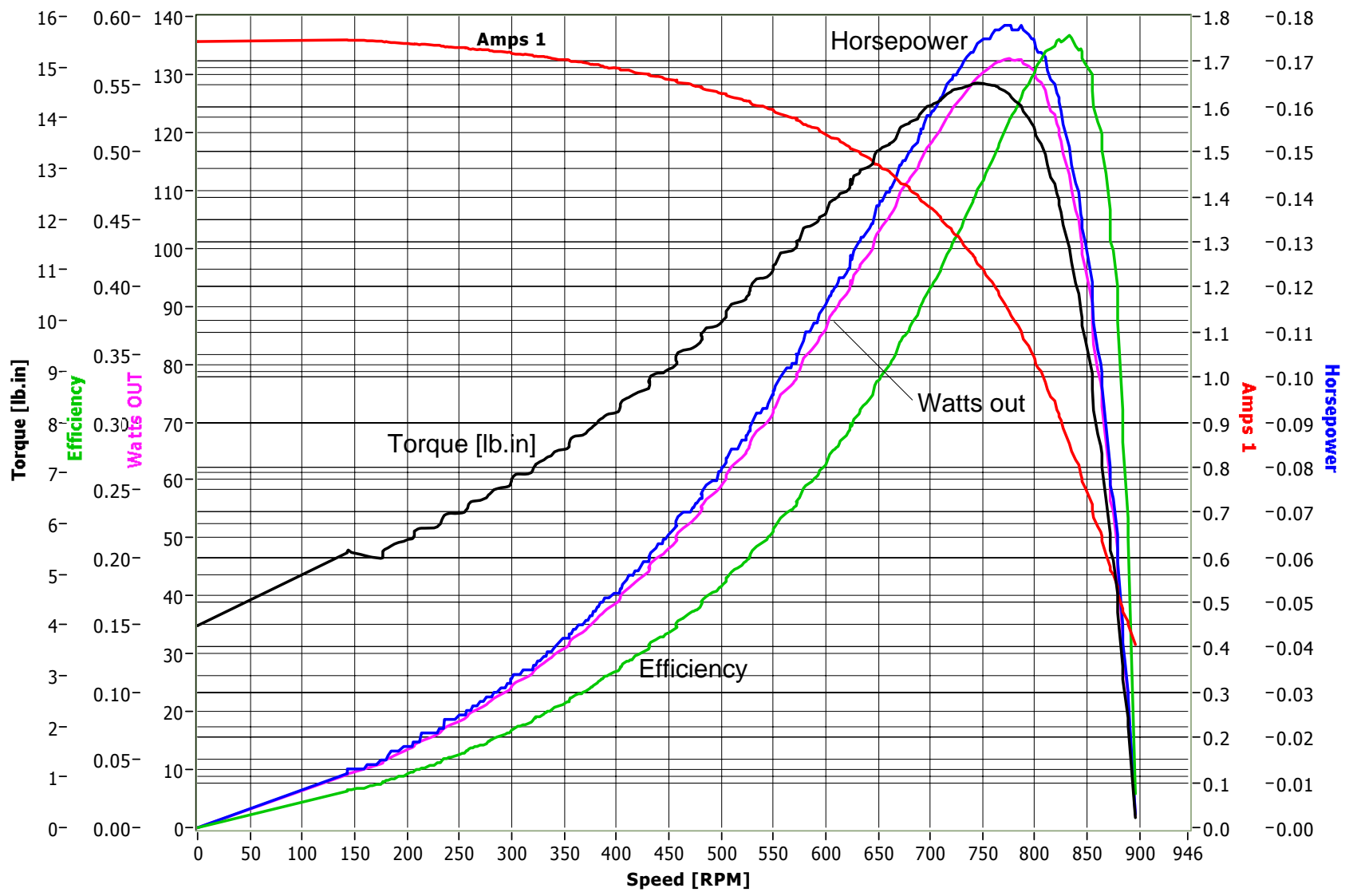
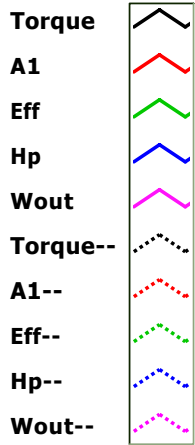
### SUMMARY OF CHARACTERISTICS AT MAX EFFICIENCY

Motor	CMA-0000-1	CMA-0000-2	CMA-0000-3	CMA-0000-4	CMA-0000-5
Efficiency (%)	58	59	58	58	59
Speed (rpm)	833	819	834	836	831
Current (Amps)	0.85	0.93	0.87	0.84	0.87
Watts Out (Watts)	112.70	123.31	114.02	112.91	117.20
Voltage (Volts)	229.99	229.59	229.02	230.38	230.23
Reference Graph	1	2	3	4	5

### SUMMARY OF CHARACTERISTICS AT MAX WATTS OUT

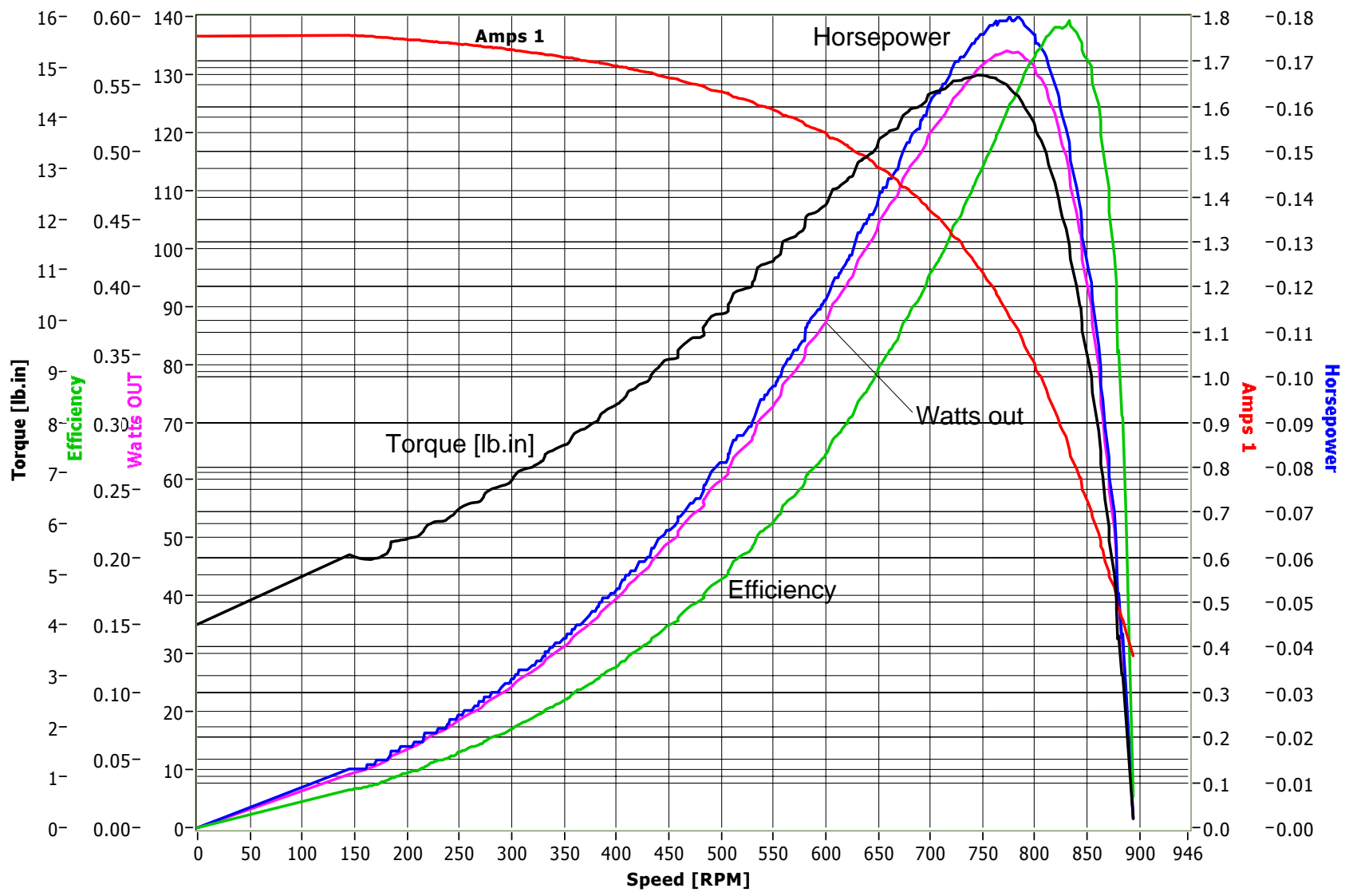
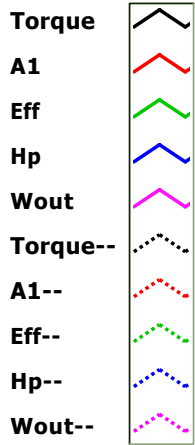
Motor	CMA-0000-1	CMA-0000-2	CMA-0000-3	CMA-0000-4	CMA-0000-5
Efficiency (%)	52	52	52	52	53
Speed (rpm)	775	773	781	781	786
Current (Amps)	1.15	1.15	1.15	1.13	1.12
Watts Out (Watts)	132.73	135.03	132.62	133.39	133.78
Voltage (Volts)	229.79	229.37	228.62	230.78	229.96
Reference Graph	1	2	3	4	5

Note: Motor number CMA-0000-3, turning the shaft by hand you could hear some noise coming from inside the motor.



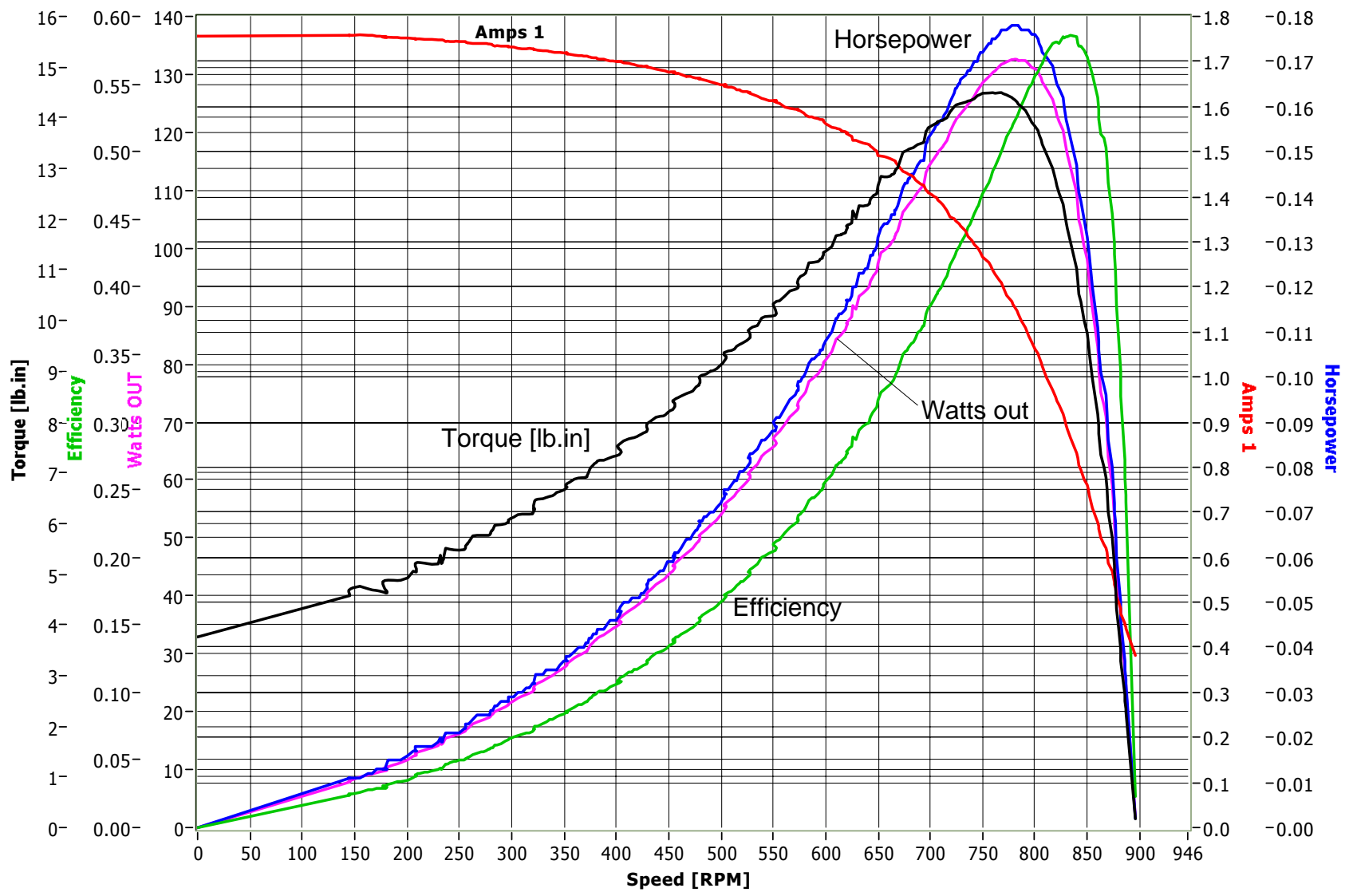
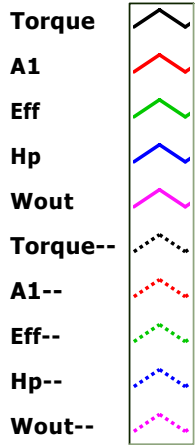
GRAPH 1

Comments  
CMA-0000-1



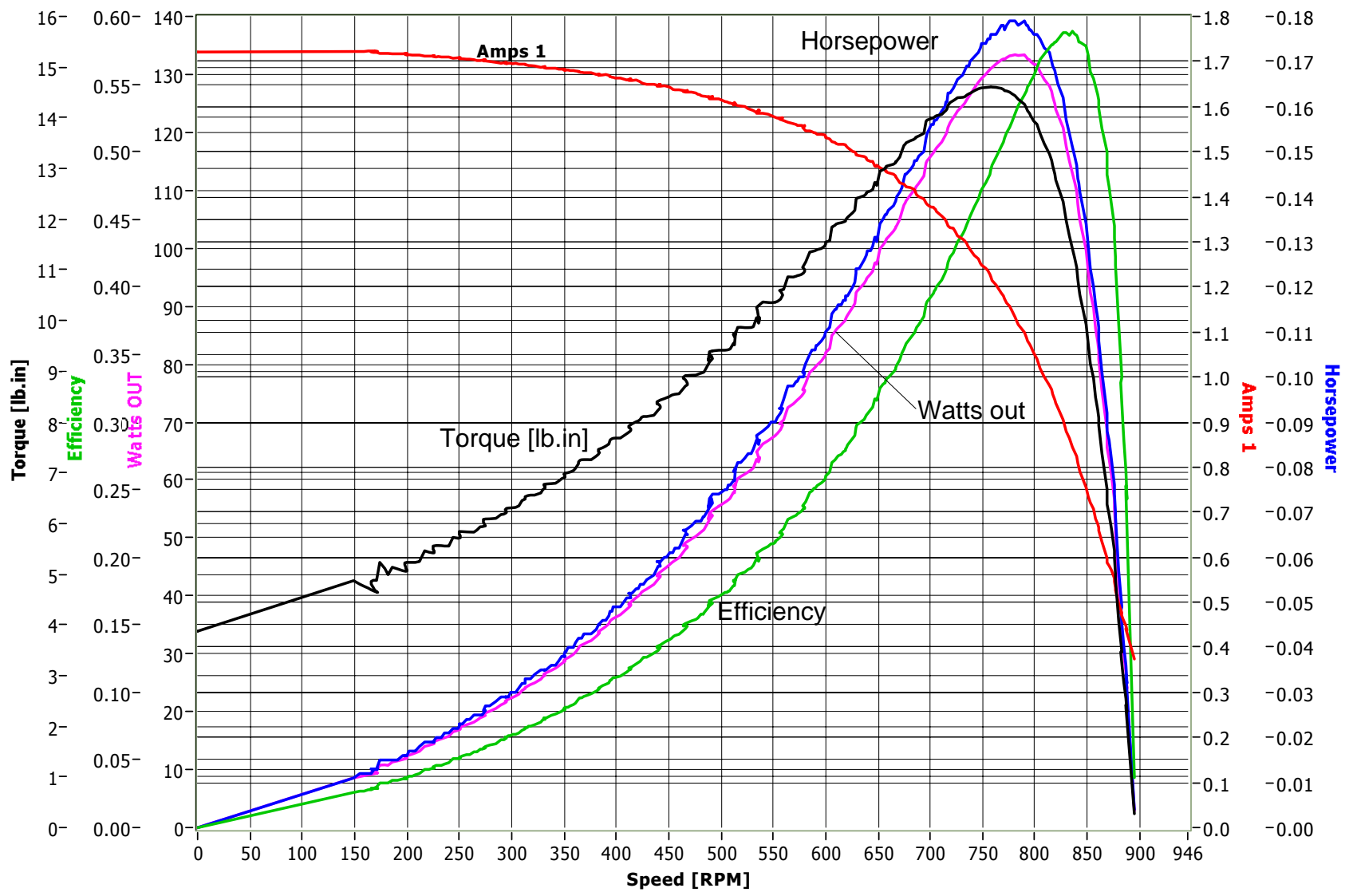
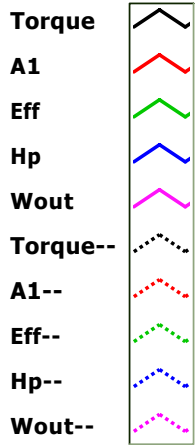
GRAPH 2

Comments  
CMA-0000-2



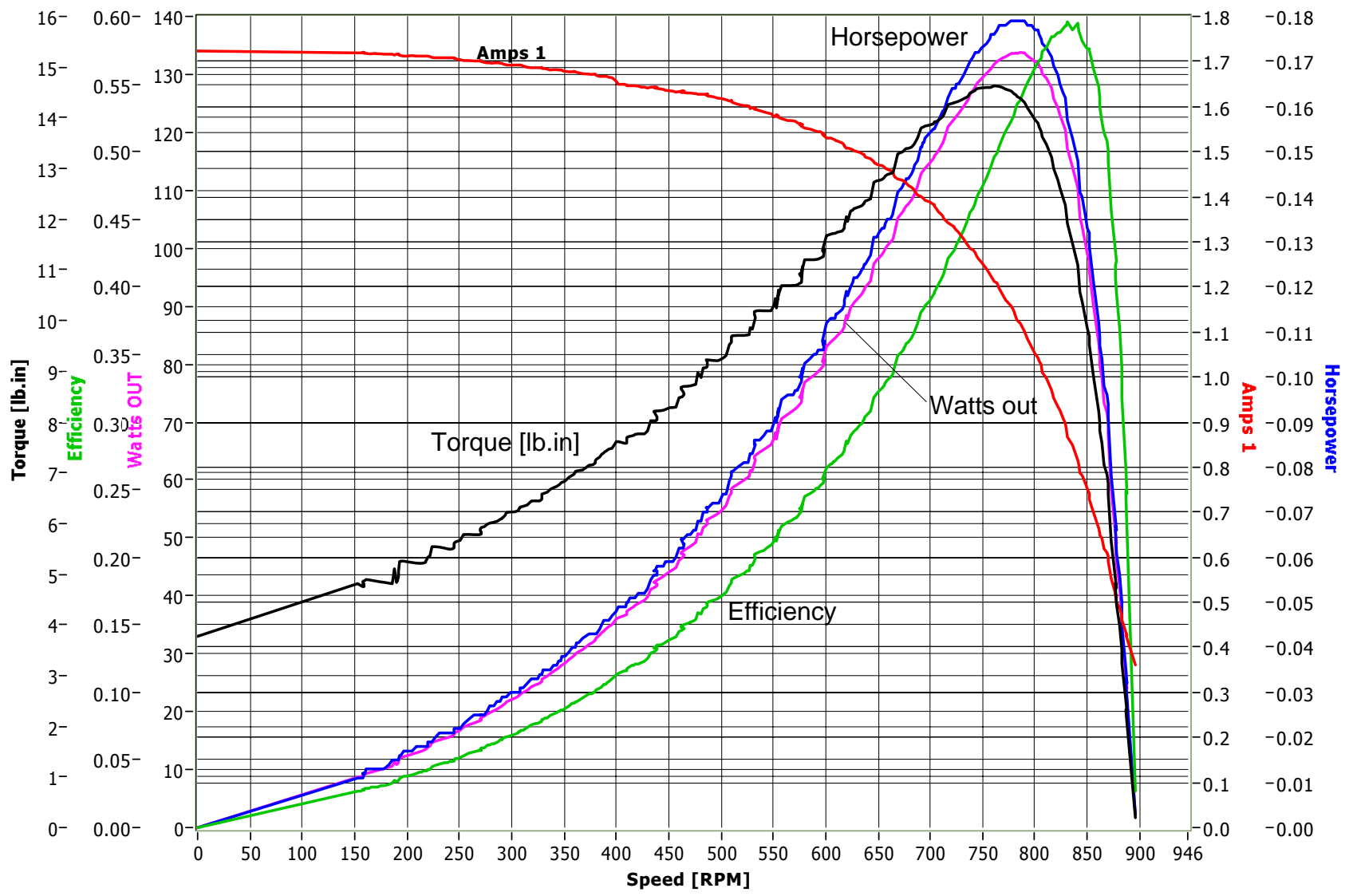
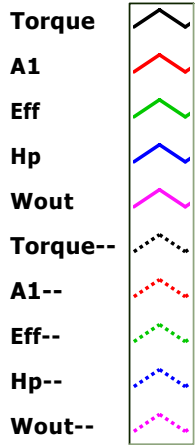
GRAPH 3

Comments  
CMA-0000-3



GRAPH 4

Comments  
CMA-0000-4



GRAPH 5

Comments  
CMA-0000-5



MAGTROL

CMA-0000

# RAW DATA FROM MOTOR PERFORMANCE

CMA-0000-1

1/1/2006

@230VAC

CURRENT A1	VOLTAGE V1	WATTS IN Win1	Power Factor	EFFICIENCY Eff	SPEED RPM	TORQUE lb.in	Horsepower	WATTS OUT Wout1	Time SECONDS
0.41	230.46	82.35	0.8810	0.0250	896	0.20	0.0030	2.08	0.02
0.45	230.31	96.36	0.9260	0.2140	889	2.02	0.0290	21.20	0.50
0.45	230.38	96.83	0.9280	0.2180	889	2.06	0.0290	21.62	0.50
0.46	230.34	98.00	0.9310	0.2290	889	2.17	0.0300	22.77	0.53
0.47	230.29	101.61	0.9370	0.2630	886	2.62	0.0370	27.43	0.55
0.48	230.18	103.91	0.9410	0.2850	884	2.92	0.0410	30.58	0.56
0.48	230.20	104.45	0.9420	0.2950	884	3.02	0.0430	31.60	0.56
0.49	230.21	106.01	0.9460	0.3090	884	3.19	0.0450	33.31	0.59
0.52	230.19	114.44	0.9550	0.3740	879	4.24	0.0590	44.14	0.61
0.53	230.19	116.06	0.9580	0.3850	879	4.39	0.0610	45.70	0.64
0.53	230.11	117.02	0.9590	0.3910	879	4.48	0.0630	46.63	0.66
0.54	230.18	118.38	0.9610	0.4000	879	4.61	0.0650	47.98	0.67
0.56	230.06	124.86	0.9650	0.4270	875	5.28	0.0730	54.62	0.67
0.57	230.08	127.00	0.9670	0.4340	872	5.47	0.0760	56.43	0.69
0.58	230.12	127.91	0.9680	0.4420	872	5.59	0.0770	57.68	0.70
0.58	230.08	129.12	0.9690	0.4570	872	5.81	0.0800	59.89	0.72
0.61	230.07	135.52	0.9730	0.4840	868	6.48	0.0890	66.55	0.73
0.64	230.18	142.75	0.9740	0.5010	864	7.11	0.0980	72.70	0.77
0.64	230.19	143.84	0.9750	0.5050	864	7.21	0.0990	73.65	0.78
0.65	230.18	145.40	0.9760	0.5130	864	7.37	0.1010	75.36	0.78
0.66	230.17	147.46	0.9770	0.5160	863	7.52	0.1030	76.83	0.80
0.67	230.11	150.32	0.9780	0.5220	860	7.76	0.1060	79.01	0.81
0.69	230.14	154.81	0.9780	0.5330	856	8.23	0.1120	83.36	0.83
0.71	230.03	158.74	0.9790	0.5450	855	8.65	0.1170	87.45	0.84
0.72	230.05	161.59	0.9800	0.5570	855	8.96	0.1210	90.60	0.86
0.75	230.08	170.05	0.9810	0.5650	848	9.63	0.1300	96.66	0.89
0.77	229.99	173.16	0.9810	0.5690	845	9.90	0.1330	98.97	0.91
0.77	230.03	174.70	0.9810	0.5740	845	10.06	0.1350	100.58	0.92
0.78	229.98	176.55	0.9810	0.5760	844	10.21	0.1360	101.96	0.94
0.81	230.04	181.80	0.9810	0.5750	842	10.53	0.1410	104.92	0.95
0.82	229.97	183.98	0.9810	0.5780	839	10.73	0.1430	106.54	0.97
0.84	229.98	188.37	0.9810	0.5840	835	11.15	0.1470	110.16	0.97
<b>0.85</b>	<b>229.99</b>	<b>192.10</b>	<b>0.9800</b>	<b>0.5860</b>	<b>833</b>	<b>11.44</b>	<b>0.1510</b>	<b>112.70</b>	<b>1.00 MAX EFF</b>
0.89	229.95	199.50	0.9800	0.5820	827	11.89	0.1560	116.31	1.03
0.90	230.04	203.68	0.9790	0.5810	825	12.14	0.1590	118.45	1.05
0.91	229.92	205.21	0.9790	0.5830	823	12.28	0.1610	119.58	1.06
0.92	229.98	206.70	0.9790	0.5830	823	12.39	0.1620	120.60	1.08
0.93	229.91	208.57	0.9790	0.5820	821	12.51	0.1630	121.47	1.09
0.95	230.00	212.80	0.9780	0.5780	819	12.70	0.1650	123.07	1.09
0.96	229.95	214.69	0.9770	0.5760	815	12.83	0.1660	123.67	1.11
0.97	229.95	218.28	0.9760	0.5750	812	13.07	0.1680	125.57	1.13
0.99	229.95	221.66	0.9760	0.5740	810	13.28	0.1710	127.27	1.16
1.01	229.83	226.73	0.9750	0.5680	806	13.49	0.1720	128.60	1.17

1.02	230.00	228.55	0.9740	0.5650	803	13.58	0.1720	128.98	1.19
1.03	230.10	230.23	0.9730	0.5620	801	13.65	0.1730	129.39	1.20
1.04	230.14	232.63	0.9730	0.5590	800	13.76	0.1740	130.20	1.22
1.05	230.27	234.41	0.9730	0.5570	799	13.83	0.1750	130.74	1.22
1.05	230.15	235.90	0.9720	0.5550	797	13.89	0.1750	130.96	1.23
1.07	230.14	238.96	0.9710	0.5500	794	13.99	0.1760	131.43	1.25
1.08	229.99	241.74	0.9700	0.5450	789	14.12	0.1770	131.85	1.27
1.10	229.98	245.29	0.9690	0.5400	787	14.24	0.1780	132.55	1.30
1.11	229.98	247.91	0.9680	0.5350	784	14.29	0.1770	132.53	1.33
1.12	230.00	249.66	0.9670	0.5300	781	14.33	0.1770	132.40	1.33
1.13	229.86	251.65	0.9660	0.5270	778	14.39	0.1770	132.46	1.34
1.14	229.90	252.50	0.9660	0.5250	777	14.42	0.1780	132.59	1.36
1.14	229.88	253.46	0.9660	0.5240	776	14.46	0.1780	132.72	1.38
1.15	229.79	254.34	0.9650	0.5220	775	14.48	0.1780	132.73	1.38 MAX WOUT
1.16	229.82	257.42	0.9640	0.5150	771	14.53	0.1780	132.55	1.39
1.18	229.91	261.16	0.9620	0.5060	766	14.58	0.1770	132.14	1.42
1.19	229.93	262.92	0.9610	0.5030	765	14.61	0.1770	132.19	1.45
1.20	229.92	264.08	0.9610	0.5000	763	14.62	0.1770	131.98	1.45
1.20	229.90	264.84	0.9600	0.4980	762	14.64	0.1770	131.95	1.47
1.21	229.85	266.76	0.9590	0.4930	759	14.64	0.1760	131.47	1.48
1.22	229.84	267.80	0.9580	0.4900	757	14.65	0.1750	131.21	1.50
1.22	229.90	268.86	0.9580	0.4870	755	14.66	0.1750	130.91	1.52
1.23	229.87	269.66	0.9570	0.4840	753	14.67	0.1750	130.66	1.52
1.24	229.83	271.99	0.9560	0.4790	751	14.68	0.1750	130.40	1.55
1.25	229.84	274.26	0.9540	0.4720	745	14.69	0.1740	129.44	1.58
1.26	229.90	276.28	0.9530	0.4670	743	14.68	0.1730	129.05	1.59
1.26	229.87	276.70	0.9530	0.4670	743	14.68	0.1730	129.05	1.61
1.27	229.88	277.68	0.9520	0.4640	741	14.67	0.1720	128.62	1.63
1.27	229.84	278.02	0.9520	0.4630	741	14.67	0.1720	128.62	1.63
1.28	229.91	278.86	0.9520	0.4600	739	14.65	0.1720	128.10	1.64
1.29	229.82	280.47	0.9500	0.4540	735	14.62	0.1710	127.14	1.66
1.29	229.87	281.91	0.9490	0.4490	732	14.60	0.1700	126.45	1.67
1.30	229.85	283.40	0.9480	0.4440	730	14.59	0.1690	125.97	1.70
1.31	229.81	285.25	0.9460	0.4400	727	14.58	0.1680	125.37	1.72
1.31	229.80	285.67	0.9460	0.4370	725	14.57	0.1670	124.94	1.73
1.32	229.83	286.30	0.9460	0.4350	723	14.56	0.1670	124.55	1.75
1.32	229.79	286.64	0.9450	0.4330	722	14.55	0.1670	124.29	1.77
1.32	229.83	287.33	0.9450	0.4320	721	14.54	0.1660	124.06	1.78
1.33	229.79	288.22	0.9440	0.4290	720	14.52	0.1660	123.65	1.78
1.34	229.80	289.34	0.9430	0.4240	716	14.47	0.1650	122.58	1.81
1.35	229.74	291.29	0.9410	0.4150	711	14.37	0.1620	120.91	1.83
1.35	229.66	291.99	0.9410	0.4130	710	14.36	0.1620	120.59	1.86
1.36	229.74	292.58	0.9400	0.4120	710	14.35	0.1620	120.51	1.88
1.36	229.72	293.16	0.9400	0.4090	708	14.32	0.1610	119.96	1.89
1.37	229.80	294.38	0.9380	0.4060	706	14.30	0.1600	119.43	1.89
1.37	229.74	295.20	0.9380	0.4030	703	14.28	0.1590	118.75	1.91
1.37	229.81	295.70	0.9370	0.4010	702	14.26	0.1590	118.40	1.92
1.38	229.75	296.21	0.9370	0.3990	700	14.24	0.1580	117.94	1.95
1.38	229.78	297.09	0.9360	0.3950	697	14.23	0.1580	117.31	1.97
1.39	229.69	297.79	0.9350	0.3910	694	14.16	0.1560	116.27	2.00
1.39	229.74	298.17	0.9350	0.3890	693	14.14	0.1550	115.90	2.00
1.39	229.66	298.46	0.9340	0.3860	691	14.09	0.1550	115.21	2.02

1.39	229.71	298.82	0.9340	0.3860	691	14.09	0.1540	115.17	2.03
1.40	229.69	299.25	0.9330	0.3840	690	14.07	0.1540	114.83	2.05
1.40	229.74	300.65	0.9320	0.3790	688	13.98	0.1520	113.76	2.06
1.41	229.76	301.63	0.9310	0.3740	683	13.94	0.1510	112.65	2.08
1.41	229.75	302.21	0.9300	0.3710	681	13.92	0.1500	112.16	2.11
1.42	229.70	302.92	0.9300	0.3690	680	13.91	0.1500	111.87	2.13
1.42	229.78	303.39	0.9300	0.3680	680	13.89	0.1500	111.75	2.14
1.42	229.70	303.81	0.9290	0.3660	678	13.88	0.1490	111.30	2.16
1.43	229.75	304.30	0.9280	0.3640	676	13.86	0.1480	110.86	2.17
1.43	229.67	304.31	0.9280	0.3630	674	13.84	0.1480	110.37	2.17
1.43	229.77	304.80	0.9280	0.3600	672	13.82	0.1470	109.88	2.19
1.43	229.73	305.16	0.9270	0.3590	671	13.79	0.1470	109.45	2.22
1.44	229.68	306.42	0.9250	0.3500	667	13.59	0.1440	107.21	2.23
1.45	229.61	307.01	0.9240	0.3470	665	13.54	0.1430	106.52	2.27
1.45	229.69	307.85	0.9240	0.3450	663	13.51	0.1420	105.98	2.28
1.45	229.64	307.97	0.9230	0.3430	662	13.50	0.1420	105.74	2.28
1.46	229.66	308.48	0.9230	0.3420	661	13.49	0.1410	105.50	2.30
1.46	229.67	308.65	0.9220	0.3420	661	13.47	0.1410	105.35	2.31
1.46	229.70	309.22	0.9220	0.3390	658	13.45	0.1410	104.69	2.33
1.46	229.63	309.52	0.9220	0.3350	654	13.42	0.1390	103.81	2.36
1.47	229.69	310.03	0.9210	0.3340	653	13.39	0.1390	103.45	2.38
1.47	229.69	310.48	0.9210	0.3320	652	13.38	0.1390	103.18	2.41
1.47	229.72	310.67	0.9200	0.3310	651	13.36	0.1380	102.91	2.41
1.47	229.67	311.11	0.9200	0.3300	649	13.34	0.1380	102.44	2.42
1.47	229.64	310.97	0.9200	0.3270	647	13.27	0.1360	101.60	2.44
1.48	229.65	312.08	0.9180	0.3200	645	13.09	0.1340	99.90	2.45
1.48	229.61	312.12	0.9180	0.3190	644	13.07	0.1340	99.61	2.47
1.49	229.59	312.59	0.9170	0.3170	642	13.05	0.1330	99.09	2.48
1.49	229.62	313.24	0.9160	0.3140	639	13.01	0.1320	98.35	2.52
1.49	229.60	313.74	0.9160	0.3120	636	12.99	0.1310	97.75	2.53
1.49	229.65	314.15	0.9150	0.3100	634	12.98	0.1310	97.33	2.55
1.50	229.60	314.38	0.9150	0.3090	633	12.97	0.1300	97.10	2.56
1.50	229.65	314.64	0.9140	0.3080	633	12.95	0.1300	96.99	2.58
1.50	229.59	314.73	0.9140	0.3080	633	12.94	0.1300	96.88	2.58
1.50	229.68	315.11	0.9140	0.3060	632	12.90	0.1300	96.46	2.59
1.50	229.66	315.49	0.9140	0.3020	627	12.86	0.1280	95.37	2.63
1.51	229.59	315.60	0.9120	0.2970	625	12.69	0.1260	93.80	2.66
1.51	229.63	315.67	0.9130	0.2990	624	12.79	0.1270	94.43	2.67
1.51	229.59	316.20	0.9110	0.2940	623	12.61	0.1240	92.95	2.69
1.51	229.63	316.43	0.9110	0.2930	622	12.59	0.1240	92.64	2.70
1.51	229.67	316.92	0.9110	0.2900	620	12.55	0.1230	92.03	2.70
1.52	229.66	317.52	0.9100	0.2880	617	12.53	0.1220	91.43	2.72
1.52	229.58	317.77	0.9090	0.2860	614	12.51	0.1220	90.86	2.73
1.53	229.65	318.34	0.9090	0.2840	613	12.48	0.1220	90.54	2.77
1.53	229.66	318.72	0.9080	0.2820	612	12.44	0.1210	90.08	2.80
1.53	229.57	318.66	0.9080	0.2810	610	12.42	0.1200	89.60	2.81
1.53	229.65	318.87	0.9080	0.2800	609	12.40	0.1200	89.31	2.83
1.53	229.57	318.76	0.9080	0.2790	607	12.38	0.1190	88.91	2.84
1.53	229.65	319.05	0.9070	0.2780	606	12.36	0.1190	88.62	2.84
1.53	229.57	319.04	0.9070	0.2770	605	12.35	0.1180	88.37	2.86
1.53	229.66	319.48	0.9070	0.2760	604	12.33	0.1180	88.12	2.88
1.54	229.59	319.93	0.9050	0.2680	600	12.10	0.1160	85.90	2.91

1.55	229.52	320.73	0.9040	0.2640	594	12.04	0.1140	84.61	2.92
1.55	229.60	321.07	0.9040	0.2630	594	12.03	0.1140	84.54	2.95
1.55	229.52	321.04	0.9030	0.2630	594	12.01	0.1140	84.43	2.97
1.55	229.56	321.46	0.9030	0.2610	593	11.97	0.1130	83.95	2.98
1.55	229.58	321.68	0.9030	0.2600	592	11.94	0.1120	83.65	3.00
1.55	229.63	321.89	0.9020	0.2580	589	11.91	0.1120	82.97	3.02
1.55	229.58	321.95	0.9020	0.2560	587	11.88	0.1110	82.51	3.05
1.56	229.58	322.15	0.9020	0.2550	585	11.86	0.1100	82.09	3.06
1.56	229.54	322.28	0.9010	0.2540	583	11.86	0.1100	81.78	3.09
1.56	229.61	322.94	0.9010	0.2530	581	11.85	0.1100	81.43	3.09
1.56	229.55	322.79	0.9010	0.2510	579	11.83	0.1080	81.01	3.11
1.57	229.57	323.60	0.8990	0.2440	575	11.59	0.1060	78.82	3.13
1.57	229.64	323.87	0.8990	0.2430	574	11.58	0.1050	78.67	3.14
1.57	229.57	323.88	0.8980	0.2410	572	11.56	0.1050	78.24	3.16
1.57	229.64	324.34	0.8980	0.2410	573	11.51	0.1050	78.01	3.19
1.57	229.65	324.51	0.8980	0.2380	572	11.44	0.1030	77.39	3.20
1.58	229.65	324.62	0.8980	0.2370	570	11.41	0.1030	76.95	3.22
1.58	229.64	324.49	0.8970	0.2360	569	11.39	0.1030	76.68	3.23
1.58	229.63	324.62	0.8970	0.2350	568	11.38	0.1030	76.48	3.25
1.58	229.67	324.71	0.8970	0.2350	567	11.37	0.1020	76.28	3.27
1.58	229.60	324.78	0.8970	0.2340	565	11.37	0.1020	75.98	3.28
1.58	229.65	325.06	0.8960	0.2330	563	11.36	0.1020	75.64	3.30
1.58	229.64	325.66	0.8960	0.2290	557	11.34	0.1000	74.70	3.31
1.59	229.57	325.91	0.8940	0.2230	552	11.11	0.0980	72.56	3.34
1.59	229.66	326.32	0.8930	0.2220	551	11.10	0.0970	72.37	3.36
1.59	229.63	326.52	0.8930	0.2210	550	11.09	0.0970	72.16	3.38
1.59	229.61	326.46	0.8930	0.2210	550	11.07	0.0970	72.06	3.39
1.59	229.62	326.74	0.8930	0.2200	550	11.04	0.0960	71.86	3.41
1.59	229.64	326.72	0.8930	0.2190	550	11.01	0.0960	71.67	3.42
1.59	229.60	326.70	0.8930	0.2180	549	10.96	0.0960	71.20	3.42
1.59	229.55	326.53	0.8920	0.2160	547	10.91	0.0950	70.59	3.45
1.60	229.59	326.79	0.8920	0.2150	545	10.88	0.0940	70.13	3.48
1.60	229.69	327.35	0.8920	0.2130	544	10.86	0.0930	69.90	3.50
1.60	229.64	327.41	0.8920	0.2120	542	10.85	0.0930	69.55	3.52
1.60	229.63	327.62	0.8910	0.2110	540	10.84	0.0930	69.23	3.53
1.60	229.61	327.71	0.8910	0.2100	538	10.84	0.0920	68.97	3.53
1.60	229.57	327.69	0.8910	0.2080	534	10.82	0.0920	68.38	3.55
1.60	229.67	328.07	0.8910	0.2050	530	10.74	0.0900	67.32	3.56
1.61	229.62	328.57	0.8890	0.2020	528	10.63	0.0890	66.43	3.59
1.61	229.65	328.86	0.8890	0.2010	528	10.59	0.0880	66.18	3.61
1.61	229.63	328.80	0.8880	0.2000	527	10.55	0.0880	65.80	3.64
1.61	229.56	328.66	0.8880	0.1990	527	10.51	0.0880	65.55	3.66
1.61	229.64	328.79	0.8880	0.1980	525	10.48	0.0870	65.08	3.67
1.61	229.55	328.57	0.8870	0.1970	524	10.45	0.0870	64.77	3.67
1.61	229.63	328.83	0.8880	0.1970	524	10.42	0.0860	64.62	3.69
1.61	229.58	328.77	0.8870	0.1960	522	10.40	0.0860	64.23	3.70
1.62	229.53	329.10	0.8870	0.1940	520	10.38	0.0860	63.86	3.73
1.62	229.52	329.24	0.8870	0.1920	516	10.36	0.0840	63.24	3.75
1.62	229.56	329.53	0.8860	0.1910	513	10.34	0.0840	62.78	3.78
1.62	229.62	329.72	0.8860	0.1890	510	10.32	0.0840	62.29	3.80
1.62	229.54	329.88	0.8840	0.1850	506	10.21	0.0820	61.10	3.81
1.63	229.46	329.78	0.8840	0.1850	505	10.18	0.0820	60.85	3.81

1.63	229.54	330.16	0.8840	0.1840	505	10.18	0.0820	60.79	3.83
1.63	229.53	330.29	0.8840	0.1840	505	10.13	0.0810	60.55	3.84
1.63	229.49	330.27	0.8830	0.1820	505	10.07	0.0810	60.17	3.88
1.63	229.48	330.19	0.8830	0.1800	502	10.01	0.0800	59.44	3.91
1.63	229.53	330.24	0.8830	0.1790	501	9.98	0.0800	59.15	3.92
1.63	229.46	330.10	0.8830	0.1780	500	9.95	0.0790	58.89	3.92
1.63	229.54	330.44	0.8830	0.1780	499	9.94	0.0790	58.67	3.94
1.63	229.48	330.27	0.8830	0.1770	498	9.92	0.0790	58.45	3.95
1.63	229.53	330.94	0.8830	0.1750	496	9.90	0.0770	58.07	3.97
1.64	229.51	331.09	0.8820	0.1740	492	9.87	0.0770	57.46	4.00
1.64	229.51	331.12	0.8810	0.1710	486	9.85	0.0760	56.66	4.02
1.64	229.53	331.54	0.8810	0.1690	483	9.77	0.0750	55.86	4.05
1.64	229.53	331.77	0.8800	0.1670	481	9.74	0.0740	55.45	4.05
1.64	229.61	332.08	0.8800	0.1670	481	9.73	0.0740	55.36	4.06
1.64	229.52	331.88	0.8800	0.1670	481	9.70	0.0740	55.22	4.08
1.64	229.52	331.95	0.8800	0.1670	482	9.69	0.0740	55.25	4.09
1.64	229.51	331.88	0.8790	0.1660	482	9.63	0.0730	54.93	4.11
1.64	229.56	331.98	0.8790	0.1630	480	9.56	0.0730	54.31	4.13
1.65	229.57	331.99	0.8790	0.1610	477	9.51	0.0720	53.68	4.16
1.65	229.49	331.83	0.8790	0.1610	476	9.50	0.0720	53.49	4.17
1.65	229.57	332.28	0.8790	0.1600	474	9.47	0.0710	53.13	4.19
1.65	229.55	332.27	0.8780	0.1600	473	9.46	0.0710	52.94	4.20
1.65	229.58	332.71	0.8780	0.1590	471	9.44	0.0700	52.61	4.22
1.65	229.55	332.70	0.8780	0.1580	469	9.43	0.0700	52.34	4.23
1.65	229.51	332.70	0.8770	0.1550	464	9.42	0.0700	51.69	4.25
1.65	229.50	332.70	0.8770	0.1530	459	9.37	0.0690	50.87	4.28
1.66	229.50	332.98	0.8760	0.1510	457	9.29	0.0680	50.25	4.30
1.66	229.52	333.23	0.8760	0.1500	457	9.27	0.0680	50.14	4.31
1.66	229.56	333.38	0.8760	0.1500	457	9.25	0.0670	49.99	4.33
1.66	229.48	333.15	0.8750	0.1490	457	9.22	0.0670	49.83	4.34
1.66	229.58	333.47	0.8760	0.1490	458	9.19	0.0670	49.78	4.36
1.66	229.63	333.51	0.8760	0.1480	458	9.15	0.0670	49.56	4.38
1.66	229.63	333.53	0.8750	0.1460	454	9.08	0.0660	48.75	4.41
1.66	229.58	333.44	0.8750	0.1440	450	9.04	0.0650	48.14	4.42
1.66	229.50	333.30	0.8750	0.1430	447	9.00	0.0640	47.61	4.45
1.66	229.51	333.82	0.8740	0.1410	445	8.97	0.0640	47.21	4.45
1.67	229.59	334.09	0.8740	0.1410	444	8.97	0.0630	47.11	4.47
1.67	229.54	334.04	0.8740	0.1410	442	8.97	0.0630	46.89	4.48
1.67	229.58	334.20	0.8740	0.1400	440	8.97	0.0630	46.68	4.50
1.67	229.53	334.15	0.8730	0.1390	438	8.96	0.0620	46.43	4.52
1.67	229.47	334.02	0.8730	0.1370	433	8.91	0.0610	45.64	4.53
1.67	229.47	334.11	0.8720	0.1350	431	8.81	0.0600	44.93	4.56
1.67	229.53	334.44	0.8720	0.1340	431	8.78	0.0600	44.79	4.58
1.67	229.49	334.17	0.8720	0.1350	432	8.81	0.0600	45.02	4.59
1.67	229.48	334.29	0.8720	0.1340	432	8.77	0.0600	44.84	4.61
1.67	229.53	334.37	0.8720	0.1340	432	8.75	0.0600	44.71	4.63
1.67	229.48	334.33	0.8720	0.1340	432	8.73	0.0600	44.61	4.64
1.67	229.54	334.61	0.8720	0.1320	431	8.66	0.0590	44.16	4.66
1.67	229.61	334.88	0.8720	0.1300	426	8.62	0.0590	43.46	4.67
1.67	229.57	334.81	0.8710	0.1280	421	8.59	0.0570	42.77	4.70
1.68	229.49	334.55	0.8710	0.1270	418	8.56	0.0570	42.31	4.72
1.68	229.51	334.99	0.8700	0.1250	416	8.53	0.0560	42.00	4.73

1.68	229.56	335.18	0.8700	0.1240	415	8.52	0.0560	41.84	4.75
1.68	229.47	335.13	0.8700	0.1240	413	8.50	0.0560	41.53	4.77
1.68	229.52	335.45	0.8700	0.1230	412	8.49	0.0560	41.36	4.78
1.68	229.58	335.42	0.8690	0.1230	410	8.47	0.0550	41.08	4.80
1.68	229.59	335.37	0.8690	0.1210	406	8.42	0.0540	40.47	4.81
1.68	229.57	335.35	0.8690	0.1190	405	8.39	0.0530	40.22	4.84
1.68	229.54	335.23	0.8690	0.1190	404	8.36	0.0530	39.94	4.86
1.68	229.51	335.30	0.8690	0.1190	404	8.34	0.0530	39.86	4.88
1.68	229.56	335.44	0.8690	0.1180	404	8.32	0.0530	39.76	4.88
1.68	229.49	335.24	0.8690	0.1180	404	8.30	0.0530	39.69	4.89
1.69	229.56	335.73	0.8680	0.1170	403	8.24	0.0520	39.28	4.91
1.69	229.49	335.59	0.8680	0.1160	402	8.20	0.0520	39.01	4.92
1.69	229.48	335.63	0.8680	0.1150	398	8.17	0.0520	38.49	4.95
1.69	229.46	335.43	0.8670	0.1130	393	8.16	0.0510	37.95	4.98
1.69	229.52	335.70	0.8670	0.1120	391	8.14	0.0510	37.68	5.00
1.69	229.53	335.80	0.8670	0.1120	389	8.12	0.0510	37.36	5.00
1.69	229.50	335.97	0.8670	0.1100	387	8.08	0.0500	36.99	5.02
1.69	229.51	336.03	0.8660	0.1100	386	8.07	0.0500	36.84	5.03
1.69	229.46	336.08	0.8660	0.1090	385	8.06	0.0500	36.70	5.05
1.69	229.60	336.52	0.8660	0.1080	383	8.03	0.0490	36.37	5.06
1.69	229.58	336.44	0.8660	0.1070	382	7.99	0.0490	36.10	5.09
1.69	229.61	336.50	0.8660	0.1060	380	7.95	0.0480	35.74	5.11
1.69	229.54	336.24	0.8650	0.1050	378	7.92	0.0480	35.42	5.13
1.69	229.56	336.44	0.8650	0.1040	377	7.90	0.0470	35.22	5.14
1.69	229.57	336.28	0.8650	0.1040	376	7.88	0.0470	35.04	5.16
1.69	229.51	336.21	0.8650	0.1030	375	7.86	0.0470	34.89	5.17
1.70	229.60	336.67	0.8650	0.1020	373	7.83	0.0460	34.56	5.19
1.70	229.53	336.73	0.8640	0.1010	371	7.78	0.0460	34.13	5.20
1.70	229.54	336.81	0.8640	0.1000	368	7.74	0.0450	33.70	5.23
1.70	229.62	337.06	0.8640	0.0990	367	7.74	0.0450	33.59	5.25
1.70	229.59	336.85	0.8640	0.0990	364	7.73	0.0450	33.28	5.27
1.70	229.51	336.72	0.8640	0.0980	361	7.72	0.0440	32.98	5.28
1.70	229.61	336.91	0.8630	0.0970	359	7.71	0.0440	32.74	5.30
1.70	229.46	336.55	0.8630	0.0960	357	7.68	0.0430	32.43	5.31
1.70	229.60	337.09	0.8630	0.0960	356	7.65	0.0430	32.20	5.33
1.70	229.50	337.02	0.8630	0.0940	355	7.57	0.0430	31.81	5.36
1.70	229.46	336.91	0.8620	0.0930	355	7.53	0.0420	31.64	5.38
1.70	229.46	336.95	0.8620	0.0930	355	7.51	0.0420	31.55	5.39
1.70	229.54	337.29	0.8620	0.0930	354	7.49	0.0420	31.37	5.41
1.70	229.54	337.16	0.8620	0.0930	353	7.47	0.0420	31.22	5.42
1.70	229.49	337.10	0.8620	0.0920	351	7.46	0.0420	30.99	5.44
1.70	229.53	337.24	0.8620	0.0910	349	7.46	0.0420	30.79	5.45
1.70	229.46	336.86	0.8620	0.0900	345	7.44	0.0410	30.39	5.47
1.71	229.52	337.20	0.8620	0.0890	341	7.41	0.0400	29.90	5.48
1.71	229.54	337.34	0.8610	0.0870	338	7.34	0.0390	29.33	5.52
1.71	229.53	337.51	0.8610	0.0860	337	7.33	0.0390	29.21	5.53
1.71	229.50	337.57	0.8610	0.0860	335	7.31	0.0390	28.99	5.55
1.71	229.52	337.72	0.8610	0.0860	334	7.30	0.0390	28.86	5.56
1.71	229.48	337.56	0.8600	0.0850	333	7.29	0.0380	28.71	5.58
1.71	229.43	337.59	0.8600	0.0850	332	7.27	0.0380	28.56	5.59
1.71	229.56	337.88	0.8600	0.0840	331	7.25	0.0380	28.41	5.59
1.71	229.55	337.83	0.8600	0.0820	327	7.22	0.0370	27.91	5.63

1.71	229.50	337.62	0.8600	0.0820	325	7.19	0.0370	27.64	5.66
1.71	229.52	337.64	0.8600	0.0820	323	7.17	0.0360	27.39	5.67
1.71	229.57	337.73	0.8600	0.0810	323	7.15	0.0360	27.33	5.69
1.71	229.50	337.50	0.8590	0.0810	322	7.13	0.0360	27.16	5.70
1.71	229.44	337.61	0.8590	0.0800	321	7.10	0.0360	26.96	5.70
1.71	229.57	338.10	0.8590	0.0790	320	7.04	0.0350	26.66	5.72
1.71	229.49	337.95	0.8590	0.0780	319	7.00	0.0350	26.43	5.75
1.72	229.44	337.82	0.8590	0.0770	316	6.98	0.0350	26.09	5.78
1.72	229.52	337.97	0.8590	0.0760	313	6.97	0.0350	25.82	5.80
1.72	229.45	337.72	0.8590	0.0760	311	6.97	0.0350	25.66	5.81
1.72	229.46	337.98	0.8590	0.0750	308	6.97	0.0340	25.42	5.83
1.72	229.56	338.06	0.8580	0.0750	306	6.97	0.0340	25.25	5.84
1.72	229.46	337.82	0.8580	0.0740	304	6.97	0.0340	25.05	5.86
1.72	229.43	337.82	0.8580	0.0730	302	6.93	0.0340	24.78	5.88
1.72	229.44	337.99	0.8580	0.0720	300	6.87	0.0330	24.39	5.89
1.72	229.45	338.05	0.8570	0.0720	300	6.83	0.0330	24.25	5.92
1.72	229.44	338.17	0.8570	0.0710	299	6.79	0.0330	24.01	5.94
1.72	229.42	338.26	0.8570	0.0710	299	6.77	0.0320	23.94	5.95
1.72	229.49	338.57	0.8580	0.0700	298	6.74	0.0320	23.76	5.97
1.72	229.52	338.49	0.8570	0.0700	296	6.72	0.0320	23.55	5.98
1.72	229.47	338.40	0.8570	0.0690	294	6.71	0.0310	23.36	6.00
1.72	229.53	338.53	0.8570	0.0680	290	6.70	0.0310	23.00	6.02
1.72	229.53	338.51	0.8570	0.0670	286	6.68	0.0300	22.62	6.05
1.72	229.52	338.53	0.8570	0.0660	283	6.66	0.0300	22.31	6.06
1.72	229.50	338.64	0.8560	0.0650	281	6.62	0.0290	22.00	6.08
1.72	229.56	338.67	0.8560	0.0650	280	6.60	0.0290	21.86	6.09
1.72	229.42	338.40	0.8560	0.0640	279	6.58	0.0290	21.72	6.11
1.73	229.53	338.99	0.8560	0.0640	278	6.56	0.0290	21.59	6.13
1.73	229.56	339.04	0.8560	0.0630	277	6.53	0.0290	21.41	6.14
1.73	229.48	338.94	0.8560	0.0620	276	6.51	0.0290	21.24	6.17
1.73	229.48	338.88	0.8560	0.0610	273	6.48	0.0280	20.93	6.19
1.73	229.48	338.86	0.8550	0.0610	272	6.47	0.0280	20.82	6.22
1.73	229.54	339.11	0.8560	0.0610	270	6.46	0.0280	20.62	6.22
1.73	229.50	338.76	0.8550	0.0600	267	6.45	0.0270	20.38	6.23
1.73	229.47	338.75	0.8550	0.0600	265	6.44	0.0270	20.20	6.25
1.73	229.49	338.81	0.8550	0.0590	263	6.44	0.0270	20.02	6.27
1.73	229.51	338.71	0.8550	0.0590	261	6.42	0.0260	19.83	6.28
1.73	229.53	339.03	0.8550	0.0580	259	6.38	0.0260	19.54	6.31
1.73	229.57	339.37	0.8550	0.0570	258	6.30	0.0260	19.22	6.33
1.73	229.51	339.09	0.8540	0.0570	257	6.27	0.0260	19.08	6.34
1.73	229.44	339.15	0.8550	0.0560	256	6.26	0.0250	18.95	6.36
1.73	229.51	339.33	0.8550	0.0560	256	6.24	0.0250	18.90	6.38
1.73	229.53	339.37	0.8540	0.0550	255	6.22	0.0250	18.77	6.39
1.73	229.45	339.08	0.8540	0.0550	253	6.21	0.0250	18.58	6.41
1.73	229.46	339.13	0.8540	0.0540	250	6.20	0.0250	18.34	6.42
1.73	229.50	339.17	0.8540	0.0530	246	6.20	0.0240	18.04	6.45
1.73	229.45	338.99	0.8530	0.0520	242	6.20	0.0240	17.75	6.48
1.73	229.43	338.96	0.8530	0.0520	240	6.20	0.0240	17.60	6.50
1.73	229.49	339.23	0.8530	0.0510	238	6.19	0.0240	17.42	6.52
1.73	229.51	339.11	0.8530	0.0510	237	6.18	0.0240	17.31	6.52
1.73	229.45	339.00	0.8530	0.0510	236	6.16	0.0240	17.21	6.53
1.73	229.55	339.34	0.8530	0.0510	235	6.14	0.0220	17.07	6.56

1.73	229.51	339.34	0.8530	0.0500	234	6.09	0.0220	16.87	6.58
1.73	229.53	339.57	0.8530	0.0490	233	6.05	0.0220	16.68	6.61
1.73	229.47	339.32	0.8530	0.0490	233	6.04	0.0220	16.65	6.63
1.74	229.43	339.40	0.8530	0.0480	232	5.99	0.0220	16.44	6.64
1.74	229.53	339.70	0.8530	0.0480	231	5.97	0.0220	16.32	6.66
1.74	229.50	339.59	0.8530	0.0480	229	5.93	0.0210	16.08	6.66
1.74	229.48	339.57	0.8530	0.0460	226	5.91	0.0210	15.80	6.69
1.74	229.57	339.85	0.8520	0.0460	222	5.91	0.0210	15.52	6.70
1.74	229.55	339.83	0.8520	0.0440	217	5.91	0.0210	15.16	6.73
1.74	229.54	339.65	0.8520	0.0440	214	5.90	0.0210	14.95	6.75
1.74	229.54	339.61	0.8520	0.0430	212	5.90	0.0190	14.80	6.77
1.74	229.42	339.29	0.8510	0.0430	210	5.89	0.0190	14.62	6.78
1.74	229.54	339.84	0.8520	0.0430	209	5.87	0.0190	14.52	6.80
1.74	229.49	339.49	0.8510	0.0420	207	5.85	0.0190	14.32	6.81
1.74	229.51	339.65	0.8510	0.0420	207	5.82	0.0190	14.24	6.83
1.74	229.47	339.65	0.8510	0.0420	207	5.77	0.0190	14.14	6.84
1.74	229.45	339.64	0.8510	0.0420	207	5.75	0.0190	14.08	6.88
1.74	229.37	339.34	0.8510	0.0410	206	5.73	0.0190	13.96	6.89
1.74	229.35	339.37	0.8510	0.0410	206	5.71	0.0190	13.92	6.91
1.74	229.40	339.59	0.8510	0.0410	205	5.70	0.0180	13.82	6.92
1.74	229.42	339.49	0.8510	0.0410	204	5.69	0.0180	13.74	6.94
1.74	229.40	339.53	0.8510	0.0400	201	5.68	0.0180	13.52	6.95
1.74	229.50	339.87	0.8510	0.0380	197	5.65	0.0180	13.16	6.97
1.74	229.52	339.84	0.8500	0.0380	192	5.62	0.0170	12.77	7.00
1.74	229.58	340.17	0.8510	0.0360	188	5.60	0.0170	12.44	7.03
1.74	229.51	339.89	0.8500	0.0360	185	5.56	0.0170	12.16	7.03
1.74	229.51	339.93	0.8500	0.0350	182	5.52	0.0160	11.89	7.05
1.74	229.57	340.18	0.8500	0.0350	180	5.50	0.0150	11.71	7.06
1.74	229.52	339.90	0.8500	0.0340	179	5.49	0.0150	11.62	7.08
1.74	229.45	339.84	0.8500	0.0340	177	5.45	0.0150	11.42	7.11
1.74	229.43	339.75	0.8490	0.0340	177	5.41	0.0150	11.33	7.13
1.74	229.44	339.80	0.8490	0.0340	177	5.38	0.0150	11.26	7.16
1.74	229.50	340.09	0.8500	0.0330	177	5.35	0.0150	11.21	7.17
1.74	229.52	340.11	0.8500	0.0330	177	5.33	0.0150	11.17	7.19
1.74	229.49	339.96	0.8490	0.0330	177	5.32	0.0150	11.15	7.20
1.75	229.47	340.08	0.8490	0.0330	176	5.32	0.0150	11.07	7.20
1.75	229.56	340.38	0.8500	0.0320	175	5.31	0.0150	11.00	7.22
1.75	229.51	340.12	0.8490	0.0320	171	5.32	0.0140	10.77	7.25
1.75	229.47	340.03	0.8490	0.0310	167	5.33	0.0140	10.54	7.28
1.75	229.53	340.15	0.8490	0.0310	165	5.34	0.0140	10.43	7.30
1.75	229.50	340.15	0.8490	0.0300	162	5.36	0.0140	10.26	7.31
1.75	229.56	340.39	0.8490	0.0290	159	5.37	0.0130	10.10	7.33
1.75	229.55	340.38	0.8490	0.0290	156	5.39	0.0130	9.94	7.34
1.75	229.53	340.39	0.8490	0.0290	152	5.41	0.0130	9.72	7.36
1.75	229.57	340.41	0.8490	0.0280	147	5.43	0.0130	9.44	7.38
1.75	229.47	340.01	0.8480	0.0280	144	5.48	0.0130	9.33	7.41
1.75	229.50	340.20	0.8480	0.0280	143	5.45	0.0130	9.22	7.44
1.75	229.45	340.03	0.8480	0.0270	143	5.42	0.0120	9.17	7.45
1.74	229.08	339.75	0.8510	0.0000	0	3.99	0.0000	0.00	17.97



## RAW DATA FROM MOTOR PERFORMANCE

CMA-0000-2  
1/1/2006  
@230VAC

CURRENT A1	VOLTAGE V1	WATTS IN Win1	Power Factor	EFFICIENCY Eff	SPEED RPM	TORQUE lb.in	Horsepower	WATTS OUT Wout1	Time SECONDS
0.38	230.16	78.88	0.9000	0.0230	894	0.17	0.0020	1.84	0.00
0.44	230.00	94.48	0.9440	0.2330	887	2.17	0.0310	22.77	0.50
0.45	229.99	99.12	0.9520	0.2780	885	2.71	0.0380	28.38	0.55
0.46	229.98	101.54	0.9560	0.3030	884	3.02	0.0430	31.55	0.56
0.46	229.89	102.02	0.9580	0.3050	883	3.01	0.0420	31.45	0.59
0.49	229.93	108.69	0.9650	0.3530	880	3.78	0.0520	39.33	0.61
0.49	230.05	108.36	0.9650	0.3510	879	3.72	0.0520	38.68	0.63
0.50	229.93	112.38	0.9680	0.3890	878	4.30	0.0600	44.70	0.64
0.51	229.99	113.41	0.9690	0.3950	878	4.39	0.0610	45.63	0.64
0.51	229.91	114.41	0.9710	0.4030	878	4.50	0.0620	46.76	0.66
0.53	229.96	119.59	0.9730	0.4230	876	4.99	0.0700	51.72	0.67
0.56	229.91	125.10	0.9760	0.4550	871	5.65	0.0780	58.27	0.69
0.57	229.90	127.44	0.9780	0.4730	871	5.94	0.0820	61.18	0.72
0.59	229.96	133.22	0.9800	0.4910	867	6.47	0.0890	66.35	0.73
0.62	229.86	138.83	0.9820	0.5020	865	6.93	0.0950	70.88	0.75
0.62	229.84	140.86	0.9820	0.5120	863	7.16	0.0980	73.15	0.77
0.63	229.83	142.12	0.9830	0.5170	863	7.28	0.1000	74.35	0.78
0.64	229.80	143.62	0.9830	0.5230	863	7.42	0.1020	75.80	0.80
0.65	229.90	147.68	0.9840	0.5350	861	7.83	0.1070	79.75	0.81
0.69	229.78	155.80	0.9850	0.5500	855	8.57	0.1170	86.74	0.83
0.70	229.77	158.77	0.9840	0.5630	854	8.91	0.1210	90.06	0.84
0.72	229.77	162.91	0.9850	0.5670	851	9.22	0.1240	92.82	0.88
0.74	229.78	167.83	0.9850	0.5710	847	9.61	0.1290	96.34	0.89
0.75	229.72	169.56	0.9850	0.5750	845	9.81	0.1310	98.03	0.91
0.76	229.79	170.91	0.9850	0.5800	845	9.94	0.1330	99.41	0.91
0.78	229.76	175.61	0.9850	0.5820	844	10.26	0.1370	102.50	0.92
0.78	229.83	175.75	0.9850	0.5830	843	10.29	0.1380	102.61	0.94
0.80	229.75	180.04	0.9850	0.5880	840	10.68	0.1420	106.10	0.95
0.82	229.70	186.18	0.9840	0.5930	834	11.21	0.1480	110.62	0.97
0.84	229.64	189.49	0.9840	0.5970	833	11.49	0.1520	113.24	1.00
0.87	229.63	195.49	0.9830	0.5930	830	11.81	0.1550	115.98	1.02
0.88	229.69	199.22	0.9820	0.5910	826	12.05	0.1580	117.76	1.03
0.89	229.69	201.49	0.9820	0.5920	824	12.25	0.1600	119.43	1.05
0.90	229.67	203.12	0.9810	0.5920	823	12.37	0.1620	120.43	1.06
0.91	229.75	204.82	0.9810	0.5920	822	12.47	0.1630	121.23	1.08
0.93	229.59	208.35	0.9800	0.5920	819	12.73	0.1650	123.31	1.08 MAX EFF
0.96	229.63	214.40	0.9790	0.5860	813	13.07	0.1690	125.72	1.11
0.97	229.69	218.10	0.9780	0.5850	811	13.30	0.1710	127.57	1.14
0.98	229.58	220.48	0.9770	0.5820	809	13.41	0.1720	128.31	1.16
1.00	229.60	224.03	0.9770	0.5770	806	13.56	0.1730	129.27	1.17
1.01	229.54	225.59	0.9760	0.5750	803	13.65	0.1740	129.69	1.19
1.02	229.54	227.29	0.9750	0.5730	801	13.74	0.1740	130.22	1.19

1.03	229.54	229.88	0.9740	0.5700	800	13.85	0.1760	131.05	1.20
1.03	229.47	231.09	0.9740	0.5690	799	13.92	0.1760	131.57	1.22
1.05	229.48	233.90	0.9730	0.5650	795	14.06	0.1770	132.20	1.23
1.07	229.52	238.11	0.9710	0.5580	790	14.21	0.1780	132.80	1.27
1.08	229.52	240.89	0.9700	0.5530	788	14.30	0.1790	133.28	1.28
1.11	229.47	245.39	0.9680	0.5460	784	14.43	0.1800	133.85	1.31
1.12	229.54	248.13	0.9670	0.5390	780	14.49	0.1790	133.73	1.33
1.13	229.43	249.11	0.9660	0.5370	778	14.53	0.1790	133.75	1.34
1.13	229.48	250.60	0.9650	0.5350	776	14.59	0.1800	133.91	1.36
1.15	229.37	253.28	0.9640	0.5290	773	14.66	0.1790	134.03	1.38 MAX WOUT
1.17	229.41	257.62	0.9610	0.5180	767	14.72	0.1790	133.54	1.41
1.18	229.36	258.83	0.9600	0.5160	766	14.73	0.1790	133.50	1.42
1.18	229.38	260.04	0.9600	0.5130	764	14.75	0.1780	133.33	1.44
1.19	229.34	260.69	0.9600	0.5120	763	14.77	0.1790	133.34	1.45
1.19	229.42	261.54	0.9590	0.5100	763	14.78	0.1790	133.43	1.47
1.20	229.36	263.36	0.9580	0.5050	760	14.79	0.1780	132.99	1.47
1.21	229.38	264.90	0.9570	0.5000	757	14.80	0.1780	132.56	1.48
1.22	229.35	266.41	0.9560	0.4960	754	14.83	0.1770	132.26	1.50
1.23	229.28	268.73	0.9540	0.4900	751	14.84	0.1760	131.82	1.53
1.24	229.34	270.63	0.9530	0.4850	748	14.84	0.1760	131.34	1.56
1.25	229.39	271.82	0.9520	0.4810	745	14.84	0.1750	130.81	1.58
1.25	229.31	272.69	0.9510	0.4790	744	14.84	0.1750	130.59	1.58
1.26	229.34	273.74	0.9510	0.4750	742	14.82	0.1740	130.11	1.59
1.26	229.29	274.25	0.9500	0.4740	741	14.82	0.1740	129.89	1.61
1.26	229.40	275.23	0.9490	0.4710	740	14.81	0.1740	129.63	1.63
1.28	229.23	277.24	0.9470	0.4640	735	14.79	0.1720	128.58	1.64
1.29	229.27	278.80	0.9460	0.4590	732	14.77	0.1710	127.92	1.67
1.30	229.33	280.86	0.9450	0.4540	730	14.74	0.1710	127.31	1.69
1.30	229.25	281.26	0.9440	0.4520	729	14.74	0.1710	127.14	1.70
1.31	229.28	282.06	0.9430	0.4500	727	14.74	0.1700	126.75	1.72
1.31	229.27	282.63	0.9430	0.4470	724	14.73	0.1700	126.18	1.73
1.31	229.24	283.21	0.9420	0.4450	722	14.73	0.1690	125.83	1.75
1.32	229.26	284.39	0.9410	0.4400	720	14.68	0.1680	125.07	1.77
1.32	229.30	285.37	0.9400	0.4370	719	14.66	0.1670	124.74	1.78
1.34	229.26	287.40	0.9370	0.4280	714	14.57	0.1650	123.09	1.81
1.34	229.33	288.45	0.9370	0.4250	712	14.56	0.1650	122.66	1.83
1.35	229.23	288.73	0.9370	0.4240	711	14.55	0.1640	122.42	1.84
1.35	229.26	289.40	0.9360	0.4220	710	14.55	0.1640	122.19	1.86
1.35	229.19	289.67	0.9350	0.4210	709	14.54	0.1630	121.96	1.86
1.35	229.24	290.17	0.9350	0.4190	708	14.53	0.1630	121.74	1.88
1.36	229.20	290.69	0.9340	0.4170	706	14.52	0.1630	121.29	1.89
1.36	229.23	291.89	0.9330	0.4120	702	14.50	0.1620	120.39	1.91
1.37	229.30	292.77	0.9330	0.4100	700	14.48	0.1610	119.93	1.94
1.37	229.27	293.40	0.9310	0.4070	698	14.45	0.1600	119.36	1.97
1.38	229.19	294.28	0.9300	0.4010	696	14.33	0.1580	117.97	1.97
1.38	229.24	294.91	0.9300	0.3980	694	14.29	0.1580	117.33	1.98
1.39	229.16	295.31	0.9290	0.3950	692	14.26	0.1570	116.71	2.00
1.39	229.23	296.01	0.9280	0.3930	691	14.24	0.1570	116.38	2.02
1.40	229.16	296.51	0.9270	0.3920	690	14.23	0.1550	116.17	2.03
1.40	229.20	297.27	0.9270	0.3890	688	14.21	0.1550	115.63	2.05
1.41	229.16	298.30	0.9250	0.3850	683	14.19	0.1540	114.63	2.06

1.41	229.19	299.12	0.9240	0.3820	681	14.17	0.1530	114.17	2.09
1.41	229.21	299.58	0.9240	0.3800	680	14.15	0.1520	113.88	2.11
1.42	229.19	299.61	0.9240	0.3800	680	14.14	0.1520	113.75	2.13
1.42	229.23	300.01	0.9240	0.3780	679	14.12	0.1520	113.46	2.13
1.42	229.15	299.99	0.9230	0.3770	678	14.11	0.1520	113.16	2.14
1.42	229.22	300.55	0.9230	0.3750	676	14.08	0.1510	112.62	2.16
1.42	229.13	300.52	0.9220	0.3730	674	14.04	0.1500	111.98	2.17
1.43	229.21	301.38	0.9210	0.3660	671	13.90	0.1480	110.35	2.19
1.44	229.18	302.69	0.9200	0.3610	669	13.79	0.1460	109.18	2.22
1.44	229.16	302.91	0.9190	0.3600	668	13.78	0.1460	108.93	2.23
1.44	229.13	303.54	0.9180	0.3570	665	13.76	0.1450	108.28	2.25
1.45	229.17	304.13	0.9170	0.3540	663	13.76	0.1440	107.90	2.27
1.45	229.12	304.60	0.9170	0.3530	661	13.74	0.1440	107.47	2.27
1.45	229.12	304.68	0.9160	0.3530	661	13.74	0.1440	107.43	2.28
1.45	229.13	305.08	0.9160	0.3510	660	13.71	0.1440	107.09	2.30
1.46	229.14	305.55	0.9150	0.3490	658	13.68	0.1420	106.48	2.33
1.46	229.04	305.80	0.9140	0.3450	655	13.64	0.1420	105.67	2.34
1.46	229.05	306.00	0.9140	0.3440	654	13.62	0.1410	105.42	2.38
1.46	229.11	306.39	0.9140	0.3430	653	13.61	0.1410	105.13	2.38
1.46	229.04	306.30	0.9140	0.3420	652	13.60	0.1410	104.88	2.39
1.46	229.12	306.67	0.9140	0.3410	651	13.57	0.1400	104.50	2.41
1.47	229.04	306.72	0.9130	0.3360	649	13.42	0.1380	103.01	2.42
1.48	229.16	308.49	0.9110	0.3300	645	13.31	0.1360	101.60	2.42
1.48	229.15	309.13	0.9100	0.3270	642	13.29	0.1360	100.91	2.45
1.49	229.14	309.56	0.9090	0.3250	641	13.26	0.1350	100.58	2.48
1.49	229.06	309.58	0.9090	0.3240	640	13.24	0.1350	100.28	2.50
1.49	229.11	310.00	0.9080	0.3220	639	13.22	0.1340	99.95	2.52
1.49	229.09	310.10	0.9080	0.3210	637	13.20	0.1340	99.51	2.53
1.49	229.08	310.41	0.9080	0.3190	635	13.19	0.1330	99.07	2.55
1.49	229.08	310.39	0.9070	0.3190	635	13.17	0.1330	98.92	2.55
1.49	229.03	310.47	0.9070	0.3170	633	13.15	0.1320	98.48	2.56
1.50	229.03	310.79	0.9070	0.3150	631	13.12	0.1320	97.95	2.59
1.50	229.12	311.72	0.9050	0.3050	626	12.86	0.1280	95.21	2.63
1.51	229.11	312.00	0.9040	0.3040	625	12.84	0.1270	94.95	2.64
1.51	229.02	312.21	0.9040	0.3030	623	12.83	0.1270	94.57	2.66
1.51	229.12	312.69	0.9040	0.3020	622	12.81	0.1260	94.29	2.66
1.51	229.07	312.88	0.9030	0.3000	621	12.79	0.1260	93.98	2.67
1.51	229.15	313.23	0.9030	0.2990	621	12.77	0.1260	93.83	2.69
1.52	229.07	313.24	0.9020	0.2980	619	12.74	0.1250	93.29	2.70
1.52	229.07	313.89	0.9010	0.2950	616	12.70	0.1240	92.53	2.72
1.52	229.14	314.38	0.9010	0.2920	614	12.66	0.1230	91.97	2.75
1.52	229.15	314.56	0.9000	0.2920	613	12.64	0.1230	91.68	2.77
1.53	229.07	314.50	0.9000	0.2910	612	12.63	0.1220	91.42	2.78
1.53	229.16	314.86	0.9000	0.2900	611	12.61	0.1220	91.15	2.80
1.53	229.09	314.86	0.9000	0.2890	609	12.60	0.1220	90.77	2.81
1.53	229.15	315.31	0.9000	0.2870	607	12.59	0.1210	90.42	2.83
1.53	229.12	315.19	0.8990	0.2820	604	12.45	0.1190	88.97	2.83
1.54	229.16	315.92	0.8970	0.2780	602	12.34	0.1180	87.89	2.86
1.54	229.20	316.67	0.8960	0.2760	600	12.28	0.1170	87.14	2.89
1.54	229.21	316.92	0.8960	0.2740	599	12.26	0.1170	86.91	2.91
1.54	229.11	316.82	0.8950	0.2730	597	12.24	0.1160	86.46	2.92

1.55	229.14	317.12	0.8950	0.2720	596	12.22	0.1160	86.17	2.94
1.55	229.06	316.91	0.8950	0.2710	595	12.21	0.1150	85.92	2.94
1.55	229.13	317.36	0.8940	0.2700	594	12.19	0.1150	85.64	2.95
1.55	229.13	317.42	0.8940	0.2690	593	12.17	0.1150	85.35	2.97
1.55	229.13	317.69	0.8940	0.2670	590	12.13	0.1140	84.68	3.00
1.55	229.12	318.18	0.8930	0.2640	586	12.11	0.1130	83.93	3.02
1.56	229.10	318.32	0.8930	0.2630	584	12.10	0.1120	83.57	3.05
1.56	229.16	318.59	0.8930	0.2610	583	12.08	0.1120	83.33	3.06
1.56	229.10	318.38	0.8920	0.2610	582	12.07	0.1110	83.08	3.06
1.56	229.14	318.70	0.8920	0.2590	581	12.03	0.1110	82.68	3.08
1.56	229.02	318.56	0.8910	0.2550	580	11.84	0.1080	81.25	3.09
1.57	229.12	319.45	0.8900	0.2520	578	11.77	0.1080	80.52	3.11
1.57	229.08	319.78	0.8890	0.2500	575	11.74	0.1070	79.87	3.13
1.57	229.06	319.85	0.8890	0.2480	573	11.70	0.1060	79.32	3.16
1.57	229.12	320.21	0.8890	0.2470	572	11.68	0.1060	79.01	3.17
1.57	229.06	320.06	0.8880	0.2460	571	11.66	0.1060	78.77	3.19
1.58	229.12	320.46	0.8880	0.2450	570	11.65	0.1060	78.57	3.20
1.58	229.09	320.44	0.8880	0.2440	568	11.64	0.1050	78.19	3.22
1.58	229.04	320.53	0.8870	0.2430	566	11.62	0.1040	77.82	3.23
1.58	229.05	320.61	0.8870	0.2420	564	11.60	0.1040	77.43	3.25
1.58	229.10	320.97	0.8870	0.2400	562	11.59	0.1030	77.07	3.27
1.58	229.04	321.01	0.8860	0.2380	559	11.56	0.1020	76.42	3.30
1.59	229.06	321.34	0.8850	0.2320	557	11.31	0.1000	74.54	3.31
1.59	229.03	321.63	0.8840	0.2310	555	11.28	0.1000	74.06	3.33
1.59	229.08	321.85	0.8840	0.2300	554	11.26	0.0990	73.81	3.34
1.59	229.02	321.82	0.8840	0.2290	553	11.25	0.0990	73.61	3.36
1.59	229.10	322.01	0.8830	0.2280	552	11.24	0.0980	73.38	3.38
1.59	228.99	321.89	0.8830	0.2270	551	11.21	0.0980	73.08	3.39
1.59	228.97	322.03	0.8830	0.2260	550	11.17	0.0980	72.69	3.41
1.60	229.03	322.59	0.8820	0.2230	546	11.15	0.0970	72.00	3.44
1.60	229.02	322.83	0.8820	0.2220	544	11.13	0.0960	71.64	3.45
1.60	229.08	323.10	0.8820	0.2210	542	11.12	0.0960	71.28	3.47
1.60	229.02	322.89	0.8810	0.2200	541	11.11	0.0950	71.10	3.48
1.60	229.08	323.21	0.8810	0.2190	539	11.10	0.0950	70.79	3.50
1.60	229.03	322.96	0.8800	0.2190	538	11.09	0.0950	70.58	3.52
1.60	228.98	323.10	0.8800	0.2160	535	11.04	0.0930	69.88	3.53
1.61	229.09	323.81	0.8780	0.2100	532	10.80	0.0910	67.98	3.55
1.61	229.06	323.94	0.8780	0.2080	530	10.75	0.0900	67.42	3.58
1.61	229.05	323.96	0.8780	0.2080	530	10.74	0.0900	67.33	3.59
1.61	229.01	323.75	0.8780	0.2080	530	10.71	0.0900	67.17	3.61
1.61	229.02	323.91	0.8780	0.2070	530	10.69	0.0900	67.01	3.63
1.61	229.00	323.80	0.8770	0.2060	529	10.67	0.0890	66.75	3.64
1.61	228.98	324.14	0.8770	0.2040	527	10.65	0.0890	66.41	3.66
1.62	229.07	324.46	0.8770	0.2030	524	10.64	0.0880	65.94	3.66
1.62	229.05	324.66	0.8770	0.2020	521	10.62	0.0870	65.43	3.69
1.62	229.03	324.68	0.8760	0.2000	517	10.59	0.0870	64.80	3.72
1.62	228.96	324.55	0.8750	0.1990	516	10.59	0.0870	64.63	3.73
1.62	229.01	324.92	0.8750	0.1980	514	10.57	0.0860	64.25	3.75
1.62	229.00	325.01	0.8750	0.1970	512	10.54	0.0860	63.83	3.77
1.63	228.97	325.32	0.8740	0.1920	509	10.37	0.0840	62.45	3.78
1.63	228.98	325.58	0.8740	0.1910	508	10.35	0.0830	62.21	3.80

1.63	229.00	325.60	0.8730	0.1900	507	10.32	0.0830	61.88	3.80
1.63	229.04	325.76	0.8730	0.1890	507	10.26	0.0830	61.52	3.83
1.63	229.03	325.78	0.8730	0.1880	507	10.20	0.0820	61.19	3.86
1.63	228.98	325.71	0.8730	0.1880	507	10.19	0.0820	61.10	3.88
1.63	229.04	325.93	0.8730	0.1860	505	10.16	0.0810	60.69	3.89
1.63	228.96	325.85	0.8720	0.1850	503	10.14	0.0810	60.35	3.91
1.63	229.04	326.19	0.8720	0.1840	501	10.13	0.0810	60.08	3.91
1.63	229.01	326.14	0.8720	0.1830	499	10.13	0.0810	59.82	3.92
1.64	229.10	326.52	0.8720	0.1810	495	10.12	0.0800	59.28	3.94
1.64	229.01	326.34	0.8710	0.1790	491	10.09	0.0790	58.59	3.97
1.64	229.02	326.72	0.8700	0.1760	487	9.98	0.0770	57.52	4.00
1.64	229.01	326.95	0.8690	0.1740	485	9.91	0.0760	56.89	4.02
1.64	228.99	327.12	0.8690	0.1730	484	9.89	0.0760	56.66	4.03
1.65	229.07	327.47	0.8690	0.1720	483	9.86	0.0750	56.34	4.05
1.65	229.06	327.31	0.8690	0.1720	483	9.84	0.0750	56.20	4.05
1.65	229.07	327.44	0.8690	0.1710	483	9.81	0.0750	56.03	4.06
1.65	229.07	327.23	0.8690	0.1710	484	9.76	0.0750	55.89	4.08
1.65	229.04	327.26	0.8690	0.1700	484	9.71	0.0750	55.60	4.11
1.65	229.01	327.37	0.8680	0.1680	480	9.67	0.0730	54.90	4.13
1.65	229.02	327.49	0.8680	0.1670	478	9.67	0.0730	54.67	4.16
1.65	229.11	327.76	0.8680	0.1660	476	9.67	0.0730	54.44	4.16
1.65	229.02	327.63	0.8670	0.1650	473	9.66	0.0720	54.08	4.17
1.65	229.08	328.00	0.8670	0.1640	471	9.64	0.0720	53.69	4.19
1.66	229.06	328.22	0.8660	0.1600	465	9.54	0.0700	52.47	4.22
1.66	229.00	328.41	0.8650	0.1570	461	9.46	0.0690	51.60	4.25
1.66	229.06	328.65	0.8640	0.1550	459	9.41	0.0690	51.12	4.28
1.66	229.05	328.64	0.8640	0.1550	459	9.38	0.0690	50.96	4.30
1.66	229.01	328.51	0.8640	0.1540	459	9.34	0.0680	50.71	4.31
1.66	229.06	328.60	0.8640	0.1540	459	9.31	0.0680	50.58	4.33
1.66	229.06	328.58	0.8640	0.1530	459	9.27	0.0680	50.35	4.34
1.66	229.04	328.70	0.8640	0.1520	456	9.25	0.0670	49.91	4.38
1.66	229.02	328.80	0.8630	0.1500	451	9.24	0.0660	49.30	4.41
1.67	229.11	329.16	0.8630	0.1490	448	9.23	0.0660	48.90	4.42
1.67	229.11	329.33	0.8630	0.1470	446	9.21	0.0650	48.61	4.44
1.67	229.10	329.52	0.8620	0.1430	440	9.07	0.0640	47.21	4.47
1.67	229.12	329.64	0.8610	0.1420	438	9.04	0.0630	46.82	4.48
1.67	229.04	329.70	0.8600	0.1410	436	8.99	0.0620	46.38	4.52
1.68	229.05	329.81	0.8600	0.1400	434	8.94	0.0620	45.92	4.55
1.68	229.07	329.84	0.8600	0.1380	433	8.91	0.0610	45.65	4.56
1.68	229.08	329.89	0.8590	0.1380	433	8.88	0.0610	45.48	4.58
1.68	228.99	329.59	0.8590	0.1370	432	8.85	0.0600	45.24	4.59
1.68	229.05	329.81	0.8600	0.1370	431	8.82	0.0600	44.99	4.61
1.68	229.02	329.70	0.8590	0.1360	430	8.80	0.0600	44.76	4.63
1.68	229.06	330.02	0.8590	0.1350	427	8.78	0.0590	44.34	4.66
1.68	229.11	330.40	0.8590	0.1320	422	8.74	0.0590	43.62	4.67
1.68	229.07	330.37	0.8580	0.1310	420	8.70	0.0580	43.24	4.70
1.68	228.98	330.08	0.8580	0.1300	418	8.66	0.0570	42.83	4.70
1.68	229.06	330.41	0.8580	0.1290	415	8.64	0.0570	42.40	4.72
1.68	229.06	330.32	0.8570	0.1280	414	8.63	0.0570	42.26	4.73
1.68	229.01	330.26	0.8570	0.1270	412	8.61	0.0560	41.96	4.75
1.69	229.06	330.61	0.8570	0.1260	411	8.58	0.0560	41.74	4.77

1.69	229.05	330.73	0.8560	0.1250	410	8.54	0.0560	41.42	4.80
1.69	229.03	330.76	0.8560	0.1240	409	8.50	0.0560	41.13	4.81
1.69	229.07	330.81	0.8560	0.1230	408	8.48	0.0550	40.92	4.83
1.69	229.00	330.64	0.8560	0.1230	407	8.46	0.0550	40.72	4.84
1.69	229.04	330.93	0.8560	0.1230	406	8.43	0.0550	40.52	4.86
1.69	229.05	330.80	0.8560	0.1220	404	8.40	0.0540	40.17	4.88
1.69	228.95	330.63	0.8560	0.1210	403	8.38	0.0530	39.94	4.88
1.69	229.11	331.01	0.8550	0.1190	401	8.36	0.0530	39.64	4.89
1.69	229.04	330.86	0.8550	0.1180	398	8.32	0.0520	39.16	4.92
1.69	228.99	331.01	0.8540	0.1170	395	8.29	0.0520	38.73	4.95
1.69	229.01	331.22	0.8540	0.1160	392	8.26	0.0510	38.30	4.97
1.70	229.08	331.60	0.8540	0.1150	390	8.23	0.0510	37.98	4.98
1.70	229.07	331.40	0.8540	0.1140	389	8.21	0.0510	37.78	5.00
1.70	229.00	331.44	0.8530	0.1130	387	8.18	0.0510	37.47	5.00
1.70	229.08	331.52	0.8530	0.1130	386	8.17	0.0500	37.30	5.02
1.70	229.01	331.28	0.8530	0.1120	385	8.14	0.0500	37.08	5.03
1.70	229.03	331.28	0.8530	0.1110	384	8.10	0.0500	36.78	5.06
1.70	229.07	331.51	0.8530	0.1100	383	8.06	0.0490	36.51	5.09
1.70	229.00	331.43	0.8530	0.1100	383	8.04	0.0490	36.43	5.09
1.70	229.09	331.73	0.8530	0.1100	382	8.02	0.0490	36.23	5.11
1.70	229.00	331.48	0.8520	0.1090	380	8.00	0.0480	35.96	5.13
1.70	229.08	331.75	0.8520	0.1080	379	7.99	0.0480	35.82	5.14
1.70	228.98	331.41	0.8520	0.1070	377	7.97	0.0480	35.56	5.16
1.70	228.93	331.51	0.8520	0.1060	374	7.93	0.0470	35.07	5.17
1.70	228.97	331.44	0.8510	0.1040	370	7.87	0.0460	34.43	5.19
1.70	228.96	331.46	0.8510	0.1020	366	7.84	0.0450	33.97	5.22
1.70	228.96	331.61	0.8500	0.1020	365	7.83	0.0450	33.82	5.23
1.71	228.96	331.88	0.8500	0.1020	363	7.81	0.0450	33.54	5.25
1.71	229.01	332.05	0.8500	0.1010	362	7.80	0.0450	33.40	5.27
1.71	228.95	331.97	0.8500	0.1000	360	7.77	0.0440	33.11	5.28
1.71	228.97	332.08	0.8500	0.0990	359	7.75	0.0440	32.90	5.30
1.71	228.98	332.10	0.8500	0.0990	358	7.72	0.0440	32.68	5.31
1.71	228.96	332.07	0.8490	0.0980	357	7.67	0.0430	32.41	5.33
1.71	228.92	331.91	0.8490	0.0970	356	7.64	0.0430	32.17	5.36
1.71	228.99	332.05	0.8490	0.0960	355	7.60	0.0430	31.93	5.38
1.71	228.94	331.78	0.8490	0.0960	354	7.58	0.0430	31.75	5.39
1.71	228.94	331.92	0.8490	0.0950	353	7.56	0.0430	31.59	5.41
1.71	229.04	332.24	0.8490	0.0950	352	7.55	0.0420	31.46	5.41
1.71	228.98	332.08	0.8480	0.0940	350	7.54	0.0420	31.24	5.42
1.71	229.02	332.42	0.8490	0.0920	346	7.51	0.0410	30.74	5.45
1.71	228.95	332.52	0.8480	0.0910	342	7.47	0.0410	30.23	5.47
1.71	228.92	332.52	0.8480	0.0890	339	7.44	0.0400	29.82	5.50
1.72	229.01	332.68	0.8480	0.0890	337	7.42	0.0400	29.59	5.52
1.71	229.00	332.49	0.8470	0.0880	335	7.40	0.0390	29.34	5.53
1.72	228.94	332.38	0.8470	0.0880	334	7.39	0.0390	29.20	5.55
1.72	228.98	332.51	0.8470	0.0870	332	7.36	0.0390	28.92	5.56
1.72	228.88	332.25	0.8470	0.0860	332	7.33	0.0380	28.80	5.56
1.72	229.01	332.63	0.8460	0.0860	331	7.28	0.0380	28.51	5.59
1.72	229.00	332.72	0.8460	0.0850	330	7.24	0.0380	28.27	5.63
1.72	228.89	332.47	0.8460	0.0850	328	7.22	0.0370	28.02	5.64
1.72	228.93	332.71	0.8460	0.0840	328	7.21	0.0370	27.98	5.66

1.72	228.94	332.60	0.8460	0.0840	326	7.19	0.0370	27.72	5.67
1.72	228.92	332.74	0.8460	0.0830	324	7.16	0.0370	27.46	5.69
1.72	229.02	333.03	0.8460	0.0820	322	7.14	0.0360	27.22	5.70
1.72	228.96	332.78	0.8450	0.0810	320	7.11	0.0360	26.92	5.70
1.72	229.01	332.98	0.8450	0.0790	315	7.09	0.0350	26.41	5.73
1.72	228.96	333.01	0.8450	0.0780	312	7.07	0.0350	26.10	5.77
1.72	228.94	333.04	0.8450	0.0780	311	7.06	0.0350	25.99	5.78
1.72	228.94	333.07	0.8440	0.0770	309	7.05	0.0350	25.77	5.80
1.72	228.87	332.97	0.8440	0.0760	307	7.03	0.0350	25.52	5.81
1.72	228.99	333.42	0.8440	0.0760	306	7.01	0.0340	25.39	5.83
1.72	228.95	333.12	0.8440	0.0750	305	6.99	0.0340	25.24	5.83
1.72	228.91	333.09	0.8440	0.0750	304	6.97	0.0340	25.06	5.84
1.73	228.91	333.24	0.8440	0.0740	302	6.92	0.0330	24.71	5.88
1.73	228.94	333.22	0.8440	0.0730	301	6.87	0.0330	24.47	5.91
1.73	228.97	333.25	0.8430	0.0730	300	6.84	0.0330	24.29	5.92
1.73	228.92	333.17	0.8430	0.0720	298	6.80	0.0320	23.98	5.94
1.73	228.96	333.40	0.8430	0.0720	298	6.80	0.0320	23.96	5.95
1.73	229.03	333.41	0.8430	0.0710	296	6.78	0.0320	23.74	5.97
1.73	229.03	333.47	0.8430	0.0700	294	6.76	0.0320	23.51	5.98
1.73	228.95	333.64	0.8430	0.0690	290	6.74	0.0310	23.13	6.02
1.73	228.95	333.61	0.8430	0.0680	287	6.72	0.0300	22.81	6.03
1.73	229.05	333.93	0.8430	0.0680	285	6.70	0.0300	22.60	6.06
1.73	228.93	333.45	0.8420	0.0670	282	6.69	0.0300	22.31	6.06
1.73	228.93	333.78	0.8420	0.0670	281	6.68	0.0300	22.20	6.08
1.73	228.96	333.72	0.8420	0.0660	279	6.66	0.0290	21.98	6.09
1.73	228.97	333.67	0.8420	0.0650	277	6.63	0.0290	21.73	6.11
1.73	229.05	333.86	0.8420	0.0640	275	6.60	0.0290	21.48	6.13
1.73	228.97	333.58	0.8410	0.0640	274	6.56	0.0290	21.28	6.16
1.73	228.99	333.67	0.8410	0.0630	273	6.51	0.0280	21.04	6.17
1.73	229.00	333.77	0.8410	0.0620	272	6.48	0.0280	20.87	6.19
1.73	228.89	333.72	0.8410	0.0620	271	6.46	0.0280	20.70	6.20
1.74	229.02	334.07	0.8410	0.0620	270	6.44	0.0280	20.56	6.22
1.73	229.01	333.95	0.8410	0.0610	269	6.43	0.0280	20.46	6.23
1.74	228.92	333.84	0.8410	0.0610	268	6.42	0.0270	20.36	6.25
1.74	228.94	333.85	0.8410	0.0600	265	6.41	0.0270	20.10	6.27
1.74	228.95	334.04	0.8410	0.0600	262	6.40	0.0260	19.85	6.30
1.74	228.96	334.08	0.8400	0.0590	259	6.39	0.0260	19.58	6.31
1.74	228.92	334.08	0.8400	0.0580	257	6.37	0.0260	19.37	6.33
1.74	229.05	334.35	0.8400	0.0570	255	6.35	0.0260	19.16	6.34
1.74	228.90	333.80	0.8400	0.0570	253	6.33	0.0250	18.95	6.36
1.74	228.91	333.88	0.8400	0.0560	251	6.30	0.0250	18.72	6.38
1.74	229.02	334.19	0.8400	0.0560	249	6.27	0.0250	18.48	6.39
1.74	228.95	334.25	0.8400	0.0540	247	6.24	0.0240	18.22	6.42
1.74	228.97	334.38	0.8390	0.0530	245	6.18	0.0240	17.92	6.44
1.74	228.97	334.42	0.8390	0.0530	244	6.16	0.0240	17.79	6.47
1.74	228.96	334.40	0.8390	0.0530	242	6.14	0.0240	17.59	6.48
1.74	228.89	334.06	0.8390	0.0520	241	6.13	0.0240	17.46	6.50
1.74	228.95	334.44	0.8390	0.0520	240	6.11	0.0230	17.35	6.50
1.74	229.00	334.61	0.8390	0.0510	239	6.10	0.0230	17.24	6.52
1.74	228.90	334.30	0.8390	0.0510	237	6.06	0.0220	16.99	6.55
1.74	228.91	334.25	0.8380	0.0500	234	6.04	0.0220	16.72	6.56

1.74	228.92	334.17	0.8380	0.0500	231	6.04	0.0220	16.50	6.59
1.74	228.86	334.11	0.8380	0.0500	230	6.04	0.0220	16.43	6.61
1.74	228.95	334.50	0.8380	0.0490	228	6.04	0.0210	16.28	6.63
1.74	228.94	334.25	0.8380	0.0490	226	6.03	0.0210	16.12	6.64
1.74	228.86	334.20	0.8380	0.0480	225	6.02	0.0210	16.03	6.66
1.74	229.00	334.70	0.8380	0.0480	223	6.00	0.0210	15.83	6.66
1.75	228.86	334.41	0.8380	0.0460	220	5.97	0.0210	15.55	6.69
1.75	228.93	334.65	0.8380	0.0450	217	5.89	0.0210	15.13	6.72
1.75	228.92	334.60	0.8380	0.0440	216	5.85	0.0200	14.96	6.73
1.75	228.96	334.78	0.8380	0.0440	215	5.83	0.0190	14.83	6.75
1.75	228.95	334.70	0.8370	0.0440	214	5.81	0.0190	14.70	6.77
1.75	228.89	334.60	0.8370	0.0430	213	5.79	0.0190	14.59	6.78
1.75	228.90	334.78	0.8370	0.0430	212	5.77	0.0190	14.47	6.80
1.75	228.86	334.59	0.8360	0.0420	210	5.74	0.0190	14.26	6.81
1.75	228.88	334.56	0.8360	0.0420	207	5.73	0.0190	14.03	6.83
1.75	228.92	334.62	0.8360	0.0420	205	5.72	0.0180	13.88	6.86
1.75	228.99	334.77	0.8360	0.0410	203	5.71	0.0180	13.73	6.88
1.75	228.90	334.60	0.8360	0.0410	201	5.70	0.0180	13.56	6.89
1.75	228.94	334.80	0.8360	0.0400	200	5.69	0.0180	13.47	6.91
1.75	228.92	334.69	0.8360	0.0400	199	5.68	0.0180	13.38	6.92
1.75	228.96	334.88	0.8360	0.0400	196	5.68	0.0180	13.17	6.94
1.75	228.95	334.85	0.8360	0.0390	194	5.67	0.0180	13.02	6.97
1.75	229.02	335.10	0.8360	0.0380	192	5.66	0.0170	12.86	6.98
1.75	229.03	335.22	0.8360	0.0380	190	5.65	0.0170	12.71	7.00
1.75	229.01	334.98	0.8360	0.0370	188	5.65	0.0170	12.56	7.02
1.75	228.98	335.03	0.8360	0.0370	187	5.64	0.0170	12.48	7.03
1.75	229.04	335.22	0.8360	0.0370	185	5.64	0.0170	12.35	7.05
1.75	229.02	335.15	0.8360	0.0360	184	5.52	0.0160	12.01	7.06
1.75	228.95	335.21	0.8350	0.0350	181	5.41	0.0150	11.58	7.08
1.75	228.89	334.86	0.8350	0.0340	178	5.37	0.0150	11.32	7.11
1.75	228.88	334.84	0.8350	0.0340	176	5.36	0.0150	11.15	7.14
1.75	228.90	335.01	0.8350	0.0330	175	5.34	0.0150	11.06	7.16
1.75	228.99	335.27	0.8350	0.0330	174	5.33	0.0150	10.97	7.16
1.75	228.94	334.91	0.8340	0.0320	172	5.32	0.0150	10.82	7.17
1.75	228.92	334.89	0.8340	0.0320	171	5.31	0.0150	10.75	7.19
1.76	228.99	335.26	0.8350	0.0320	169	5.31	0.0140	10.62	7.20
1.76	229.00	335.41	0.8350	0.0310	167	5.29	0.0140	10.46	7.23
1.76	228.98	335.43	0.8340	0.0310	165	5.29	0.0140	10.33	7.25
1.76	229.01	335.38	0.8340	0.0310	164	5.29	0.0140	10.26	7.28
1.76	228.97	335.42	0.8340	0.0300	162	5.29	0.0140	10.14	7.30
1.76	229.04	335.64	0.8340	0.0300	161	5.29	0.0130	10.08	7.31
1.76	229.00	335.40	0.8340	0.0300	160	5.30	0.0130	10.02	7.31
1.76	228.97	335.39	0.8340	0.0300	159	5.30	0.0130	9.96	7.33
1.76	229.00	335.39	0.8340	0.0290	156	5.31	0.0130	9.79	7.36
1.76	229.05	335.52	0.8340	0.0290	153	5.32	0.0130	9.63	7.38
1.76	229.04	335.57	0.8340	0.0290	150	5.34	0.0130	9.48	7.41
1.76	228.95	335.25	0.8340	0.0280	148	5.36	0.0130	9.38	7.42
1.76	228.94	335.31	0.8340	0.0280	145	5.38	0.0130	9.23	7.44
1.76	228.74	335.52	0.8360	0.0000	0	4.01	0.0000	0.00	17.74



MAGTROL

CMA-0000

# RAW DATA FROM MOTOR PERFORMANCE

CMA-0000-3

1/1/2006

@230VAC

CURRENT	VOLTAGE	WATTS IN	Power	EFFICIENCY	SPEED	TORQUE	Horsepower	WATTS OUT	Time
A1	V1	Win1	Factor	Eff	RPM	lb.in		Wout1	SECONDS
0.38	229.60	79.37	0.9060	0.0230	896	0.17	0.0020	1.82	0.00
0.44	229.34	96.13	0.9480	0.2410	887	2.29	0.0320	23.98	0.50
0.45	229.42	96.85	0.9490	0.2460	887	2.34	0.0330	24.55	0.52
0.45	229.39	98.27	0.9510	0.2590	886	2.50	0.0350	26.17	0.53
0.45	229.40	99.01	0.9530	0.2720	886	2.62	0.0370	27.42	0.55
0.48	229.25	104.57	0.9600	0.3190	882	3.28	0.0460	34.26	0.56
0.48	229.27	106.48	0.9620	0.3300	882	3.43	0.0480	35.78	0.59
0.49	229.31	107.46	0.9640	0.3380	882	3.52	0.0500	36.76	0.61
0.50	229.22	110.82	0.9670	0.3620	880	3.93	0.0550	40.93	0.63
0.51	229.35	113.84	0.9690	0.3860	878	4.31	0.0600	44.81	0.63
0.53	229.29	118.61	0.9720	0.4120	877	4.85	0.0680	50.27	0.64
0.54	229.20	120.25	0.9720	0.4240	876	5.05	0.0700	52.31	0.66
0.54	229.26	121.42	0.9730	0.4320	876	5.17	0.0720	53.55	0.67
0.57	229.31	127.15	0.9760	0.4540	874	5.72	0.0800	59.09	0.69
0.59	229.28	131.69	0.9780	0.4770	870	6.22	0.0860	64.02	0.70
0.61	229.21	137.08	0.9800	0.4930	869	6.69	0.0920	68.74	0.73
0.62	229.23	139.22	0.9800	0.5030	868	6.91	0.0960	70.94	0.75
0.63	229.16	141.22	0.9810	0.5100	866	7.11	0.0980	72.87	0.77
0.64	229.21	144.61	0.9820	0.5130	863	7.35	0.1010	75.07	0.77
0.66	229.21	149.11	0.9820	0.5240	861	7.77	0.1060	79.15	0.78
0.67	229.13	150.46	0.9820	0.5310	861	7.92	0.1080	80.69	0.80
0.68	229.19	152.39	0.9820	0.5400	860	8.16	0.1110	83.01	0.81
0.71	229.14	159.70	0.9830	0.5570	855	8.86	0.1200	89.62	0.83
0.74	229.07	165.97	0.9830	0.5650	852	9.36	0.1270	94.35	0.86
0.75	229.02	169.13	0.9830	0.5670	851	9.57	0.1290	96.35	0.88
0.76	229.08	171.41	0.9840	0.5700	850	9.75	0.1310	98.07	0.89
0.77	229.09	174.10	0.9830	0.5750	847	10.01	0.1350	100.31	0.91
0.79	229.01	178.58	0.9820	0.5780	844	10.37	0.1390	103.56	0.91
0.80	229.09	180.92	0.9820	0.5780	842	10.52	0.1410	104.83	0.92
0.82	229.01	184.33	0.9820	0.5800	841	10.77	0.1430	107.19	0.94
0.83	229.07	186.75	0.9820	0.5850	840	11.02	0.1470	109.57	0.95
<b>0.87</b>	<b>229.02</b>	<b>194.25</b>	<b>0.9810</b>	<b>0.5860</b>	<b>834</b>	<b>11.56</b>	<b>0.1530</b>	<b>114.02</b>	<b>0.97 MAX EFF</b>
0.88	228.92	198.36	0.9800	0.5850	831	11.82	0.1560	116.17	1.00
0.89	228.90	200.06	0.9800	0.5850	830	11.93	0.1570	117.19	1.02
0.91	228.97	203.97	0.9790	0.5840	828	12.17	0.1600	119.23	1.03
0.92	228.89	205.52	0.9780	0.5850	827	12.30	0.1620	120.34	1.03
0.94	228.96	209.82	0.9780	0.5800	823	12.52	0.1640	121.87	1.05
0.95	228.80	211.70	0.9770	0.5810	821	12.66	0.1650	122.93	1.06
0.96	228.84	213.32	0.9770	0.5810	820	12.77	0.1660	123.85	1.08
0.97	228.80	216.58	0.9760	0.5800	817	13.00	0.1690	125.67	1.09
1.00	228.81	222.55	0.9740	0.5730	811	13.29	0.1710	127.53	1.13
1.02	228.72	227.70	0.9720	0.5650	807	13.48	0.1720	128.71	1.14
1.03	228.78	229.46	0.9720	0.5640	806	13.57	0.1730	129.36	1.16
1.04	228.74	231.71	0.9710	0.5610	804	13.67	0.1740	129.99	1.17

1.05	228.72	233.53	0.9700	0.5590	803	13.75	0.1750	130.64	1.19
1.06	228.65	235.39	0.9690	0.5560	800	13.84	0.1760	130.95	1.19
1.08	228.73	238.49	0.9680	0.5500	797	13.91	0.1760	131.17	1.20
1.09	228.72	241.29	0.9670	0.5470	794	14.03	0.1770	131.80	1.22
1.11	228.75	244.73	0.9650	0.5410	791	14.15	0.1770	132.38	1.25
1.13	228.66	247.83	0.9640	0.5340	787	14.22	0.1770	132.41	1.28
1.14	228.63	250.61	0.9620	0.5280	784	14.27	0.1780	132.37	1.28
1.15	228.71	252.07	0.9610	0.5260	783	14.31	0.1780	132.57	1.30
<b>1.15</b>	<b>228.62</b>	<b>253.32</b>	<b>0.9600</b>	<b>0.5230</b>	<b>781</b>	<b>14.35</b>	<b>0.1780</b>	<b>132.62</b>	<b>1.31</b> MAX WOUT
1.16	228.68	254.67	0.9600	0.5200	779	14.38	0.1780	132.54	1.33
1.17	228.66	255.75	0.9590	0.5180	778	14.40	0.1780	132.55	1.33
1.18	228.63	258.44	0.9580	0.5110	773	14.45	0.1770	132.16	1.34
1.20	228.64	261.79	0.9550	0.5040	770	14.47	0.1770	131.86	1.38
1.21	228.57	263.62	0.9540	0.5000	768	14.50	0.1770	131.73	1.41
1.22	228.60	264.69	0.9540	0.4960	766	14.50	0.1760	131.37	1.42
1.23	228.55	267.04	0.9520	0.4890	762	14.49	0.1750	130.59	1.42
1.24	228.55	268.41	0.9510	0.4860	760	14.50	0.1750	130.34	1.44
1.24	228.48	269.17	0.9500	0.4840	759	14.49	0.1750	130.16	1.45
1.25	228.57	270.36	0.9490	0.4810	758	14.49	0.1740	129.97	1.47
1.25	228.55	271.68	0.9480	0.4770	756	14.49	0.1740	129.61	1.48
1.27	228.46	273.69	0.9470	0.4690	750	14.49	0.1720	128.54	1.52
1.28	228.42	275.45	0.9450	0.4650	748	14.46	0.1720	127.97	1.53
1.28	228.51	276.88	0.9440	0.4600	746	14.44	0.1710	127.47	1.55
1.29	228.52	277.44	0.9430	0.4590	745	14.43	0.1700	127.23	1.56
1.29	228.45	278.59	0.9420	0.4540	742	14.38	0.1700	126.20	1.58
1.30	228.46	279.69	0.9410	0.4500	740	14.36	0.1690	125.69	1.59
1.31	228.46	280.68	0.9400	0.4460	738	14.34	0.1680	125.22	1.59
1.31	228.44	281.62	0.9390	0.4440	736	14.33	0.1680	124.79	1.61
1.32	228.42	283.20	0.9370	0.4390	734	14.31	0.1670	124.28	1.64
1.34	228.45	285.29	0.9350	0.4320	729	14.28	0.1660	123.17	1.67
1.34	228.44	285.95	0.9340	0.4300	728	14.28	0.1650	122.96	1.69
1.34	228.38	286.22	0.9340	0.4290	727	14.27	0.1650	122.72	1.70
1.35	228.50	287.05	0.9340	0.4260	725	14.26	0.1640	122.28	1.70
1.35	228.45	287.31	0.9330	0.4240	724	14.24	0.1640	121.98	1.72
1.35	228.44	287.80	0.9330	0.4220	723	14.22	0.1630	121.64	1.73
1.36	228.45	288.66	0.9320	0.4160	719	14.12	0.1610	120.10	1.75
1.37	228.44	290.73	0.9290	0.4080	716	14.00	0.1590	118.60	1.77
1.38	228.45	292.16	0.9270	0.4040	713	13.97	0.1580	117.81	1.80
1.38	228.44	292.76	0.9270	0.4020	712	13.95	0.1570	117.52	1.81
1.39	228.42	293.44	0.9260	0.3990	710	13.94	0.1570	117.10	1.83
1.39	228.41	294.35	0.9250	0.3960	707	13.93	0.1560	116.48	1.84
1.40	228.36	294.43	0.9240	0.3950	707	13.91	0.1560	116.32	1.86
1.40	228.37	294.93	0.9240	0.3940	706	13.90	0.1560	116.07	1.88
1.40	228.35	295.23	0.9230	0.3910	704	13.87	0.1550	115.53	1.88
1.41	228.44	296.13	0.9230	0.3870	701	13.84	0.1540	114.79	1.91
1.41	228.42	296.84	0.9220	0.3840	698	13.80	0.1530	113.97	1.94
1.41	228.47	297.44	0.9210	0.3820	697	13.76	0.1520	113.43	1.95
1.41	228.40	297.41	0.9210	0.3800	696	13.74	0.1520	113.11	1.97
1.43	228.40	298.81	0.9180	0.3710	694	13.53	0.1480	111.06	1.97
1.43	228.35	298.91	0.9180	0.3710	693	13.51	0.1480	110.75	1.98
1.43	228.39	299.41	0.9180	0.3680	691	13.49	0.1480	110.31	2.00
1.43	228.41	300.00	0.9170	0.3660	688	13.47	0.1470	109.65	2.02
1.44	228.42	300.78	0.9160	0.3620	686	13.45	0.1460	109.13	2.05

1.44	228.37	301.52	0.9150	0.3590	684	13.41	0.1450	108.53	2.06
1.45	228.35	301.97	0.9140	0.3580	682	13.40	0.1450	108.11	2.08
1.45	228.38	302.27	0.9130	0.3560	680	13.39	0.1440	107.69	2.09
1.45	228.31	302.39	0.9130	0.3550	679	13.38	0.1440	107.45	2.11
1.45	228.38	302.80	0.9130	0.3530	678	13.36	0.1430	107.17	2.13
1.45	228.31	302.88	0.9120	0.3520	676	13.34	0.1430	106.70	2.14
1.46	228.39	303.36	0.9120	0.3500	674	13.32	0.1420	106.22	2.16
1.47	228.38	305.18	0.9090	0.3380	669	13.01	0.1380	102.99	2.17
1.48	228.33	305.82	0.9070	0.3350	667	12.98	0.1370	102.46	2.20
1.48	228.29	305.93	0.9070	0.3350	667	12.96	0.1370	102.30	2.22
1.48	228.37	306.39	0.9060	0.3330	666	12.94	0.1370	101.98	2.23
1.48	228.29	306.27	0.9060	0.3330	666	12.91	0.1360	101.74	2.25
1.48	228.35	306.49	0.9060	0.3310	665	12.89	0.1360	101.42	2.25
1.48	228.31	306.62	0.9060	0.3290	663	12.88	0.1360	101.01	2.27
1.48	228.35	306.76	0.9050	0.3280	662	12.85	0.1350	100.65	2.28
1.49	228.33	307.13	0.9050	0.3260	659	12.84	0.1340	100.08	2.31
1.49	228.31	307.51	0.9050	0.3240	656	12.84	0.1340	99.62	2.34
1.49	228.29	307.70	0.9040	0.3220	653	12.85	0.1330	99.24	2.36
1.49	228.38	307.98	0.9040	0.3160	650	12.66	0.1310	97.33	2.36
1.50	228.30	308.85	0.9010	0.3110	649	12.50	0.1290	95.99	2.38
1.50	228.30	309.25	0.9000	0.3090	647	12.48	0.1280	95.54	2.39
1.51	228.21	309.34	0.9000	0.3080	646	12.47	0.1280	95.33	2.41
1.51	228.27	309.77	0.9000	0.3070	645	12.45	0.1270	95.00	2.42
1.51	228.26	310.16	0.8980	0.3040	643	12.40	0.1270	94.32	2.44
1.51	228.31	310.49	0.8980	0.3020	642	12.34	0.1260	93.71	2.47
1.52	228.23	310.31	0.8970	0.3010	642	12.31	0.1260	93.48	2.48
1.52	228.33	310.78	0.8970	0.2990	641	12.29	0.1250	93.21	2.50
1.52	228.26	310.69	0.8970	0.2990	640	12.27	0.1240	92.93	2.52
1.52	228.23	310.98	0.8970	0.2980	638	12.27	0.1240	92.60	2.53
1.52	228.17	310.92	0.8970	0.2970	636	12.26	0.1230	92.25	2.53
1.52	228.22	311.46	0.8970	0.2940	632	12.27	0.1230	91.71	2.55
1.53	228.13	311.49	0.8950	0.2870	629	12.02	0.1200	89.46	2.58
1.53	228.21	311.72	0.8960	0.2890	626	12.17	0.1200	90.10	2.61
1.53	228.15	312.51	0.8930	0.2820	625	11.93	0.1180	88.19	2.63
1.54	228.12	312.88	0.8930	0.2810	623	11.90	0.1170	87.74	2.64
1.54	228.19	313.25	0.8920	0.2790	621	11.89	0.1170	87.33	2.64
1.54	228.16	313.39	0.8910	0.2780	620	11.87	0.1170	87.04	2.66
1.54	228.23	313.55	0.8910	0.2770	621	11.84	0.1170	86.96	2.67
1.54	228.17	313.54	0.8910	0.2760	620	11.79	0.1160	86.49	2.69
1.54	228.14	313.70	0.8910	0.2740	619	11.73	0.1150	85.93	2.72
1.55	228.18	314.08	0.8900	0.2710	615	11.70	0.1140	85.15	2.73
1.55	228.23	314.27	0.8890	0.2700	615	11.69	0.1140	85.08	2.75
1.55	228.20	314.34	0.8890	0.2700	614	11.69	0.1140	84.91	2.77
1.55	228.24	314.46	0.8890	0.2700	613	11.69	0.1140	84.75	2.78
1.55	228.19	314.59	0.8890	0.2680	611	11.68	0.1130	84.43	2.80
1.55	228.22	314.70	0.8890	0.2680	610	11.68	0.1130	84.26	2.81
1.55	228.21	315.06	0.8880	0.2610	606	11.46	0.1100	82.17	2.81
1.56	228.20	315.77	0.8850	0.2560	600	11.37	0.1080	80.70	2.84
1.57	228.24	316.29	0.8840	0.2540	598	11.35	0.1070	80.27	2.88
1.57	228.21	316.62	0.8840	0.2530	598	11.33	0.1070	80.13	2.89
1.57	228.26	316.78	0.8840	0.2520	598	11.29	0.1070	79.88	2.91
1.57	228.18	316.62	0.8830	0.2510	597	11.26	0.1060	79.53	2.92
1.57	228.26	316.81	0.8830	0.2500	597	11.23	0.1060	79.32	2.94

1.57	228.19	316.65	0.8830	0.2490	595	11.21	0.1060	78.93	2.94
1.57	228.26	316.79	0.8830	0.2480	594	11.19	0.1050	78.62	2.95
1.57	228.24	316.89	0.8820	0.2470	593	11.17	0.1050	78.34	2.98
1.58	228.24	317.29	0.8820	0.2440	589	11.15	0.1040	77.70	3.00
1.58	228.23	317.53	0.8820	0.2440	587	11.15	0.1040	77.41	3.03
1.58	228.24	317.64	0.8820	0.2420	584	11.14	0.1030	76.98	3.05
1.58	228.25	317.84	0.8810	0.2370	581	10.94	0.1010	75.20	3.06
1.59	228.30	318.57	0.8800	0.2340	579	10.90	0.1000	74.67	3.06
1.59	228.22	318.43	0.8790	0.2340	578	10.89	0.1000	74.49	3.08
1.59	228.20	318.74	0.8780	0.2320	576	10.87	0.0990	74.08	3.09
1.59	228.18	318.93	0.8780	0.2310	574	10.82	0.0990	73.45	3.13
1.59	228.20	318.85	0.8770	0.2280	573	10.74	0.0980	72.83	3.14
1.59	228.25	319.07	0.8770	0.2280	574	10.72	0.0980	72.77	3.17
1.59	228.21	318.90	0.8770	0.2280	574	10.68	0.0970	72.50	3.17
1.59	228.22	319.11	0.8770	0.2270	574	10.66	0.0970	72.36	3.19
1.59	228.27	319.17	0.8770	0.2260	573	10.63	0.0970	72.08	3.20
1.59	228.23	319.06	0.8770	0.2250	571	10.62	0.0960	71.73	3.22
1.60	228.25	319.56	0.8770	0.2220	566	10.59	0.0950	70.89	3.25
1.60	228.21	319.52	0.8760	0.2180	561	10.48	0.0930	69.59	3.27
1.61	228.26	320.64	0.8740	0.2130	556	10.39	0.0910	68.36	3.30
1.61	228.26	320.77	0.8730	0.2120	553	10.38	0.0910	67.91	3.31
1.61	228.16	320.79	0.8730	0.2100	550	10.33	0.0900	67.24	3.34
1.61	228.23	320.92	0.8720	0.2090	550	10.31	0.0900	67.07	3.36
1.61	228.22	320.68	0.8720	0.2080	552	10.22	0.0890	66.74	3.38
1.61	228.25	320.89	0.8720	0.2070	553	10.14	0.0890	66.34	3.41
1.61	228.25	320.94	0.8720	0.2050	552	10.10	0.0880	65.99	3.44
1.61	228.19	320.82	0.8720	0.2040	549	10.09	0.0880	65.55	3.45
1.61	228.24	320.97	0.8720	0.2030	546	10.09	0.0870	65.15	3.47
1.62	228.13	321.05	0.8710	0.2010	542	10.08	0.0860	64.63	3.48
1.62	228.17	321.22	0.8700	0.2000	539	10.05	0.0860	64.09	3.50
1.62	228.21	321.88	0.8690	0.1950	535	9.90	0.0840	62.68	3.52
1.63	228.26	322.46	0.8680	0.1920	530	9.87	0.0830	61.91	3.55
1.63	228.20	322.37	0.8670	0.1910	528	9.84	0.0830	61.48	3.58
1.63	228.20	322.46	0.8670	0.1890	526	9.80	0.0820	61.02	3.59
1.63	228.25	322.61	0.8670	0.1890	527	9.77	0.0820	60.94	3.61
1.63	228.21	322.51	0.8660	0.1890	528	9.73	0.0820	60.79	3.63
1.63	228.23	322.57	0.8660	0.1870	528	9.67	0.0810	60.39	3.64
1.63	228.29	322.97	0.8670	0.1850	525	9.61	0.0800	59.70	3.67
1.63	228.22	322.83	0.8660	0.1820	521	9.56	0.0790	58.95	3.69
1.64	228.15	322.63	0.8650	0.1820	519	9.54	0.0790	58.59	3.72
1.64	228.22	323.07	0.8650	0.1810	518	9.53	0.0790	58.42	3.72
1.64	228.29	323.19	0.8650	0.1790	515	9.49	0.0770	57.85	3.73
1.64	228.19	323.49	0.8640	0.1770	513	9.44	0.0770	57.28	3.75
1.64	228.24	323.86	0.8640	0.1750	510	9.41	0.0760	56.79	3.77
1.64	228.12	323.40	0.8630	0.1740	507	9.40	0.0750	56.37	3.78
1.65	228.16	323.51	0.8620	0.1720	503	9.37	0.0750	55.75	3.80
1.65	228.19	323.58	0.8620	0.1720	503	9.33	0.0740	55.49	3.83
1.65	228.18	323.82	0.8620	0.1720	505	9.30	0.0740	55.54	3.84
1.65	228.18	323.76	0.8610	0.1710	505	9.26	0.0740	55.32	3.86
1.65	228.14	323.83	0.8610	0.1700	504	9.23	0.0740	55.01	3.88
1.65	228.22	323.87	0.8620	0.1690	503	9.20	0.0730	54.73	3.89
1.65	228.19	323.85	0.8620	0.1680	502	9.17	0.0730	54.45	3.91
1.65	228.27	324.14	0.8620	0.1670	500	9.13	0.0720	53.99	3.92

1.65	228.20	324.04	0.8600	0.1640	496	9.05	0.0710	53.11	3.94
1.65	228.20	324.22	0.8600	0.1620	493	9.02	0.0700	52.60	3.97
1.66	228.24	324.57	0.8600	0.1610	490	9.00	0.0700	52.16	3.98
1.66	228.21	324.90	0.8590	0.1590	486	8.95	0.0690	51.45	4.00
1.66	228.21	325.03	0.8590	0.1580	484	8.93	0.0690	51.14	4.02
1.66	228.23	324.94	0.8580	0.1570	482	8.92	0.0680	50.89	4.03
1.66	228.20	324.97	0.8580	0.1560	481	8.91	0.0680	50.73	4.05
1.66	228.23	324.78	0.8570	0.1550	479	8.89	0.0680	50.36	4.06
1.66	228.23	325.05	0.8570	0.1540	480	8.84	0.0680	50.19	4.08
1.66	228.19	325.07	0.8570	0.1530	480	8.78	0.0670	49.85	4.11
1.66	228.15	324.92	0.8570	0.1520	479	8.74	0.0670	49.55	4.13
1.66	228.22	325.01	0.8570	0.1520	479	8.72	0.0670	49.44	4.14
1.66	228.12	324.80	0.8570	0.1510	477	8.70	0.0660	49.13	4.16
1.66	228.27	325.18	0.8570	0.1500	476	8.69	0.0660	48.92	4.17
1.67	228.17	325.14	0.8560	0.1480	473	8.61	0.0650	48.18	4.19
1.67	228.16	325.16	0.8550	0.1470	471	8.59	0.0640	47.87	4.19
1.67	228.18	325.23	0.8550	0.1450	467	8.56	0.0640	47.30	4.22
1.67	228.16	325.71	0.8540	0.1430	462	8.51	0.0620	46.53	4.25
1.67	228.21	326.14	0.8540	0.1410	459	8.48	0.0610	46.06	4.27
1.67	228.18	325.87	0.8530	0.1410	457	8.46	0.0610	45.75	4.28
1.68	228.22	325.99	0.8530	0.1400	456	8.45	0.0610	45.57	4.30
1.68	228.16	325.65	0.8530	0.1390	454	8.42	0.0600	45.24	4.31
1.68	228.16	325.78	0.8530	0.1380	454	8.40	0.0600	45.12	4.31
1.68	228.24	325.95	0.8530	0.1390	456	8.37	0.0610	45.15	4.33
1.68	228.23	326.11	0.8520	0.1370	456	8.31	0.0600	44.81	4.36
1.68	228.16	326.04	0.8530	0.1360	454	8.25	0.0590	44.29	4.39
1.68	228.16	325.99	0.8520	0.1350	452	8.23	0.0590	44.00	4.41
1.68	228.22	325.93	0.8520	0.1350	451	8.22	0.0590	43.85	4.42
1.68	228.17	326.00	0.8520	0.1330	449	8.18	0.0590	43.47	4.42
1.68	228.22	326.24	0.8510	0.1320	447	8.14	0.0580	43.05	4.44
1.68	228.16	325.99	0.8510	0.1310	445	8.12	0.0570	42.75	4.45
1.68	228.19	326.35	0.8510	0.1300	442	8.11	0.0570	42.43	4.47
1.68	228.11	326.10	0.8500	0.1290	438	8.10	0.0560	41.95	4.50
1.69	228.11	326.62	0.8490	0.1260	433	8.02	0.0550	41.08	4.52
1.69	228.16	326.73	0.8490	0.1240	431	7.99	0.0550	40.75	4.55
1.69	228.13	326.67	0.8490	0.1240	430	7.97	0.0540	40.57	4.55
1.69	228.21	326.85	0.8490	0.1230	429	7.95	0.0540	40.34	4.56
1.69	228.21	326.67	0.8490	0.1230	429	7.93	0.0540	40.24	4.58
1.69	228.17	326.62	0.8480	0.1230	429	7.90	0.0540	40.10	4.59
1.69	228.14	326.66	0.8480	0.1220	430	7.86	0.0530	39.98	4.61
1.69	228.21	326.87	0.8480	0.1210	429	7.81	0.0530	39.63	4.64
1.69	228.17	326.80	0.8480	0.1200	426	7.78	0.0520	39.23	4.67
1.69	228.18	326.83	0.8480	0.1190	424	7.76	0.0520	38.93	4.67
1.69	228.21	327.02	0.8480	0.1180	422	7.74	0.0510	38.64	4.69
1.69	228.16	326.86	0.8470	0.1170	420	7.72	0.0510	38.34	4.70
1.69	228.11	326.91	0.8470	0.1170	417	7.69	0.0510	37.95	4.72
1.69	228.22	327.05	0.8460	0.1150	415	7.68	0.0510	37.73	4.73
1.70	228.14	327.18	0.8460	0.1150	412	7.67	0.0500	37.38	4.77
1.70	228.19	327.41	0.8460	0.1120	407	7.63	0.0500	36.73	4.78
1.70	228.26	327.95	0.8450	0.1110	404	7.58	0.0490	36.23	4.81
1.70	228.13	327.45	0.8450	0.1090	402	7.54	0.0480	35.88	4.83
1.70	228.18	327.69	0.8450	0.1080	401	7.52	0.0480	35.68	4.83
1.70	228.13	327.33	0.8440	0.1090	402	7.50	0.0480	35.69	4.84

1.70	228.19	327.55	0.8440	0.1080	402	7.48	0.0480	35.57	4.86
1.70	228.25	327.75	0.8450	0.1080	404	7.45	0.0480	35.61	4.88
1.70	228.15	327.49	0.8440	0.1080	405	7.41	0.0480	35.49	4.91
1.70	228.11	327.34	0.8440	0.1070	403	7.35	0.0470	35.07	4.92
1.70	228.16	327.51	0.8440	0.1060	400	7.33	0.0460	34.70	4.95
1.70	228.10	327.44	0.8440	0.1050	397	7.32	0.0460	34.38	4.95
1.70	228.17	327.64	0.8440	0.1040	394	7.30	0.0460	34.01	4.97
1.70	228.13	327.70	0.8440	0.1020	391	7.27	0.0450	33.63	4.98
1.71	228.17	327.90	0.8430	0.1010	388	7.25	0.0440	33.26	5.00
1.71	228.14	327.50	0.8420	0.1010	384	7.25	0.0440	32.92	5.02
1.71	228.19	327.68	0.8420	0.1000	382	7.23	0.0440	32.67	5.05
1.71	228.21	327.89	0.8420	0.0990	381	7.20	0.0430	32.47	5.06
1.71	228.19	328.05	0.8420	0.0980	379	7.18	0.0430	32.18	5.08
1.71	228.18	327.92	0.8420	0.0980	378	7.15	0.0430	31.99	5.09
1.71	228.10	327.97	0.8420	0.0960	376	7.11	0.0420	31.64	5.11
1.71	228.17	328.16	0.8420	0.0960	375	7.08	0.0420	31.43	5.13
1.71	228.15	328.14	0.8410	0.0950	374	7.03	0.0420	31.11	5.14
1.71	228.24	328.26	0.8410	0.0940	373	6.98	0.0410	30.79	5.16
1.71	228.16	328.02	0.8400	0.0930	372	6.94	0.0410	30.55	5.19
1.71	228.12	328.03	0.8400	0.0930	372	6.92	0.0410	30.46	5.20
1.71	228.15	328.05	0.8400	0.0930	371	6.91	0.0410	30.34	5.22
1.71	228.07	327.90	0.8400	0.0920	369	6.91	0.0400	30.15	5.23
1.71	228.15	328.21	0.8400	0.0910	367	6.90	0.0400	29.97	5.25
1.71	228.08	327.96	0.8400	0.0910	364	6.89	0.0400	29.69	5.27
1.71	228.20	328.56	0.8400	0.0890	360	6.87	0.0390	29.27	5.28
1.72	228.13	328.41	0.8390	0.0870	355	6.81	0.0380	28.59	5.31
1.72	228.19	328.36	0.8380	0.0860	353	6.79	0.0380	28.35	5.33
1.72	228.21	328.53	0.8380	0.0860	352	6.77	0.0380	28.18	5.36
1.72	228.20	328.41	0.8380	0.0850	352	6.75	0.0380	28.11	5.36
1.72	228.16	328.47	0.8380	0.0850	352	6.73	0.0370	28.02	5.38
1.72	228.24	328.73	0.8380	0.0850	353	6.72	0.0370	28.05	5.39
1.72	228.16	328.53	0.8380	0.0850	352	6.69	0.0370	27.86	5.41
1.72	228.19	328.71	0.8380	0.0840	350	6.66	0.0370	27.57	5.42
1.72	228.13	328.54	0.8380	0.0830	346	6.63	0.0360	27.13	5.44
1.72	228.11	328.44	0.8380	0.0820	343	6.61	0.0350	26.83	5.47
1.72	228.15	328.65	0.8380	0.0810	341	6.57	0.0350	26.51	5.48
1.72	228.08	328.35	0.8370	0.0800	339	6.54	0.0350	26.25	5.50
1.72	228.13	328.55	0.8370	0.0800	337	6.54	0.0350	26.06	5.52
1.72	228.11	328.43	0.8360	0.0800	336	6.53	0.0350	25.96	5.53
1.72	228.09	328.50	0.8360	0.0790	335	6.52	0.0350	25.86	5.55
1.72	228.19	328.84	0.8360	0.0780	333	6.51	0.0350	25.65	5.56
1.72	228.08	328.66	0.8360	0.0770	330	6.49	0.0340	25.33	5.59
1.73	228.11	328.76	0.8360	0.0750	325	6.48	0.0340	24.91	5.61
1.73	228.16	328.91	0.8360	0.0750	323	6.46	0.0340	24.70	5.63
1.73	228.07	328.70	0.8350	0.0750	322	6.44	0.0330	24.53	5.64
1.73	228.10	329.02	0.8350	0.0730	321	6.35	0.0320	24.13	5.66
1.73	228.13	328.90	0.8350	0.0730	321	6.34	0.0320	24.06	5.67
1.73	228.06	328.69	0.8350	0.0730	321	6.31	0.0320	23.97	5.69
1.73	228.10	328.72	0.8350	0.0720	321	6.27	0.0320	23.81	5.70
1.73	228.14	328.77	0.8350	0.0730	322	6.29	0.0320	23.98	5.72
1.73	228.14	328.87	0.8350	0.0730	322	6.27	0.0320	23.89	5.75
1.73	228.13	329.03	0.8350	0.0710	320	6.19	0.0320	23.43	5.77
1.73	228.05	328.87	0.8350	0.0700	317	6.18	0.0310	23.19	5.78

1.73	228.09	328.91	0.8340	0.0700	314	6.18	0.0310	22.98	5.80
1.73	228.03	328.70	0.8340	0.0690	310	6.18	0.0300	22.68	5.81
1.73	228.13	329.07	0.8340	0.0680	306	6.17	0.0300	22.35	5.81
1.73	228.13	329.26	0.8340	0.0670	302	6.12	0.0290	21.88	5.84
1.73	228.10	328.94	0.8330	0.0660	299	6.10	0.0290	21.57	5.88
1.73	228.18	329.10	0.8330	0.0660	298	6.08	0.0290	21.44	5.89
1.73	228.13	328.93	0.8320	0.0650	297	6.07	0.0290	21.33	5.91
1.73	228.10	329.00	0.8320	0.0650	297	6.05	0.0290	21.27	5.92
1.73	228.17	329.33	0.8330	0.0650	297	6.04	0.0290	21.21	5.94
1.73	228.16	329.21	0.8320	0.0650	297	6.02	0.0280	21.17	5.95
1.73	228.09	329.07	0.8320	0.0640	294	5.99	0.0280	20.84	5.97
1.73	228.19	329.45	0.8330	0.0620	290	5.98	0.0280	20.51	6.00
1.74	228.16	329.38	0.8330	0.0610	286	5.97	0.0270	20.19	6.02
1.73	228.21	329.39	0.8320	0.0610	284	5.96	0.0270	20.03	6.03
1.74	228.11	329.33	0.8320	0.0590	282	5.87	0.0260	19.59	6.05
1.74	228.16	329.61	0.8320	0.0590	281	5.86	0.0260	19.49	6.06
1.74	228.23	329.75	0.8320	0.0590	281	5.85	0.0260	19.45	6.08
1.74	228.20	329.48	0.8310	0.0590	280	5.83	0.0260	19.31	6.09
1.74	228.21	329.59	0.8310	0.0590	280	5.80	0.0260	19.23	6.11
1.74	228.21	329.71	0.8310	0.0580	279	5.77	0.0250	19.06	6.14
1.74	228.11	329.52	0.8310	0.0580	278	5.77	0.0250	18.96	6.16
1.74	228.17	329.84	0.8310	0.0570	276	5.76	0.0250	18.82	6.17
1.74	228.22	329.78	0.8310	0.0560	273	5.76	0.0250	18.62	6.19
1.74	228.14	329.54	0.8310	0.0560	271	5.77	0.0250	18.49	6.20
1.74	228.14	329.70	0.8310	0.0550	267	5.76	0.0250	18.21	6.22
1.74	228.05	329.37	0.8310	0.0540	263	5.76	0.0240	17.91	6.23
1.74	228.13	329.67	0.8300	0.0520	259	5.63	0.0230	17.24	6.27
1.74	228.12	329.48	0.8290	0.0520	258	5.61	0.0230	17.12	6.30
1.74	228.11	329.61	0.8290	0.0520	258	5.60	0.0230	17.08	6.30
1.74	228.14	329.63	0.8290	0.0510	257	5.58	0.0230	16.97	6.31
1.74	228.18	329.71	0.8290	0.0510	256	5.55	0.0230	16.82	6.33
1.74	228.13	329.68	0.8290	0.0510	256	5.54	0.0220	16.76	6.34
1.74	228.18	329.98	0.8300	0.0510	256	5.51	0.0220	16.70	6.36
1.74	228.16	329.82	0.8290	0.0500	255	5.48	0.0220	16.54	6.39
1.74	228.12	329.77	0.8290	0.0500	250	5.47	0.0210	16.19	6.42
1.75	228.19	330.01	0.8290	0.0490	247	5.48	0.0210	16.00	6.44
1.74	228.08	329.54	0.8290	0.0490	245	5.48	0.0210	15.88	6.45
1.74	228.07	329.59	0.8280	0.0480	241	5.49	0.0210	15.65	6.47
1.75	228.11	329.74	0.8290	0.0470	239	5.50	0.0210	15.55	6.48
1.74	228.12	329.61	0.8280	0.0470	237	5.51	0.0210	15.45	6.48
1.75	228.16	329.92	0.8280	0.0450	235	5.32	0.0200	14.79	6.52
1.75	228.14	329.90	0.8280	0.0450	235	5.29	0.0200	14.72	6.55
1.75	228.12	329.96	0.8280	0.0440	234	5.25	0.0190	14.54	6.56
1.75	228.13	329.86	0.8280	0.0440	234	5.24	0.0190	14.50	6.58
1.75	228.08	329.78	0.8280	0.0440	234	5.23	0.0190	14.47	6.59
1.75	228.13	329.97	0.8280	0.0430	233	5.21	0.0190	14.36	6.61
1.75	228.20	330.40	0.8280	0.0440	232	5.37	0.0200	14.74	6.63
1.75	228.09	329.96	0.8270	0.0430	230	5.20	0.0190	14.15	6.64
1.75	228.07	329.86	0.8270	0.0420	224	5.20	0.0180	13.77	6.67
1.75	228.08	329.89	0.8270	0.0410	220	5.21	0.0180	13.55	6.70
1.75	228.17	330.11	0.8270	0.0410	217	5.22	0.0180	13.39	6.70
1.75	228.13	329.93	0.8270	0.0400	212	5.23	0.0180	13.11	6.72
1.75	228.11	330.00	0.8270	0.0400	210	5.23	0.0180	13.00	6.73

1.75	228.16	330.10	0.8270	0.0390	209	5.22	0.0180	12.92	6.75
1.75	228.14	329.88	0.8270	0.0390	208	5.21	0.0180	12.82	6.77
1.75	228.14	329.83	0.8270	0.0390	208	5.16	0.0170	12.70	6.80
1.75	228.17	329.95	0.8270	0.0380	209	5.10	0.0170	12.62	6.81
1.75	228.09	329.80	0.8270	0.0380	209	5.07	0.0170	12.55	6.84
1.75	228.17	330.07	0.8270	0.0380	209	5.06	0.0170	12.50	6.86
1.75	228.13	329.87	0.8270	0.0380	209	5.05	0.0170	12.47	6.86
1.75	228.09	329.87	0.8270	0.0380	209	5.04	0.0170	12.47	6.88
1.75	228.15	330.19	0.8270	0.0380	208	5.04	0.0170	12.41	6.89
1.75	228.07	330.04	0.8270	0.0370	206	5.06	0.0170	12.32	6.91
1.75	228.03	329.93	0.8260	0.0350	201	4.92	0.0160	11.71	6.94
1.75	228.08	329.90	0.8260	0.0340	194	4.88	0.0150	11.20	6.97
1.75	228.06	330.01	0.8260	0.0340	191	4.87	0.0150	11.02	6.98
1.75	228.09	330.16	0.8260	0.0330	187	4.88	0.0150	10.80	7.00
1.75	228.16	330.25	0.8260	0.0320	182	4.88	0.0150	10.51	7.02
1.75	228.04	329.94	0.8250	0.0310	179	4.88	0.0130	10.32	7.02
1.76	228.06	330.16	0.8250	0.0310	177	4.85	0.0130	10.16	7.03
1.75	228.05	329.89	0.8250	0.0300	177	4.81	0.0130	10.06	7.06
1.75	228.07	329.85	0.8250	0.0300	178	4.75	0.0130	10.00	7.09
1.75	228.07	329.83	0.8250	0.0300	179	4.71	0.0130	9.97	7.11
1.75	228.04	329.75	0.8250	0.0300	180	4.68	0.0130	9.97	7.13
1.75	228.11	329.98	0.8250	0.0300	181	4.66	0.0130	9.97	7.14
1.75	228.15	330.01	0.8250	0.0300	181	4.64	0.0130	9.93	7.16
1.75	228.08	329.84	0.8250	0.0300	181	4.63	0.0130	9.91	7.17
1.76	228.07	330.04	0.8250	0.0290	180	4.63	0.0130	9.86	7.19
1.76	228.03	330.03	0.8250	0.0290	178	4.64	0.0130	9.77	7.22
1.76	228.09	330.32	0.8250	0.0290	174	4.67	0.0130	9.60	7.23
1.76	228.04	330.14	0.8240	0.0290	171	4.68	0.0130	9.46	7.25
1.76	228.03	330.40	0.8240	0.0280	167	4.69	0.0120	9.26	7.27
1.76	228.08	330.44	0.8250	0.0280	163	4.71	0.0120	9.08	7.28
1.76	228.07	330.38	0.8240	0.0260	155	4.76	0.0110	8.73	7.30
1.76	228.01	330.07	0.8240	0.0250	148.5	4.73	0.0110	8.30	7.33
1.76	227.99	329.88	0.8240	0.0250	146	4.71	0.0110	8.12	7.36
1.76	228.06	330.09	0.8240	0.0250	144.5	4.68	0.0110	7.98	7.38
1.76	228.06	329.94	0.8240	0.0240	144.5	4.65	0.0110	7.94	7.39
1.76	227.99	329.73	0.8230	0.0240	145	4.62	0.0110	7.91	7.41
1.76	228.05	329.97	0.8230	0.0240	145.5	4.58	0.0110	7.87	7.42
1.76	228.19	330.84	0.8260	0.0000	0	3.76	0.0000	0.00	17.82



MAGTROL

CMA-0000

# RAW DATA FROM MOTOR PERFORMANCE

CMA-0000-4

1/1/2006

@230VAC

CURRENT	VOLTAGE	WATTS IN	Power	EFFICIENCY	SPEED	TORQUE	Horsepower	WATTS OUT	Time
A1	V1	Win1	Factor	Eff	RPM	lb.in		Wout1	SECONDS
0.37	230.00	79.46	0.9230	0.0370	895	0.27	0.0040	2.90	0.00
0.44	230.81	97.37	0.9590	0.2470	887	2.37	0.0340	24.84	0.52
0.44	230.74	97.93	0.9600	0.2530	887	2.42	0.0340	25.42	0.55
0.44	230.76	97.17	0.9610	0.2430	888	2.29	0.0320	24.01	0.55
0.45	230.72	99.63	0.9630	0.2640	887	2.55	0.0360	26.71	0.56
0.46	230.71	102.11	0.9660	0.2860	885	2.85	0.0400	29.83	0.58
0.46	230.72	103.72	0.9680	0.3010	884	3.06	0.0430	31.99	0.59
0.48	230.63	106.77	0.9700	0.3290	882	3.46	0.0480	36.14	0.59
0.48	230.68	106.80	0.9710	0.3330	883	3.46	0.0490	36.15	0.61
0.50	230.61	111.96	0.9750	0.3730	880	4.08	0.0570	42.46	0.64
0.53	230.60	119.05	0.9780	0.4160	877	4.91	0.0690	50.92	0.67
0.53	230.68	120.27	0.9790	0.4220	877	5.01	0.0700	51.94	0.67
0.55	230.62	123.70	0.9810	0.4360	876	5.32	0.0740	55.12	0.69
0.55	230.69	125.25	0.9810	0.4450	876	5.46	0.0760	56.61	0.70
0.57	230.57	129.64	0.9830	0.4620	873	5.92	0.0820	61.15	0.72
0.58	230.57	131.64	0.9830	0.4740	871	6.18	0.0860	63.63	0.72
0.59	230.58	133.35	0.9840	0.4830	869	6.38	0.0880	65.58	0.74
0.60	230.55	135.80	0.9850	0.5000	869	6.68	0.0920	68.66	0.77
0.63	230.59	144.14	0.9860	0.5170	864	7.38	0.1010	75.42	0.78
0.66	230.59	150.00	0.9870	0.5320	861	7.93	0.1080	80.83	0.81
0.67	230.60	151.57	0.9870	0.5380	861	8.08	0.1110	82.33	0.83
0.67	230.54	153.41	0.9880	0.5420	860	8.24	0.1130	83.83	0.83
0.69	230.57	156.00	0.9870	0.5480	858	8.49	0.1160	86.13	0.84
0.71	230.49	160.81	0.9870	0.5540	856	8.87	0.1200	89.80	0.86
0.72	230.51	163.94	0.9870	0.5590	853	9.15	0.1240	92.35	0.88
0.73	230.51	167.08	0.9870	0.5710	851	9.53	0.1290	95.93	0.88
0.76	230.48	171.83	0.9880	0.5780	849	9.93	0.1340	99.72	0.91
0.79	230.50	179.74	0.9860	0.5810	843	10.51	0.1410	104.78	0.94
0.80	230.50	181.99	0.9870	0.5810	842	10.65	0.1430	106.07	0.95
0.81	230.45	183.83	0.9860	0.5840	841	10.81	0.1440	107.59	0.97
0.82	230.43	187.15	0.9860	0.5860	840	11.05	0.1470	109.85	0.97
0.83	230.39	189.48	0.9860	0.5870	838	11.24	0.1490	111.42	0.99
0.84	230.38	191.55	0.9850	0.5890	836	11.42	0.1510	112.91	1.00 MAX EFF
0.86	230.51	195.98	0.9850	0.5860	833	11.67	0.1540	115.00	1.02
0.88	230.63	199.60	0.9840	0.5880	830	11.97	0.1570	117.57	1.03
0.91	230.89	205.32	0.9830	0.5880	827	12.35	0.1620	120.79	1.06
0.93	230.88	210.94	0.9810	0.5830	822	12.65	0.1650	123.01	1.08
0.94	230.93	213.25	0.9810	0.5810	820	12.78	0.1670	123.94	1.09
0.95	230.84	214.74	0.9810	0.5810	819	12.89	0.1680	124.91	1.11
0.96	230.94	217.91	0.9810	0.5790	817	13.06	0.1690	126.20	1.13
0.97	230.82	219.59	0.9800	0.5790	816	13.16	0.1700	127.06	1.13
0.98	230.90	221.81	0.9790	0.5770	814	13.29	0.1720	127.97	1.14
1.00	230.81	225.69	0.9780	0.5720	809	13.49	0.1730	129.13	1.16
1.02	230.88	229.64	0.9760	0.5680	805	13.70	0.1750	130.44	1.19

1.04	230.91	234.01	0.9750	0.5620	802	13.87	0.1760	131.61	1.20
1.05	230.90	236.67	0.9740	0.5560	799	13.94	0.1760	131.74	1.24
1.07	230.81	239.67	0.9720	0.5520	796	14.04	0.1770	132.18	1.24
1.07	230.86	240.87	0.9720	0.5500	795	14.09	0.1770	132.50	1.25
1.08	230.75	241.98	0.9720	0.5480	793	14.14	0.1780	132.67	1.27
1.09	230.89	243.69	0.9710	0.5450	792	14.19	0.1780	132.92	1.28
1.10	230.81	245.94	0.9690	0.5420	790	14.27	0.1790	133.36	1.28
1.12	230.79	249.29	0.9680	0.5340	784	14.37	0.1780	133.25	1.31
1.13	230.78	252.65	0.9660	0.5280	781	14.44	0.1790	133.39	1.34 MAX WOUT
1.15	230.74	255.31	0.9650	0.5220	778	14.48	0.1790	133.24	1.36
1.16	230.75	257.17	0.9630	0.5180	776	14.51	0.1790	133.19	1.38
1.16	230.82	258.65	0.9620	0.5140	773	14.53	0.1780	132.88	1.39
1.17	230.68	260.04	0.9620	0.5100	771	14.54	0.1770	132.59	1.39
1.18	230.78	261.56	0.9610	0.5070	770	14.56	0.1780	132.65	1.41
1.19	230.69	262.68	0.9600	0.5040	768	14.58	0.1780	132.49	1.42
1.20	230.66	265.93	0.9580	0.4960	763	14.60	0.1760	131.80	1.45
1.21	230.70	267.97	0.9570	0.4900	759	14.61	0.1760	131.16	1.49
1.22	230.65	269.24	0.9550	0.4870	758	14.61	0.1760	131.03	1.50
1.23	230.70	270.47	0.9550	0.4830	757	14.61	0.1750	130.81	1.52
1.24	230.64	271.84	0.9530	0.4800	755	14.60	0.1750	130.42	1.52
1.24	230.66	272.65	0.9530	0.4770	753	14.60	0.1740	130.03	1.53
1.25	230.65	273.86	0.9520	0.4720	749	14.59	0.1740	129.28	1.55
1.25	230.65	274.56	0.9510	0.4700	748	14.59	0.1730	129.08	1.56
1.26	230.71	276.52	0.9500	0.4650	746	14.57	0.1720	128.62	1.58
1.27	230.71	277.90	0.9490	0.4590	742	14.53	0.1710	127.56	1.61
1.28	230.64	280.07	0.9470	0.4520	738	14.48	0.1700	126.46	1.63
1.29	230.71	280.88	0.9460	0.4500	737	14.47	0.1690	126.21	1.64
1.29	230.62	281.34	0.9460	0.4480	736	14.46	0.1690	125.92	1.66
1.30	230.69	282.27	0.9450	0.4460	735	14.45	0.1690	125.64	1.67
1.30	230.59	283.23	0.9430	0.4420	733	14.42	0.1680	125.02	1.69
1.31	230.63	284.02	0.9420	0.4390	731	14.41	0.1670	124.59	1.69
1.31	230.67	285.22	0.9420	0.4330	726	14.40	0.1660	123.65	1.72
1.32	230.60	286.66	0.9410	0.4290	724	14.37	0.1650	123.05	1.74
1.33	230.62	287.90	0.9390	0.4250	722	14.34	0.1640	122.50	1.77
1.33	230.61	288.21	0.9390	0.4220	719	14.30	0.1630	121.65	1.78
1.34	230.62	288.77	0.9380	0.4180	717	14.25	0.1630	120.85	1.80
1.34	230.54	289.68	0.9360	0.4140	716	14.18	0.1610	120.08	1.81
1.35	230.67	290.59	0.9360	0.4120	715	14.15	0.1610	119.66	1.81
1.35	230.60	291.07	0.9350	0.4100	714	14.13	0.1600	119.33	1.83
1.36	230.61	292.26	0.9340	0.4050	711	14.07	0.1590	118.32	1.84
1.37	230.59	293.69	0.9320	0.4000	706	14.04	0.1570	117.28	1.88
1.37	230.54	294.43	0.9310	0.3980	705	14.03	0.1570	117.03	1.91
1.37	230.52	294.68	0.9300	0.3970	704	14.02	0.1570	116.74	1.92
1.38	230.59	295.22	0.9300	0.3950	703	14.00	0.1560	116.45	1.92
1.38	230.56	295.34	0.9300	0.3930	701	13.99	0.1560	115.99	1.94
1.38	230.58	295.73	0.9290	0.3910	699	13.97	0.1550	115.54	1.95
1.38	230.53	296.12	0.9290	0.3890	697	13.96	0.1540	115.08	1.97
1.39	230.63	296.79	0.9280	0.3870	696	13.93	0.1530	114.71	1.99
1.40	230.53	297.79	0.9260	0.3780	694	13.70	0.1500	112.45	2.00
1.40	230.50	298.56	0.9250	0.3720	689	13.64	0.1490	111.20	2.03
1.40	230.51	299.18	0.9240	0.3700	687	13.62	0.1480	110.73	2.05
1.41	230.62	300.00	0.9230	0.3680	686	13.61	0.1480	110.47	2.06
1.41	230.55	300.07	0.9230	0.3680	686	13.60	0.1480	110.39	2.08

1.42	230.61	300.88	0.9230	0.3660	685	13.59	0.1480	110.10	2.09
1.42	230.53	301.15	0.9220	0.3650	684	13.57	0.1470	109.82	2.09
1.42	230.60	301.69	0.9220	0.3620	681	13.55	0.1460	109.16	2.11
1.42	230.55	301.98	0.9210	0.3580	677	13.51	0.1450	108.20	2.14
1.43	230.52	302.35	0.9200	0.3560	676	13.48	0.1450	107.79	2.17
1.43	230.60	302.89	0.9190	0.3540	675	13.46	0.1440	107.46	2.19
1.43	230.52	302.95	0.9190	0.3510	673	13.35	0.1420	106.30	2.20
1.43	230.53	303.17	0.9180	0.3460	671	13.23	0.1410	105.00	2.22
1.44	230.47	304.24	0.9150	0.3420	668	13.15	0.1400	103.89	2.22
1.44	230.55	304.85	0.9150	0.3400	667	13.14	0.1390	103.66	2.24
1.45	230.52	304.96	0.9150	0.3390	667	13.12	0.1390	103.50	2.25
1.45	230.55	305.65	0.9140	0.3370	665	13.08	0.1380	102.93	2.28
1.45	230.48	306.03	0.9130	0.3330	660	13.06	0.1370	101.95	2.30
1.46	230.44	306.18	0.9130	0.3320	658	13.04	0.1360	101.55	2.33
1.46	230.51	306.61	0.9120	0.3310	658	13.03	0.1360	101.43	2.34
1.46	230.49	306.77	0.9120	0.3300	657	13.02	0.1360	101.17	2.34
1.46	230.54	307.13	0.9120	0.3290	657	13.00	0.1360	101.06	2.36
1.46	230.42	306.95	0.9120	0.3280	655	12.98	0.1350	100.55	2.38
1.46	230.45	307.56	0.9120	0.3250	652	12.95	0.1340	99.90	2.39
1.47	230.44	308.14	0.9100	0.3160	649	12.67	0.1300	97.25	2.41
1.47	230.42	307.80	0.9100	0.3170	648	12.72	0.1310	97.52	2.44
1.47	230.41	307.84	0.9100	0.3170	647	12.73	0.1310	97.41	2.45
1.48	230.45	309.11	0.9080	0.3110	645	12.58	0.1290	96.02	2.47
1.48	230.39	309.06	0.9070	0.3090	643	12.56	0.1280	95.55	2.49
1.48	230.40	309.47	0.9070	0.3060	640	12.54	0.1280	94.92	2.50
1.48	230.42	309.89	0.9060	0.3050	639	12.52	0.1270	94.66	2.52
1.49	230.46	310.26	0.9060	0.3050	639	12.51	0.1270	94.54	2.52
1.49	230.46	310.68	0.9050	0.3020	637	12.47	0.1260	93.95	2.55
1.49	230.40	310.83	0.9050	0.2990	632	12.43	0.1240	92.93	2.58
1.49	230.37	310.93	0.9040	0.2980	630	12.41	0.1240	92.53	2.59
1.49	230.36	310.96	0.9040	0.2960	629	12.40	0.1240	92.26	2.61
1.50	230.39	311.28	0.9040	0.2960	629	12.39	0.1240	92.18	2.63
1.50	230.33	311.21	0.9030	0.2960	629	12.37	0.1230	92.07	2.64
1.50	230.43	311.87	0.9020	0.2900	628	12.18	0.1210	90.46	2.64
1.50	230.28	311.49	0.9020	0.2880	626	12.13	0.1200	89.84	2.66
1.51	230.42	313.03	0.9000	0.2830	621	12.04	0.1180	88.44	2.67
1.51	230.41	313.26	0.9000	0.2810	620	12.01	0.1180	88.09	2.70
1.51	230.38	313.54	0.8990	0.2800	619	11.98	0.1180	87.74	2.74
1.52	230.41	313.64	0.8990	0.2790	619	11.96	0.1170	87.59	2.75
1.52	230.36	313.69	0.8990	0.2780	617	11.94	0.1170	87.19	2.75
1.52	230.44	313.96	0.8980	0.2760	615	11.93	0.1160	86.81	2.77
1.52	230.35	313.75	0.8980	0.2750	612	11.92	0.1160	86.30	2.78
1.52	230.43	314.04	0.8980	0.2730	610	11.90	0.1150	85.91	2.80
1.52	230.36	314.24	0.8970	0.2720	609	11.88	0.1150	85.60	2.83
1.52	230.29	314.36	0.8970	0.2700	606	11.85	0.1140	84.94	2.84
1.53	230.31	315.03	0.8950	0.2630	604	11.57	0.1110	82.68	2.88
1.53	230.32	315.33	0.8940	0.2600	600	11.55	0.1100	81.97	2.88
1.53	230.34	315.59	0.8940	0.2600	600	11.54	0.1100	81.90	2.89
1.53	230.32	315.58	0.8930	0.2590	600	11.52	0.1100	81.79	2.91
1.54	230.30	315.78	0.8930	0.2590	600	11.50	0.1100	81.65	2.92
1.54	230.34	315.98	0.8930	0.2570	599	11.47	0.1090	81.28	2.94
1.54	230.35	316.13	0.8920	0.2550	596	11.42	0.1080	80.55	2.95
1.54	230.37	316.21	0.8920	0.2530	592	11.40	0.1070	79.85	2.99

1.54	230.27	316.06	0.8910	0.2520	591	11.39	0.1070	79.65	3.00
1.54	230.31	316.48	0.8910	0.2510	590	11.38	0.1060	79.44	3.02
1.54	230.26	316.44	0.8910	0.2510	589	11.37	0.1060	79.24	3.03
1.54	230.23	316.70	0.8910	0.2490	587	11.36	0.1060	78.90	3.05
1.55	230.29	317.02	0.8900	0.2480	585	11.35	0.1050	78.58	3.06
1.55	230.31	316.99	0.8900	0.2410	581	11.16	0.1030	76.68	3.08
1.55	230.25	317.64	0.8880	0.2380	578	11.05	0.1010	75.57	3.09
1.56	230.23	317.80	0.8870	0.2370	580	11.01	0.1010	75.52	3.13
1.56	230.29	318.18	0.8870	0.2360	580	10.97	0.1010	75.28	3.14
1.56	230.29	318.03	0.8870	0.2360	579	10.94	0.1000	74.95	3.16
1.56	230.26	318.04	0.8870	0.2340	577	10.91	0.1000	74.48	3.17
1.56	230.31	318.03	0.8870	0.2330	575	10.90	0.1000	74.12	3.19
1.56	230.28	318.07	0.8860	0.2320	573	10.89	0.0990	73.80	3.20
1.56	230.33	318.27	0.8860	0.2310	572	10.88	0.0990	73.60	3.22
1.56	230.30	318.55	0.8860	0.2300	569	10.86	0.0980	73.11	3.24
1.57	230.24	319.12	0.8850	0.2280	564	10.87	0.0980	72.50	3.27
1.57	230.23	319.13	0.8830	0.2210	560	10.62	0.0950	70.33	3.28
1.57	230.24	319.45	0.8830	0.2190	557	10.60	0.0930	69.87	3.30
1.57	230.31	319.59	0.8820	0.2180	556	10.60	0.0930	69.70	3.31
1.57	230.21	319.57	0.8820	0.2180	557	10.58	0.0930	69.71	3.33
1.58	230.25	319.83	0.8820	0.2180	558	10.55	0.0930	69.65	3.34
1.58	230.18	319.65	0.8820	0.2170	559	10.50	0.0930	69.46	3.34
1.57	230.21	319.62	0.8820	0.2150	557	10.42	0.0920	68.69	3.38
1.57	230.19	319.42	0.8810	0.2130	554	10.38	0.0910	68.02	3.41
1.58	230.19	319.62	0.8810	0.2120	552	10.36	0.0900	67.69	3.42
1.58	230.20	319.64	0.8810	0.2110	552	10.36	0.0900	67.66	3.44
1.58	230.20	319.97	0.8800	0.2100	550	10.36	0.0900	67.39	3.45
1.58	230.21	320.25	0.8800	0.2100	548	10.35	0.0900	67.13	3.45
1.58	230.18	320.61	0.8800	0.2080	545	10.36	0.0890	66.79	3.47
1.59	230.26	320.96	0.8800	0.2060	540	10.37	0.0880	66.23	3.49
1.59	230.21	320.75	0.8790	0.2030	534	10.26	0.0870	64.84	3.52
1.59	230.20	321.11	0.8780	0.2010	535	10.20	0.0860	64.55	3.53
1.59	230.19	321.36	0.8770	0.1990	536	10.06	0.0860	63.80	3.56
1.59	230.10	321.18	0.8770	0.1990	537	10.06	0.0860	63.91	3.58
1.59	230.17	321.31	0.8770	0.1990	537	10.02	0.0860	63.65	3.58
1.59	230.14	321.27	0.8770	0.1970	536	9.95	0.0850	63.10	3.59
1.59	230.15	320.75	0.8780	0.1990	534	10.06	0.0860	63.55	3.61
1.59	230.12	320.91	0.8760	0.1940	531	9.88	0.0840	62.06	3.63
1.59	230.14	321.06	0.8760	0.1920	529	9.87	0.0830	61.75	3.66
1.60	230.24	321.72	0.8750	0.1910	526	9.86	0.0830	61.37	3.67
1.60	230.21	322.32	0.8750	0.1890	523	9.86	0.0820	61.02	3.70
1.60	230.29	322.60	0.8750	0.1880	519	9.87	0.0810	60.60	3.72
1.60	230.22	322.39	0.8740	0.1870	516	9.87	0.0810	60.24	3.72
1.61	230.29	322.77	0.8740	0.1820	513	9.68	0.0790	58.75	3.74
1.60	230.16	322.17	0.8740	0.1830	512	9.74	0.0790	58.98	3.75
1.61	230.20	322.51	0.8740	0.1820	512	9.72	0.0790	58.86	3.77
1.61	230.23	322.80	0.8730	0.1840	514	9.77	0.0800	59.43	3.78
1.61	230.23	322.98	0.8720	0.1790	513	9.52	0.0770	57.78	3.81
1.61	230.24	322.66	0.8740	0.1790	512	9.55	0.0770	57.86	3.83
1.61	230.26	322.85	0.8720	0.1760	509	9.44	0.0760	56.87	3.84
1.61	230.32	322.95	0.8720	0.1750	508	9.43	0.0760	56.70	3.86
1.61	230.25	322.84	0.8720	0.1750	507	9.43	0.0760	56.55	3.88
1.61	230.32	323.11	0.8720	0.1740	506	9.42	0.0750	56.41	3.89

1.61	230.20	322.93	0.8710	0.1740	504	9.42	0.0750	56.15	3.91
1.62	230.27	323.90	0.8700	0.1710	498	9.42	0.0740	55.47	3.92
1.62	230.29	323.80	0.8700	0.1690	492	9.40	0.0740	54.74	3.95
1.62	230.20	323.60	0.8690	0.1680	489	9.39	0.0730	54.30	3.97
1.62	230.29	324.28	0.8690	0.1640	488	9.23	0.0710	53.31	3.99
1.62	230.22	324.10	0.8680	0.1640	488	9.22	0.0710	53.22	4.00
1.62	230.28	324.10	0.8690	0.1670	490	9.33	0.0730	54.08	4.02
1.62	230.23	323.95	0.8680	0.1670	491	9.30	0.0730	54.02	4.03
1.62	230.26	324.21	0.8680	0.1660	492	9.25	0.0720	53.84	4.03
1.62	230.27	324.11	0.8690	0.1640	489	9.18	0.0710	53.12	4.06
1.62	230.18	323.87	0.8670	0.1590	484	8.99	0.0690	51.46	4.09
1.62	230.24	323.95	0.8670	0.1580	483	8.98	0.0690	51.30	4.11
1.62	230.21	323.89	0.8670	0.1580	481	8.96	0.0680	51.01	4.13
1.63	230.21	324.27	0.8670	0.1570	480	8.96	0.0680	50.87	4.14
1.63	230.21	324.48	0.8660	0.1550	478	8.94	0.0680	50.56	4.16
1.63	230.22	324.89	0.8660	0.1540	476	8.93	0.0680	50.26	4.17
1.63	230.29	325.17	0.8650	0.1530	472	8.92	0.0670	49.82	4.17
1.63	230.20	324.89	0.8650	0.1510	466	8.91	0.0660	49.15	4.20
1.63	230.21	324.73	0.8640	0.1500	464	8.89	0.0660	48.78	4.24
1.63	230.21	324.80	0.8640	0.1490	464	8.86	0.0660	48.65	4.25
1.64	230.26	325.21	0.8640	0.1500	466	8.84	0.0660	48.71	4.27
1.64	230.17	325.02	0.8640	0.1490	467	8.80	0.0650	48.64	4.28
1.64	230.21	325.25	0.8640	0.1490	468	8.76	0.0650	48.53	4.28
1.64	230.22	325.15	0.8640	0.1490	468	8.73	0.0650	48.35	4.30
1.64	230.18	325.04	0.8640	0.1470	466	8.71	0.0650	48.02	4.31
1.64	230.17	325.08	0.8630	0.1430	460	8.56	0.0620	46.58	4.34
1.64	230.21	325.05	0.8630	0.1420	456	8.55	0.0620	46.11	4.36
1.64	230.20	325.03	0.8620	0.1410	454	8.54	0.0610	45.86	4.39
1.64	230.20	325.34	0.8620	0.1400	453	8.53	0.0610	45.72	4.39
1.64	230.25	325.81	0.8620	0.1390	451	8.51	0.0610	45.38	4.41
1.65	230.15	325.89	0.8610	0.1380	448	8.48	0.0600	44.94	4.42
1.65	230.23	326.13	0.8610	0.1370	446	8.46	0.0600	44.65	4.44
1.65	230.24	325.93	0.8610	0.1350	442	8.43	0.0590	44.10	4.45
1.65	230.16	325.60	0.8600	0.1340	439	8.40	0.0590	43.62	4.49
1.65	230.13	325.50	0.8590	0.1330	439	8.36	0.0590	43.42	4.50
1.65	230.21	325.92	0.8600	0.1340	441	8.34	0.0590	43.53	4.52
1.65	230.26	326.18	0.8600	0.1330	442	8.31	0.0580	43.45	4.53
1.65	230.20	325.99	0.8600	0.1330	442	8.28	0.0580	43.32	4.55
1.65	230.27	326.23	0.8600	0.1320	441	8.26	0.0580	43.07	4.56
1.65	230.19	325.92	0.8600	0.1310	440	8.24	0.0580	42.87	4.58
1.65	230.10	325.99	0.8590	0.1290	436	8.13	0.0560	41.95	4.59
1.65	230.13	325.85	0.8580	0.1260	429	8.11	0.0550	41.17	4.61
1.65	230.14	325.85	0.8580	0.1260	426	8.11	0.0540	40.87	4.64
1.65	230.16	326.07	0.8580	0.1250	425	8.10	0.0540	40.74	4.66
1.65	230.09	326.10	0.8570	0.1240	424	8.09	0.0540	40.57	4.67
1.66	230.21	326.58	0.8570	0.1230	423	8.05	0.0540	40.29	4.69
1.66	230.17	326.65	0.8570	0.1220	421	8.02	0.0530	39.96	4.70
1.66	230.19	326.90	0.8570	0.1210	419	8.01	0.0530	39.69	4.72
1.66	230.23	326.77	0.8560	0.1190	415	7.96	0.0520	39.11	4.74
1.66	230.20	326.65	0.8560	0.1180	412	7.92	0.0520	38.61	4.77
1.66	230.16	326.60	0.8550	0.1180	412	7.89	0.0520	38.48	4.78
1.66	230.17	326.75	0.8550	0.1170	413	7.88	0.0520	38.49	4.80
1.66	230.20	326.77	0.8550	0.1180	414	7.86	0.0510	38.51	4.81

1.66	230.14	326.78	0.8550	0.1170	414	7.84	0.0510	38.38	4.83
1.66	230.22	326.95	0.8550	0.1170	413	7.81	0.0510	38.18	4.84
1.66	230.17	326.80	0.8560	0.1150	410	7.77	0.0510	37.69	4.86
1.66	230.17	326.93	0.8550	0.1120	404	7.68	0.0490	36.72	4.89
1.66	230.22	326.93	0.8540	0.1110	399	7.68	0.0490	36.27	4.91
1.67	230.16	326.90	0.8540	0.1110	397	7.68	0.0490	36.06	4.94
1.67	230.23	327.16	0.8540	0.1100	396	7.67	0.0480	35.94	4.94
1.67	230.24	327.24	0.8530	0.1090	395	7.66	0.0480	35.79	4.95
1.67	230.16	327.05	0.8530	0.1090	394	7.64	0.0480	35.62	4.97
1.67	230.19	327.70	0.8530	0.1070	393	7.57	0.0470	35.19	4.99
1.67	230.18	327.72	0.8530	0.1060	390	7.52	0.0460	34.72	5.00
1.67	230.20	327.61	0.8520	0.1050	387	7.49	0.0460	34.30	5.03
1.67	230.16	327.21	0.8520	0.1030	383	7.46	0.0450	33.80	5.06
1.67	230.23	327.46	0.8520	0.1030	383	7.45	0.0450	33.76	5.08
1.67	230.22	327.34	0.8510	0.1030	383	7.43	0.0450	33.68	5.08
1.67	230.17	327.37	0.8510	0.1030	383	7.41	0.0450	33.59	5.09
1.67	230.25	327.69	0.8510	0.1030	384	7.40	0.0450	33.62	5.11
1.67	230.20	327.54	0.8510	0.1020	383	7.36	0.0450	33.37	5.13
1.67	230.24	327.65	0.8510	0.1010	381	7.33	0.0440	33.04	5.16
1.68	230.26	328.06	0.8510	0.0990	376	7.26	0.0430	32.28	5.17
1.68	230.18	327.70	0.8510	0.0980	373	7.26	0.0430	32.03	5.20
1.68	230.16	327.71	0.8500	0.0970	369	7.26	0.0430	31.69	5.22
1.68	230.24	327.77	0.8500	0.0960	367	7.26	0.0420	31.51	5.24
1.68	230.17	327.56	0.8500	0.0960	366	7.25	0.0420	31.39	5.24
1.68	230.22	327.86	0.8490	0.0960	365	7.24	0.0420	31.26	5.25
1.68	230.20	327.74	0.8490	0.0950	364	7.21	0.0420	31.06	5.27
1.68	230.21	327.91	0.8490	0.0950	364	7.18	0.0420	30.91	5.30
1.68	230.25	328.29	0.8490	0.0920	361	7.08	0.0410	30.26	5.31
1.68	230.24	328.43	0.8490	0.0910	359	7.04	0.0400	29.91	5.34
1.68	230.15	327.97	0.8480	0.0900	356	7.01	0.0400	29.54	5.34
1.68	230.15	328.07	0.8490	0.0890	354	7.00	0.0400	29.32	5.36
1.68	230.23	328.13	0.8480	0.0890	352	6.99	0.0390	29.13	5.38
1.68	230.18	327.79	0.8480	0.0890	351	6.99	0.0390	29.02	5.39
1.68	230.18	327.85	0.8480	0.0880	350	6.97	0.0380	28.87	5.41
1.68	230.22	328.19	0.8470	0.0880	351	6.94	0.0380	28.83	5.44
1.68	230.21	328.38	0.8480	0.0870	351	6.91	0.0380	28.70	5.47
1.68	230.15	328.07	0.8470	0.0870	349	6.89	0.0380	28.46	5.47
1.68	230.11	328.10	0.8480	0.0860	348	6.88	0.0380	28.33	5.49
1.68	230.21	328.33	0.8480	0.0850	345	6.83	0.0370	27.89	5.50
1.69	230.21	328.62	0.8480	0.0840	342	6.79	0.0360	27.49	5.52
1.69	230.10	328.13	0.8470	0.0830	338	6.78	0.0360	27.13	5.53
1.69	230.15	328.15	0.8460	0.0810	333	6.78	0.0350	26.71	5.56
1.69	230.18	328.19	0.8460	0.0810	331	6.77	0.0350	26.51	5.58
1.69	230.23	328.60	0.8460	0.0810	331	6.75	0.0350	26.43	5.61
1.69	230.21	328.53	0.8450	0.0810	332	6.74	0.0350	26.46	5.63
1.69	230.16	328.51	0.8450	0.0800	332	6.71	0.0350	26.36	5.63
1.69	230.21	328.77	0.8460	0.0800	332	6.69	0.0350	26.29	5.64
1.69	230.24	328.65	0.8460	0.0800	330	6.67	0.0350	26.05	5.66
1.69	230.13	328.43	0.8460	0.0780	328	6.60	0.0350	25.62	5.67
1.69	230.13	328.56	0.8450	0.0760	322	6.56	0.0340	24.98	5.70
1.69	230.17	328.54	0.8440	0.0750	318	6.56	0.0330	24.67	5.72
1.69	230.13	328.49	0.8440	0.0750	316	6.55	0.0330	24.50	5.74
1.69	230.18	328.65	0.8440	0.0740	315	6.54	0.0330	24.39	5.75

1.69	230.16	328.50	0.8440	0.0740	314	6.54	0.0330	24.28	5.77
1.69	230.11	328.56	0.8440	0.0740	313	6.53	0.0330	24.18	5.78
1.69	230.16	328.84	0.8440	0.0730	313	6.51	0.0320	24.11	5.80
1.69	230.15	328.93	0.8440	0.0730	313	6.48	0.0320	23.99	5.83
1.69	230.19	328.94	0.8440	0.0720	310	6.45	0.0320	23.67	5.84
1.69	230.11	328.95	0.8440	0.0700	307	6.35	0.0310	23.05	5.88
1.70	230.21	329.24	0.8440	0.0690	304	6.32	0.0300	22.72	5.89
1.70	230.09	328.62	0.8430	0.0690	301	6.31	0.0300	22.47	5.91
1.70	230.13	328.91	0.8430	0.0680	299	6.31	0.0300	22.31	5.91
1.70	230.20	328.82	0.8430	0.0680	297	6.30	0.0290	22.15	5.92
1.70	230.11	328.51	0.8420	0.0670	295	6.30	0.0290	21.97	5.94
1.70	230.12	328.62	0.8420	0.0670	294	6.27	0.0290	21.82	5.97
1.70	230.16	328.96	0.8420	0.0670	295	6.24	0.0290	21.76	6.00
1.70	230.14	329.07	0.8420	0.0660	295	6.21	0.0290	21.68	6.02
1.70	230.12	328.87	0.8420	0.0660	294	6.20	0.0290	21.56	6.03
1.70	230.09	328.79	0.8420	0.0650	293	6.19	0.0290	21.46	6.05
1.70	230.15	328.98	0.8420	0.0650	292	6.18	0.0290	21.36	6.05
1.70	230.10	328.64	0.8420	0.0650	290	6.18	0.0290	21.19	6.06
1.70	230.11	329.08	0.8420	0.0620	285	6.10	0.0280	20.57	6.08
1.70	230.15	329.15	0.8410	0.0610	279	6.09	0.0270	20.10	6.11
1.70	230.19	329.19	0.8410	0.0600	275	6.09	0.0270	19.81	6.14
1.70	230.17	329.05	0.8410	0.0590	273	6.08	0.0260	19.64	6.16
1.70	230.18	329.27	0.8410	0.0590	273	6.06	0.0260	19.59	6.16
1.70	230.23	329.38	0.8410	0.0590	273	6.05	0.0260	19.53	6.17
1.70	230.16	329.23	0.8400	0.0590	273	6.02	0.0260	19.45	6.19
1.70	230.18	329.51	0.8410	0.0590	274	5.99	0.0260	19.43	6.20
1.70	230.12	329.38	0.8410	0.0590	275	5.95	0.0260	19.36	6.24
1.70	230.15	329.33	0.8410	0.0580	272	5.94	0.0250	19.11	6.25
1.70	230.19	329.41	0.8410	0.0580	270	5.93	0.0250	18.96	6.28
1.70	230.20	329.38	0.8410	0.0560	267	5.87	0.0250	18.54	6.30
1.70	230.10	329.48	0.8400	0.0560	264	5.83	0.0250	18.20	6.31
1.71	230.18	329.65	0.8400	0.0540	260	5.83	0.0240	17.93	6.31
1.71	230.18	329.52	0.8400	0.0540	257	5.83	0.0240	17.74	6.33
1.71	230.15	329.33	0.8390	0.0530	253	5.84	0.0230	17.47	6.34
1.71	230.14	329.22	0.8390	0.0520	250	5.84	0.0230	17.27	6.38
1.71	230.18	329.39	0.8390	0.0520	250	5.82	0.0230	17.22	6.41
1.71	230.16	329.56	0.8390	0.0520	250	5.80	0.0230	17.16	6.41
1.71	230.24	329.80	0.8390	0.0520	250	5.78	0.0230	17.10	6.42
1.71	230.16	329.62	0.8390	0.0520	251	5.76	0.0230	17.10	6.44
1.71	230.22	329.93	0.8390	0.0520	251	5.74	0.0230	17.04	6.45
1.71	230.24	329.92	0.8390	0.0510	251	5.72	0.0230	16.97	6.47
1.71	230.19	329.65	0.8390	0.0510	249	5.71	0.0220	16.81	6.49
1.71	230.23	329.62	0.8390	0.0510	244	5.73	0.0220	16.53	6.52
1.71	230.24	330.19	0.8390	0.0480	240	5.55	0.0210	15.77	6.55
1.71	230.16	329.64	0.8380	0.0470	236	5.55	0.0210	15.51	6.56
1.71	230.13	329.74	0.8380	0.0460	233	5.56	0.0200	15.33	6.58
1.71	230.22	329.99	0.8380	0.0460	230	5.56	0.0200	15.14	6.59
1.71	230.15	329.50	0.8370	0.0460	228	5.56	0.0200	15.01	6.59
1.71	230.11	329.51	0.8370	0.0450	225	5.55	0.0190	14.78	6.61
1.71	230.18	329.68	0.8370	0.0450	225	5.52	0.0190	14.70	6.64
1.71	230.17	329.87	0.8370	0.0440	225	5.49	0.0190	14.60	6.67
1.71	230.15	329.93	0.8370	0.0440	226	5.46	0.0190	14.60	6.69
1.71	230.10	329.71	0.8370	0.0440	226	5.44	0.0190	14.55	6.70

1.71	230.09	329.85	0.8370	0.0440	226	5.43	0.0190	14.51	6.72
1.71	230.16	330.01	0.8370	0.0440	226	5.42	0.0190	14.49	6.74
1.71	230.10	329.75	0.8370	0.0440	225	5.42	0.0190	14.42	6.74
1.71	230.16	329.83	0.8370	0.0430	221	5.43	0.0190	14.20	6.77
1.71	230.18	329.83	0.8370	0.0430	217	5.46	0.0190	14.02	6.78
1.71	230.26	330.34	0.8370	0.0400	212	5.25	0.0180	13.16	6.81
1.71	230.13	329.80	0.8360	0.0390	208	5.23	0.0170	12.87	6.83
1.71	230.11	329.74	0.8360	0.0380	205	5.23	0.0170	12.69	6.84
1.72	230.19	329.91	0.8360	0.0380	202	5.23	0.0170	12.50	6.86
1.71	230.15	329.67	0.8360	0.0370	200	5.23	0.0160	12.38	6.86
1.72	230.11	329.69	0.8360	0.0370	198	5.22	0.0160	12.23	6.88
1.72	230.11	329.67	0.8350	0.0370	198	5.19	0.0160	12.15	6.91
1.72	230.14	329.82	0.8350	0.0370	199	5.13	0.0160	12.09	6.94
1.72	230.17	330.14	0.8350	0.0360	199	5.11	0.0160	12.03	6.95
1.72	230.20	330.19	0.8350	0.0360	200	5.09	0.0160	12.03	6.97
1.72	230.13	329.98	0.8350	0.0360	200	5.07	0.0160	12.01	6.99
1.72	230.12	330.09	0.8350	0.0360	200	5.06	0.0160	11.97	7.00
1.72	230.20	330.29	0.8360	0.0360	199	5.05	0.0160	11.90	7.02
1.72	230.13	329.99	0.8360	0.0360	196	5.07	0.0160	11.76	7.03
1.72	230.19	330.15	0.8360	0.0350	191	5.10	0.0150	11.53	7.06
1.72	230.25	330.16	0.8360	0.0350	186	5.14	0.0150	11.30	7.08
1.72	230.21	330.34	0.8350	0.0330	182	4.99	0.0150	10.74	7.09
1.72	230.24	330.61	0.8360	0.0330	179	5.11	0.0150	10.82	7.11
1.72	230.20	330.33	0.8350	0.0330	174	5.23	0.0150	10.77	7.13
1.72	230.21	330.18	0.8340	0.0300	171	4.88	0.0130	9.87	7.14
1.72	230.15	330.05	0.8340	0.0290	168	4.88	0.0130	9.70	7.16
1.72	230.21	330.21	0.8340	0.0290	166	4.85	0.0130	9.53	7.19
1.72	230.23	330.36	0.8340	0.0290	166	4.81	0.0130	9.44	7.20
1.72	230.22	330.40	0.8340	0.0290	167	4.77	0.0130	9.42	7.24
1.72	230.15	330.13	0.8330	0.0290	168	4.73	0.0130	9.41	7.24
1.72	230.13	330.19	0.8340	0.0290	169	4.70	0.0130	9.39	7.25
1.72	230.20	330.43	0.8340	0.0290	170	4.67	0.0130	9.40	7.27
1.72	230.22	330.45	0.8340	0.0290	171	4.65	0.0130	9.41	7.28
1.72	230.25	330.71	0.8340	0.0290	172	4.64	0.0130	9.44	7.31
1.72	230.19	330.65	0.8340	0.0290	169	4.66	0.0130	9.32	7.34
1.72	230.23	330.80	0.8340	0.0280	166	4.69	0.0120	9.21	7.36
1.72	230.31	330.91	0.8340	0.0280	163	4.72	0.0120	9.11	7.38
1.72	230.22	330.48	0.8340	0.0270	159	4.76	0.0120	8.96	7.39
1.72	230.20	330.42	0.8340	0.0270	155	4.80	0.0120	8.81	7.41
1.72	230.20	330.39	0.8330	0.0260	149	4.87	0.0110	8.59	7.42
1.72	230.14	330.55	0.8350	0.0000	0	3.87	0.0000	0.00	17.95



MAGTROL

CMA-0000

# RAW DATA FROM MOTOR PERFORMANCE

CMA-0000-5

1/1/2006

@230VAC

CURRENT A1	VOLTAGE V1	WATTS IN Win1	Power Factor	EFFICIENCY Eff	SPEED RPM	TORQUE lb.in	Horsepower	WATTS OUT Wout1	Time SECONDS
0.36	230.31	77.48	0.9330	0.0270	896	0.20	0.0030	2.09	0.00
0.43	230.48	95.00	0.9650	0.2440	887	2.29	0.0320	23.98	0.50
0.43	230.55	95.18	0.9660	0.2490	887	2.33	0.0330	24.45	0.52
0.43	230.51	95.10	0.9660	0.2470	888	2.29	0.0320	24.01	0.53
0.43	230.55	96.77	0.9690	0.2650	887	2.49	0.0350	26.08	0.55
0.46	230.54	103.50	0.9740	0.3180	883	3.24	0.0450	33.88	0.56
0.47	230.52	104.49	0.9750	0.3340	883	3.41	0.0480	35.64	0.59
0.47	230.50	106.22	0.9780	0.3400	883	3.50	0.0500	36.60	0.61
0.49	230.42	110.22	0.9790	0.3690	881	3.98	0.0560	41.43	0.63
0.50	230.47	113.15	0.9800	0.3950	878	4.40	0.0610	45.76	0.64
0.52	230.48	116.88	0.9810	0.4070	877	4.72	0.0660	48.94	0.64
0.52	230.42	117.60	0.9830	0.4160	877	4.83	0.0670	50.11	0.66
0.51	230.45	115.71	0.9820	0.4190	878	4.72	0.0660	49.07	0.67
0.55	230.36	125.27	0.9850	0.4560	873	5.63	0.0780	58.14	0.69
0.59	230.34	134.16	0.9860	0.4930	870	6.58	0.0910	67.76	0.72
0.60	230.35	136.89	0.9870	0.5010	870	6.79	0.0940	69.91	0.74
0.61	230.41	138.89	0.9880	0.5080	869	6.96	0.0960	71.55	0.75
0.62	230.33	140.85	0.9890	0.5140	866	7.16	0.0980	73.35	0.77
0.64	230.44	146.23	0.9890	0.5220	864	7.59	0.1040	77.54	0.78
0.65	230.36	147.76	0.9880	0.5330	862	7.83	0.1070	79.86	0.78
0.65	230.32	148.86	0.9890	0.5400	862	7.98	0.1090	81.39	0.80
0.66	230.39	151.26	0.9890	0.5480	861	8.21	0.1120	83.62	0.81
0.70	230.40	159.25	0.9890	0.5610	856	8.89	0.1210	90.05	0.83
0.73	230.36	165.75	0.9890	0.5750	852	9.52	0.1290	95.99	0.86
0.74	230.33	168.72	0.9890	0.5760	852	9.70	0.1320	97.73	0.88
0.75	230.32	171.24	0.9880	0.5760	850	9.85	0.1330	99.08	0.89
0.77	230.23	174.09	0.9880	0.5780	848	10.07	0.1360	101.00	0.91
0.78	230.28	177.82	0.9880	0.5820	845	10.39	0.1400	103.84	0.92
0.79	230.30	178.91	0.9880	0.5870	843	10.56	0.1410	105.34	0.92
0.81	230.23	182.89	0.9870	0.5890	842	10.85	0.1450	108.08	0.94
0.82	230.26	185.09	0.9870	0.5950	841	11.09	0.1480	110.39	0.95
0.85	230.33	192.82	0.9860	0.5900	836	11.53	0.1530	114.00	0.99
<b>0.87</b>	<b>230.23</b>	<b>196.45</b>	<b>0.9850</b>	<b>0.5960</b>	<b>831</b>	<b>11.92</b>	<b>0.1570</b>	<b>117.20</b>	<b>1.00 MAX EFF</b>
0.89	230.18	200.83	0.9840	0.5930	830	12.14	0.1600	119.17	1.02
0.90	230.14	203.13	0.9840	0.5930	829	12.28	0.1620	120.45	1.03
0.91	230.09	205.43	0.9830	0.5910	827	12.41	0.1630	121.47	1.05
0.93	230.06	209.13	0.9820	0.5880	824	12.62	0.1650	122.99	1.06
0.93	230.15	210.99	0.9820	0.5880	822	12.77	0.1670	124.20	1.06
0.95	230.08	214.76	0.9800	0.5850	818	13.00	0.1690	125.77	1.08
0.97	229.99	218.32	0.9790	0.5850	816	13.22	0.1710	127.64	1.11
1.00	230.03	223.94	0.9770	0.5770	811	13.48	0.1730	129.30	1.13
1.01	230.03	226.71	0.9760	0.5740	807	13.63	0.1740	130.12	1.16
1.03	230.11	230.33	0.9750	0.5690	806	13.73	0.1750	130.94	1.17
1.04	230.02	231.95	0.9740	0.5670	804	13.82	0.1760	131.47	1.19

1.04	230.08	233.47	0.9740	0.5660	803	13.90	0.1770	132.02	1.19
1.05	229.95	235.22	0.9720	0.5620	800	13.96	0.1770	132.16	1.20
1.07	230.03	238.20	0.9710	0.5570	797	14.07	0.1780	132.63	1.22
1.08	229.98	241.63	0.9700	0.5510	793	14.19	0.1780	133.14	1.24
1.10	229.96	245.04	0.9680	0.5460	790	14.30	0.1790	133.70	1.27
1.12	229.96	248.54	0.9660	0.5380	786	14.39	0.1790	133.78	1.30 MAX WOUT
1.13	229.91	249.92	0.9650	0.5350	783	14.42	0.1790	133.59	1.30
1.13	229.88	250.92	0.9650	0.5330	782	14.45	0.1790	133.70	1.31
1.15	229.97	253.60	0.9630	0.5270	780	14.48	0.1790	133.59	1.33
1.15	229.89	254.64	0.9620	0.5250	779	14.50	0.1790	133.65	1.34
1.16	229.96	256.01	0.9620	0.5220	777	14.53	0.1790	133.58	1.34
1.17	229.85	258.39	0.9600	0.5150	772	14.57	0.1780	133.04	1.36
1.18	229.84	260.54	0.9580	0.5100	769	14.60	0.1780	132.81	1.39
1.20	229.85	262.96	0.9560	0.5040	766	14.62	0.1780	132.47	1.42
1.21	229.86	265.02	0.9550	0.4990	764	14.63	0.1770	132.20	1.44
1.21	229.79	265.68	0.9540	0.4960	761	14.63	0.1760	131.73	1.45
1.22	229.82	267.92	0.9520	0.4890	758	14.60	0.1760	130.94	1.45
1.23	229.75	268.58	0.9510	0.4870	757	14.60	0.1750	130.76	1.47
1.24	229.74	270.47	0.9500	0.4810	754	14.60	0.1740	130.20	1.50
1.25	229.77	273.12	0.9480	0.4730	749	14.59	0.1730	129.27	1.53
1.26	229.80	274.51	0.9470	0.4690	746	14.58	0.1720	128.69	1.55
1.27	229.81	275.95	0.9460	0.4650	744	14.57	0.1720	128.26	1.58
1.28	229.70	276.83	0.9440	0.4620	743	14.54	0.1720	127.82	1.59
1.28	229.77	277.77	0.9440	0.4580	741	14.52	0.1710	127.26	1.59
1.29	229.77	278.29	0.9430	0.4550	738	14.49	0.1700	126.52	1.61
1.29	229.73	279.56	0.9410	0.4500	736	14.42	0.1690	125.57	1.63
1.30	229.78	280.65	0.9410	0.4460	734	14.40	0.1680	125.04	1.64
1.31	229.71	281.66	0.9390	0.4420	732	14.38	0.1670	124.50	1.66
1.32	229.67	284.08	0.9360	0.4340	727	14.33	0.1650	123.22	1.69
1.33	229.78	285.06	0.9360	0.4310	725	14.31	0.1650	122.75	1.70
1.33	229.71	285.32	0.9350	0.4290	724	14.31	0.1640	122.54	1.72
1.33	229.80	286.01	0.9350	0.4270	723	14.30	0.1640	122.33	1.74
1.33	229.72	286.07	0.9340	0.4270	723	14.30	0.1640	122.28	1.75
1.34	229.81	286.69	0.9330	0.4250	721	14.29	0.1640	121.86	1.77
1.34	229.71	287.46	0.9320	0.4210	717	14.26	0.1620	120.97	1.77
1.35	229.68	288.75	0.9310	0.4100	713	14.06	0.1590	118.61	1.80
1.36	229.71	289.78	0.9290	0.4080	712	14.03	0.1590	118.15	1.83
1.36	229.71	290.41	0.9280	0.4050	710	13.99	0.1580	117.52	1.84
1.37	229.67	290.85	0.9270	0.4020	708	13.95	0.1570	116.88	1.86
1.37	229.75	292.05	0.9260	0.3990	706	13.93	0.1560	116.32	1.88
1.38	229.72	293.07	0.9240	0.3960	704	13.92	0.1550	115.95	1.88
1.38	229.70	293.39	0.9240	0.3950	704	13.91	0.1550	115.82	1.89
1.38	229.69	293.58	0.9240	0.3940	703	13.88	0.1550	115.46	1.91
1.39	229.72	294.39	0.9230	0.3890	699	13.85	0.1540	114.58	1.94
1.39	229.68	294.95	0.9220	0.3860	695	13.84	0.1530	113.79	1.95
1.40	229.64	295.26	0.9220	0.3840	694	13.82	0.1520	113.51	1.99
1.40	229.64	295.62	0.9210	0.3830	693	13.82	0.1520	113.28	2.00
1.40	229.65	295.74	0.9200	0.3820	692	13.81	0.1510	113.07	2.00
1.40	229.70	296.16	0.9200	0.3810	691	13.79	0.1510	112.70	2.02
1.40	229.69	296.30	0.9190	0.3730	688	13.61	0.1480	110.75	2.03
1.41	229.69	297.73	0.9170	0.3670	685	13.49	0.1470	109.35	2.05
1.42	229.74	298.46	0.9170	0.3650	684	13.46	0.1460	108.93	2.06
1.42	229.70	298.87	0.9150	0.3620	682	13.42	0.1450	108.29	2.09

1.43	229.62	299.28	0.9140	0.3590	679	13.40	0.1440	107.61	2.11
1.43	229.63	300.01	0.9130	0.3580	677	13.39	0.1440	107.27	2.13
1.43	229.66	300.28	0.9130	0.3560	676	13.38	0.1430	107.00	2.14
1.43	229.66	300.62	0.9130	0.3550	675	13.36	0.1430	106.70	2.16
1.44	229.63	300.63	0.9120	0.3540	675	13.35	0.1430	106.58	2.17
1.44	229.66	301.07	0.9120	0.3520	673	13.32	0.1420	106.09	2.17
1.44	229.70	301.41	0.9120	0.3490	669	13.29	0.1410	105.19	2.20
1.44	229.59	301.73	0.9100	0.3410	666	13.04	0.1380	102.72	2.24
1.45	229.58	302.28	0.9080	0.3380	665	12.96	0.1370	101.97	2.25
1.45	229.59	302.53	0.9080	0.3370	665	12.95	0.1370	101.85	2.27
1.46	229.63	303.32	0.9070	0.3350	664	12.92	0.1360	101.46	2.28
1.46	229.58	303.50	0.9060	0.3330	662	12.90	0.1350	101.04	2.28
1.46	229.59	303.78	0.9060	0.3310	659	12.88	0.1350	100.43	2.30
1.46	229.61	304.28	0.9050	0.3290	657	12.85	0.1340	99.89	2.31
1.47	229.61	304.59	0.9040	0.3270	656	12.82	0.1330	99.50	2.34
1.47	229.65	304.95	0.9040	0.3250	654	12.79	0.1330	98.93	2.36
1.47	229.55	305.00	0.9040	0.3230	651	12.76	0.1320	98.31	2.39
1.47	229.59	305.26	0.9030	0.3210	649	12.76	0.1310	97.96	2.41
1.47	229.58	305.54	0.9030	0.3200	648	12.75	0.1310	97.74	2.41
1.47	229.58	305.66	0.9030	0.3190	647	12.74	0.1310	97.49	2.42
1.48	229.64	306.10	0.9020	0.3180	646	12.73	0.1310	97.26	2.44
1.48	229.58	305.94	0.9020	0.3180	646	12.71	0.1310	97.15	2.45
1.48	229.56	306.50	0.9000	0.3080	643	12.40	0.1270	94.34	2.47
1.49	229.52	307.13	0.8990	0.3040	638	12.36	0.1250	93.26	2.50
1.49	229.48	307.37	0.8980	0.3030	637	12.33	0.1250	92.94	2.52
1.49	229.55	307.68	0.8980	0.3020	637	12.31	0.1250	92.79	2.53
1.49	229.47	307.54	0.8970	0.3010	636	12.29	0.1240	92.51	2.55
1.50	229.55	307.84	0.8970	0.2990	635	12.27	0.1240	92.19	2.56
1.50	229.46	307.94	0.8960	0.2980	633	12.25	0.1230	91.75	2.58
1.50	229.59	308.53	0.8960	0.2950	630	12.23	0.1220	91.14	2.58
1.50	229.44	308.59	0.8950	0.2930	627	12.21	0.1220	90.57	2.61
1.50	229.40	308.64	0.8940	0.2920	626	12.18	0.1210	90.21	2.64
1.51	229.53	309.22	0.8940	0.2900	624	12.16	0.1200	89.78	2.66
1.51	229.50	309.31	0.8930	0.2840	621	11.96	0.1180	87.84	2.67
1.51	229.57	309.37	0.8940	0.2860	620	12.05	0.1190	88.40	2.69
1.51	229.50	309.85	0.8920	0.2800	618	11.87	0.1170	86.79	2.70
1.51	229.58	310.13	0.8920	0.2800	618	11.86	0.1170	86.68	2.70
1.51	229.51	310.02	0.8920	0.2790	618	11.83	0.1160	86.47	2.72
1.52	229.55	310.39	0.8900	0.2760	616	11.77	0.1150	85.75	2.75
1.52	229.58	311.12	0.8890	0.2730	611	11.74	0.1140	84.88	2.78
1.52	229.49	311.11	0.8890	0.2720	610	11.73	0.1140	84.66	2.80
1.53	229.54	311.49	0.8890	0.2710	609	11.72	0.1130	84.46	2.81
1.53	229.50	311.39	0.8880	0.2710	608	11.72	0.1130	84.30	2.83
1.53	229.50	311.67	0.8880	0.2690	606	11.71	0.1130	83.98	2.84
1.53	229.54	311.77	0.8880	0.2690	605	11.71	0.1130	83.79	2.84
1.53	229.54	311.98	0.8880	0.2660	601	11.68	0.1120	83.03	2.86
1.54	229.48	312.49	0.8850	0.2580	597	11.38	0.1080	80.40	2.89
1.54	229.48	312.45	0.8840	0.2570	598	11.35	0.1070	80.31	2.92
1.54	229.59	312.50	0.8850	0.2590	599	11.41	0.1080	80.87	2.94
1.54	229.54	312.60	0.8840	0.2550	598	11.27	0.1060	79.70	2.95
1.54	229.52	313.07	0.8840	0.2530	595	11.23	0.1060	79.07	2.97
1.54	229.59	313.25	0.8840	0.2510	593	11.21	0.1060	78.67	2.99
1.55	229.53	313.26	0.8830	0.2510	591	11.21	0.1050	78.35	3.00

1.55	229.58	313.58	0.8830	0.2490	589	11.20	0.1050	78.05	3.02
1.55	229.64	314.06	0.8820	0.2470	585	11.20	0.1040	77.52	3.05
1.55	229.61	314.30	0.8810	0.2450	580	11.20	0.1030	76.86	3.06
1.56	229.64	314.57	0.8800	0.2370	577	10.95	0.1000	74.72	3.08
1.56	229.58	314.96	0.8790	0.2360	575	10.92	0.1000	74.29	3.09
1.56	229.58	314.93	0.8790	0.2360	576	10.90	0.1000	74.28	3.11
1.56	229.55	314.82	0.8780	0.2350	576	10.88	0.1000	74.15	3.13
1.56	229.61	314.92	0.8790	0.2400	578	11.07	0.1020	75.71	3.14
1.56	229.58	314.70	0.8780	0.2340	577	10.76	0.0990	73.42	3.17
1.56	229.62	315.24	0.8770	0.2300	573	10.71	0.0970	72.58	3.19
1.57	229.63	315.54	0.8780	0.2290	572	10.70	0.0970	72.42	3.22
1.57	229.65	315.60	0.8770	0.2290	571	10.70	0.0970	72.26	3.22
1.57	229.60	315.68	0.8770	0.2280	569	10.70	0.0960	72.00	3.24
1.57	229.67	315.94	0.8770	0.2270	567	10.69	0.0960	71.72	3.25
1.57	229.59	315.84	0.8770	0.2260	564	10.69	0.0960	71.34	3.27
1.57	229.66	316.34	0.8760	0.2230	558	10.69	0.0950	70.58	3.28
1.58	229.61	316.63	0.8750	0.2160	554	10.45	0.0910	68.47	3.30
1.58	229.58	316.80	0.8740	0.2150	554	10.41	0.0910	68.20	3.33
1.58	229.55	316.48	0.8730	0.2200	555	10.60	0.0930	69.62	3.34
1.58	229.57	316.66	0.8730	0.2190	555	10.57	0.0930	69.39	3.36
1.58	229.59	316.55	0.8730	0.2180	555	10.53	0.0930	69.13	3.38
1.58	229.59	316.83	0.8720	0.2120	553	10.25	0.0900	67.05	3.39
1.58	229.58	316.62	0.8740	0.2150	552	10.44	0.0910	68.15	3.41
1.58	229.51	316.29	0.8740	0.2120	551	10.32	0.0900	67.28	3.42
1.58	229.58	317.09	0.8720	0.2090	548	10.19	0.0880	66.10	3.44
1.59	229.58	317.15	0.8710	0.2070	544	10.19	0.0880	65.62	3.47
1.59	229.50	317.31	0.8710	0.2050	541	10.19	0.0870	65.25	3.49
1.59	229.53	317.57	0.8700	0.2040	537	10.20	0.0860	64.79	3.50
1.59	229.45	317.61	0.8700	0.2030	534	10.19	0.0860	64.41	3.52
1.59	229.58	318.04	0.8690	0.2020	532	10.18	0.0860	64.05	3.53
1.60	229.55	317.99	0.8690	0.2010	532	10.17	0.0860	63.99	3.55
1.60	229.51	318.04	0.8680	0.2010	532	10.13	0.0850	63.74	3.55
1.60	229.51	317.91	0.8680	0.1990	533	10.06	0.0850	63.44	3.58
1.60	229.58	318.07	0.8680	0.1940	530	9.83	0.0830	61.65	3.61
1.60	229.58	318.18	0.8680	0.1940	529	9.84	0.0830	61.56	3.63
1.60	229.45	317.74	0.8680	0.1940	528	9.86	0.0830	61.61	3.64
1.60	229.54	318.52	0.8670	0.1900	527	9.72	0.0820	60.62	3.66
1.60	229.54	318.38	0.8660	0.1900	526	9.72	0.0810	60.48	3.67
1.60	229.52	318.45	0.8660	0.1900	525	9.72	0.0810	60.35	3.67
1.60	229.56	318.49	0.8660	0.1880	522	9.71	0.0810	59.96	3.69
1.61	229.53	318.66	0.8650	0.1860	516	9.71	0.0800	59.26	3.72
1.61	229.52	319.13	0.8640	0.1840	511	9.70	0.0790	58.66	3.75
1.61	229.44	319.10	0.8640	0.1830	510	9.69	0.0790	58.45	3.77
1.61	229.44	319.13	0.8630	0.1830	510	9.66	0.0780	58.30	3.78
1.61	229.51	319.38	0.8630	0.1820	510	9.64	0.0780	58.15	3.80
1.61	229.47	319.14	0.8630	0.1820	510	9.60	0.0780	57.94	3.81
1.61	229.46	319.25	0.8630	0.1810	510	9.57	0.0780	57.76	3.81
1.61	229.51	319.29	0.8630	0.1790	508	9.53	0.0770	57.25	3.83
1.62	229.52	319.46	0.8620	0.1740	505	9.31	0.0740	55.63	3.86
1.62	229.51	319.64	0.8620	0.1730	503	9.28	0.0740	55.20	3.89
1.62	229.46	319.59	0.8620	0.1720	502	9.26	0.0740	55.00	3.91
1.62	229.51	319.68	0.8610	0.1710	500	9.24	0.0730	54.65	3.92
1.62	229.42	319.30	0.8610	0.1700	498	9.22	0.0720	54.30	3.94

1.62	229.49	319.83	0.8600	0.1690	496	9.21	0.0720	54.06	3.94
1.62	229.46	319.78	0.8590	0.1680	492	9.21	0.0720	53.64	3.95
1.62	229.42	319.81	0.8590	0.1670	488	9.23	0.0710	53.26	3.97
1.63	229.41	320.06	0.8590	0.1660	486	9.23	0.0710	53.06	4.00
1.63	229.42	320.07	0.8580	0.1660	487	9.18	0.0710	52.92	4.02
1.63	229.46	320.27	0.8580	0.1650	487	9.16	0.0700	52.75	4.03
1.63	229.49	320.18	0.8580	0.1640	487	9.12	0.0700	52.57	4.05
1.63	229.46	320.22	0.8580	0.1640	487	9.10	0.0700	52.41	4.06
1.63	229.45	320.11	0.8580	0.1630	486	9.07	0.0700	52.18	4.08
1.63	229.48	320.37	0.8580	0.1620	483	9.07	0.0700	51.80	4.09
1.63	229.53	320.46	0.8580	0.1580	481	8.88	0.0680	50.56	4.11
1.63	229.54	320.57	0.8580	0.1590	478	8.97	0.0680	50.74	4.13
1.63	229.14	319.60	0.8560	0.1540	476	8.74	0.0660	49.25	4.16
1.63	229.05	319.28	0.8560	0.1530	474	8.73	0.0660	48.95	4.17
1.63	228.96	319.14	0.8560	0.1520	471	8.71	0.0650	48.55	4.19
1.63	228.80	318.82	0.8550	0.1510	468	8.71	0.0650	48.21	4.20
1.63	228.60	318.53	0.8550	0.1500	464	8.70	0.0640	47.77	4.22
1.63	228.59	318.56	0.8550	0.1490	462	8.69	0.0640	47.48	4.24
1.63	228.67	318.77	0.8540	0.1480	462	8.65	0.0640	47.30	4.25
1.64	228.67	318.88	0.8540	0.1480	464	8.60	0.0630	47.19	4.28
1.63	228.71	318.84	0.8540	0.1470	465	8.55	0.0630	47.04	4.30
1.63	228.64	318.59	0.8530	0.1470	464	8.52	0.0620	46.77	4.31
1.63	228.65	318.77	0.8540	0.1460	463	8.50	0.0620	46.55	4.33
1.63	228.61	318.55	0.8540	0.1450	460	8.48	0.0620	46.15	4.34
1.63	228.28	317.65	0.8530	0.1410	457	8.29	0.0600	44.84	4.36
1.63	228.39	318.26	0.8530	0.1400	454	8.29	0.0590	44.52	4.38
1.64	228.26	317.93	0.8520	0.1390	451	8.28	0.0590	44.19	4.39
1.64	228.28	317.96	0.8510	0.1370	447	8.25	0.0590	43.62	4.42
1.64	228.32	318.20	0.8510	0.1360	445	8.23	0.0580	43.35	4.44
1.64	228.27	318.00	0.8500	0.1350	442	8.22	0.0580	43.00	4.45
1.64	228.20	318.01	0.8500	0.1350	439	8.22	0.0580	42.69	4.47
1.64	228.31	318.48	0.8500	0.1330	437	8.22	0.0570	42.49	4.49
1.64	228.20	318.17	0.8490	0.1330	436	8.21	0.0570	42.33	4.50
1.64	228.27	318.53	0.8490	0.1330	437	8.17	0.0570	42.25	4.52
1.64	228.21	318.11	0.8490	0.1330	439	8.10	0.0570	42.08	4.55
1.64	228.21	318.03	0.8490	0.1320	439	8.04	0.0560	41.78	4.56
1.64	228.17	317.90	0.8490	0.1310	438	8.03	0.0560	41.60	4.58
1.64	228.23	318.28	0.8490	0.1300	436	8.03	0.0560	41.40	4.59
1.64	228.20	318.20	0.8490	0.1290	433	8.03	0.0550	41.13	4.61
1.64	227.94	317.53	0.8490	0.1250	430	7.83	0.0530	39.81	4.63
1.64	227.91	317.53	0.8480	0.1230	427	7.77	0.0520	39.24	4.64
1.64	227.76	317.19	0.8470	0.1220	424	7.77	0.0520	38.96	4.64
1.65	227.76	317.44	0.8470	0.1210	421	7.77	0.0520	38.69	4.67
1.65	227.62	317.11	0.8460	0.1210	418	7.76	0.0510	38.35	4.70
1.65	227.61	317.09	0.8460	0.1200	417	7.74	0.0510	38.18	4.72
1.65	227.56	316.85	0.8460	0.1200	415	7.73	0.0510	37.94	4.74
1.65	227.46	316.60	0.8450	0.1190	413	7.72	0.0510	37.71	4.75
1.65	227.48	316.74	0.8460	0.1180	411	7.71	0.0500	37.48	4.77
1.65	227.39	316.47	0.8450	0.1170	410	7.69	0.0500	37.30	4.77
1.65	227.43	316.76	0.8460	0.1170	410	7.67	0.0500	37.19	4.78
1.65	227.37	316.56	0.8450	0.1170	410	7.62	0.0500	36.98	4.81
1.65	227.37	316.48	0.8450	0.1160	410	7.59	0.0500	36.80	4.84
1.65	227.40	316.46	0.8450	0.1160	409	7.58	0.0490	36.69	4.86

1.65	227.49	316.73	0.8450	0.1160	408	7.58	0.0490	36.59	4.88
1.65	227.45	316.67	0.8450	0.1150	405	7.60	0.0490	36.41	4.89
1.65	227.45	316.60	0.8440	0.1140	402	7.61	0.0490	36.21	4.89
1.66	228.29	319.36	0.8450	0.1130	400	7.61	0.0480	36.03	4.91
1.66	228.97	321.35	0.8440	0.1100	396	7.48	0.0470	35.05	4.92
1.67	228.95	321.47	0.8430	0.1080	393	7.47	0.0460	34.72	4.95
1.67	228.93	321.54	0.8430	0.1070	391	7.44	0.0460	34.41	4.99
1.67	228.94	321.49	0.8430	0.1060	390	7.42	0.0460	34.26	5.00
1.67	228.88	321.22	0.8430	0.1060	389	7.41	0.0460	34.10	5.00
1.67	228.88	321.36	0.8430	0.1060	388	7.39	0.0460	33.93	5.02
1.67	228.97	321.55	0.8430	0.1040	386	7.36	0.0450	33.63	5.03
1.67	228.91	321.34	0.8420	0.1030	384	7.31	0.0440	33.20	5.05
1.67	228.88	321.36	0.8420	0.1020	381	7.27	0.0430	32.75	5.06
1.67	228.91	321.62	0.8410	0.1010	380	7.24	0.0430	32.53	5.09
1.67	228.90	321.68	0.8410	0.1010	380	7.21	0.0430	32.43	5.13
1.67	228.88	321.45	0.8400	0.1010	380	7.19	0.0430	32.34	5.13
1.67	228.83	321.43	0.8400	0.1000	379	7.18	0.0430	32.18	5.14
1.67	228.90	321.63	0.8400	0.1000	378	7.16	0.0430	32.03	5.16
1.67	228.85	321.40	0.8400	0.0990	377	7.15	0.0430	31.91	5.17
1.67	228.83	321.54	0.8410	0.0990	374	7.15	0.0430	31.63	5.19
1.67	228.83	321.37	0.8400	0.0960	368	7.06	0.0420	30.72	5.22
1.68	228.83	321.49	0.8390	0.0940	364	7.04	0.0410	30.33	5.24
1.68	228.84	321.62	0.8390	0.0930	362	7.03	0.0410	30.12	5.27
1.68	228.87	321.85	0.8390	0.0930	361	7.02	0.0400	30.00	5.28
1.68	228.91	321.85	0.8380	0.0930	361	7.01	0.0400	29.93	5.30
1.68	228.81	321.57	0.8380	0.0920	360	6.99	0.0400	29.78	5.31
1.68	228.87	321.80	0.8380	0.0920	360	6.98	0.0400	29.71	5.31
1.68	228.88	321.75	0.8380	0.0920	358	6.95	0.0400	29.43	5.33
1.68	228.95	322.00	0.8390	0.0900	355	6.91	0.0390	29.04	5.36
1.68	228.85	321.72	0.8380	0.0880	351	6.83	0.0380	28.38	5.39
1.68	228.83	321.80	0.8380	0.0870	349	6.82	0.0380	28.14	5.41
1.68	228.90	322.09	0.8380	0.0870	348	6.81	0.0380	28.04	5.42
1.68	228.88	321.95	0.8370	0.0870	347	6.80	0.0370	27.90	5.44
1.68	228.85	321.98	0.8370	0.0860	346	6.77	0.0370	27.73	5.45
1.68	228.85	321.93	0.8370	0.0860	345	6.76	0.0370	27.57	5.45
1.68	228.80	321.87	0.8360	0.0850	343	6.73	0.0360	27.31	5.49
1.68	228.82	321.75	0.8360	0.0840	340	6.70	0.0360	26.96	5.50
1.68	228.88	321.92	0.8370	0.0830	337	6.67	0.0350	26.60	5.53
1.68	228.75	321.72	0.8360	0.0810	334	6.62	0.0350	26.14	5.55
1.68	228.81	321.84	0.8360	0.0810	332	6.60	0.0350	25.93	5.56
1.68	228.86	321.99	0.8360	0.0800	330	6.59	0.0350	25.72	5.58
1.69	228.77	321.85	0.8350	0.0800	329	6.58	0.0340	25.62	5.59
1.69	228.81	322.11	0.8350	0.0800	329	6.56	0.0340	25.53	5.61
1.69	228.80	322.06	0.8350	0.0790	329	6.52	0.0340	25.36	5.63
1.69	228.80	321.98	0.8350	0.0790	329	6.48	0.0340	25.21	5.66
1.69	228.76	321.68	0.8340	0.0780	328	6.46	0.0340	25.07	5.67
1.69	228.73	321.76	0.8350	0.0780	327	6.45	0.0340	24.94	5.69
1.69	228.80	321.96	0.8350	0.0770	325	6.44	0.0330	24.77	5.70
1.69	228.77	321.84	0.8350	0.0770	323	6.45	0.0330	24.63	5.72
1.69	228.69	321.85	0.8350	0.0760	319	6.44	0.0330	24.31	5.74
1.69	228.78	322.13	0.8350	0.0740	315	6.36	0.0320	23.71	5.75
1.69	228.79	322.25	0.8340	0.0720	311	6.34	0.0310	23.31	5.77
1.69	228.76	322.37	0.8330	0.0720	309	6.33	0.0310	23.13	5.80

1.69	228.75	322.30	0.8330	0.0710	308	6.32	0.0310	23.03	5.81
1.69	228.82	322.41	0.8330	0.0710	308	6.31	0.0300	22.98	5.83
1.69	228.80	322.21	0.8330	0.0710	307	6.29	0.0300	22.84	5.84
1.69	228.76	322.17	0.8320	0.0710	307	6.27	0.0300	22.78	5.86
1.69	228.78	322.22	0.8330	0.0700	306	6.25	0.0300	22.63	5.88
1.69	228.79	322.26	0.8330	0.0690	303	6.23	0.0300	22.33	5.89
1.69	228.82	322.41	0.8330	0.0680	299	6.22	0.0300	22.02	5.92
1.69	228.85	322.65	0.8330	0.0670	295	6.22	0.0290	21.69	5.94
1.69	228.87	322.57	0.8330	0.0670	294	6.16	0.0290	21.44	5.95
1.69	228.78	322.28	0.8320	0.0660	292	6.12	0.0290	21.15	5.97
1.70	228.78	322.51	0.8320	0.0660	291	6.11	0.0290	21.04	5.99
1.70	228.81	322.52	0.8320	0.0650	291	6.10	0.0290	20.99	6.00
1.70	228.81	322.57	0.8310	0.0650	289	6.08	0.0280	20.79	6.02
1.70	228.82	322.58	0.8310	0.0640	288	6.06	0.0280	20.66	6.03
1.70	228.85	322.64	0.8310	0.0630	286	6.04	0.0280	20.43	6.06
1.70	228.88	322.91	0.8320	0.0620	283	6.02	0.0270	20.17	6.08
1.70	228.84	322.76	0.8320	0.0620	281	6.01	0.0270	20.00	6.09
1.70	228.85	322.71	0.8310	0.0610	279	6.01	0.0270	19.83	6.11
1.70	228.83	322.73	0.8320	0.0610	277	5.99	0.0260	19.63	6.13
1.70	228.88	322.78	0.8310	0.0590	274	5.94	0.0250	19.24	6.14
1.70	228.93	323.06	0.8300	0.0590	271	5.92	0.0250	18.98	6.16
1.70	228.91	323.17	0.8300	0.0580	270	5.89	0.0250	18.81	6.19
1.70	228.88	323.00	0.8300	0.0580	270	5.85	0.0250	18.70	6.22
1.70	228.94	323.14	0.8300	0.0580	271	5.83	0.0250	18.70	6.22
1.70	228.86	322.99	0.8300	0.0580	271	5.81	0.0250	18.63	6.24
1.70	228.94	323.18	0.8300	0.0570	271	5.79	0.0250	18.57	6.25
1.70	228.88	322.89	0.8290	0.0570	270	5.78	0.0250	18.47	6.27
1.70	228.85	322.81	0.8300	0.0570	269	5.78	0.0250	18.39	6.28
1.70	228.85	322.77	0.8290	0.0560	264	5.78	0.0250	18.05	6.31
1.70	228.88	322.96	0.8290	0.0550	259	5.78	0.0240	17.71	6.33
1.70	229.01	323.43	0.8300	0.0530	254	5.78	0.0230	17.37	6.36
1.70	228.96	323.39	0.8290	0.0520	251	5.67	0.0220	16.83	6.38
1.70	229.00	323.49	0.8290	0.0510	249	5.65	0.0220	16.65	6.39
1.71	228.97	323.34	0.8280	0.0510	247	5.64	0.0220	16.48	6.39
1.71	228.98	323.60	0.8280	0.0510	246	5.63	0.0220	16.38	6.41
1.71	229.00	323.72	0.8280	0.0500	245	5.61	0.0220	16.25	6.42
1.71	228.99	323.65	0.8280	0.0500	245	5.57	0.0220	16.15	6.45
1.71	228.95	323.43	0.8280	0.0500	245	5.53	0.0210	16.04	6.49
1.71	228.95	323.29	0.8280	0.0490	245	5.52	0.0210	15.99	6.50
1.71	228.98	323.54	0.8280	0.0490	244	5.50	0.0210	15.89	6.52
1.71	229.02	323.53	0.8280	0.0490	243	5.49	0.0210	15.80	6.53
1.71	228.95	323.43	0.8280	0.0490	241	5.49	0.0210	15.66	6.53
1.71	229.02	323.64	0.8280	0.0480	239	5.50	0.0210	15.55	6.55
1.71	228.91	323.44	0.8280	0.0480	236	5.51	0.0210	15.39	6.56
1.71	228.91	323.47	0.8280	0.0470	231	5.54	0.0210	15.13	6.59
1.71	228.95	323.77	0.8280	0.0460	227	5.54	0.0200	14.88	6.63
1.71	229.03	323.99	0.8280	0.0450	224	5.54	0.0190	14.68	6.64
1.71	229.01	323.76	0.8270	0.0430	222	5.36	0.0190	14.07	6.66
1.71	228.98	323.87	0.8270	0.0430	221	5.35	0.0190	13.98	6.66
1.71	229.05	324.05	0.8270	0.0430	220	5.33	0.0190	13.88	6.67
1.71	228.99	323.77	0.8260	0.0430	220	5.32	0.0180	13.85	6.69
1.71	228.95	323.69	0.8260	0.0420	219	5.29	0.0180	13.71	6.70
1.71	228.93	323.66	0.8260	0.0420	218	5.26	0.0180	13.56	6.74

1.71	228.99	323.74	0.8260	0.0420	218	5.24	0.0180	13.51	6.77
1.71	228.90	323.55	0.8260	0.0420	217	5.23	0.0180	13.42	6.77
1.71	228.95	323.70	0.8260	0.0420	216	5.22	0.0180	13.34	6.78
1.71	228.96	323.68	0.8260	0.0410	214	5.21	0.0180	13.20	6.80
1.71	228.93	323.72	0.8260	0.0410	212	5.21	0.0180	13.08	6.81
1.71	228.94	323.73	0.8260	0.0400	209	5.22	0.0180	12.90	6.83
1.71	228.92	323.82	0.8260	0.0390	205	5.23	0.0170	12.68	6.86
1.71	228.93	323.74	0.8260	0.0380	200	5.24	0.0170	12.40	6.88
1.71	228.93	323.75	0.8260	0.0380	197	5.26	0.0170	12.25	6.91
1.71	229.02	324.10	0.8260	0.0370	194	5.26	0.0160	12.07	6.92
1.71	229.03	324.15	0.8260	0.0360	193	5.25	0.0160	11.98	6.94
1.72	229.02	324.06	0.8250	0.0350	192	5.05	0.0150	11.48	6.95
1.72	228.95	323.81	0.8250	0.0350	192	5.02	0.0150	11.41	6.97
1.72	228.99	324.02	0.8250	0.0350	192	4.99	0.0150	11.33	7.00
1.72	228.95	323.84	0.8250	0.0350	192	4.95	0.0150	11.25	7.02
1.72	228.94	323.78	0.8240	0.0340	191	4.88	0.0150	11.02	7.05
1.72	228.88	323.68	0.8240	0.0340	191	4.87	0.0150	11.00	7.06
1.72	228.99	323.89	0.8240	0.0340	190	4.84	0.0150	10.87	7.06
1.71	229.01	323.86	0.8250	0.0350	188	5.10	0.0150	11.35	7.08
1.72	228.95	323.84	0.8240	0.0330	186	4.81	0.0150	10.59	7.09
1.72	228.99	323.94	0.8240	0.0320	183	4.82	0.0140	10.44	7.11
1.72	228.97	323.94	0.8240	0.0310	178	4.84	0.0130	10.19	7.14
1.72	228.97	324.01	0.8250	0.0310	175	4.85	0.0130	10.03	7.17
1.72	228.86	323.77	0.8240	0.0300	172	4.85	0.0130	9.88	7.19
1.72	228.97	324.13	0.8250	0.0300	169	4.87	0.0130	9.73	7.19
1.72	228.97	324.02	0.8240	0.0300	166	4.88	0.0130	9.58	7.20
1.72	228.93	323.96	0.8240	0.0290	164	4.89	0.0130	9.48	7.22
1.72	228.90	323.89	0.8240	0.0290	161	4.89	0.0130	9.32	7.24
1.72	228.96	324.03	0.8240	0.0290	160	4.88	0.0120	9.23	7.27
1.72	228.96	324.04	0.8230	0.0280	158	4.86	0.0120	9.08	7.30
1.72	228.89	323.95	0.8230	0.0280	158	4.83	0.0120	9.03	7.31
1.72	228.96	324.13	0.8230	0.0280	159	4.80	0.0120	9.04	7.33
1.72	228.97	324.09	0.8230	0.0280	158	4.79	0.0120	8.96	7.34
1.72	228.90	323.85	0.8230	0.0280	159	4.77	0.0120	8.97	7.36
1.72	228.94	324.05	0.8230	0.0280	159	4.76	0.0120	8.95	7.38
1.72	228.92	323.97	0.8230	0.0280	158	4.75	0.0110	8.89	7.39
1.72	228.91	323.85	0.8230	0.0270	156	4.77	0.0110	8.81	7.41
1.72	228.96	323.90	0.8230	0.0270	153	4.81	0.0110	8.71	7.44
1.72	229.55	326.02	0.8240	0.0000	0	3.77	0.0000	0.00	17.81



## CERTIFICATE OF PERFORMANCE

Customer Motor Analysis Number	Type of Motor Tested	Testing Date
CMA-0000-1	XYZ MOTOR	1/1/06
CMA-0000-2	XYZ MOTOR	1/1/06
CMA-0000-3	XYZ MOTOR	1/1/06
CMA-0000-4	XYZ MOTOR	1/1/06
CMA-0000-5	XYZ MOTOR	1/1/06

Magtrol hereby certifies that it has completely and satisfactorily performed and recorded the performance characteristics of the above-listed motors.

John Doe  
\_\_\_\_\_  
Test Engineer

**Magtrol, Inc.**  
**70 Gardenville Parkway**  
**Buffalo, NY 14224**  
**Phone: 716-668-5555**  
**Fax: 716-668-8705**