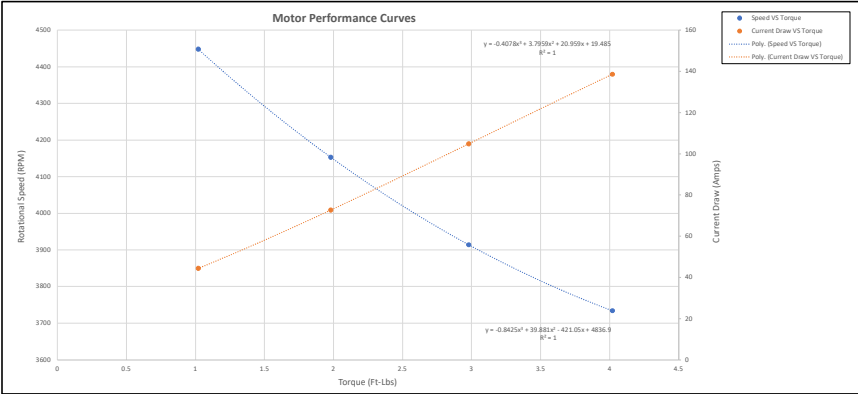
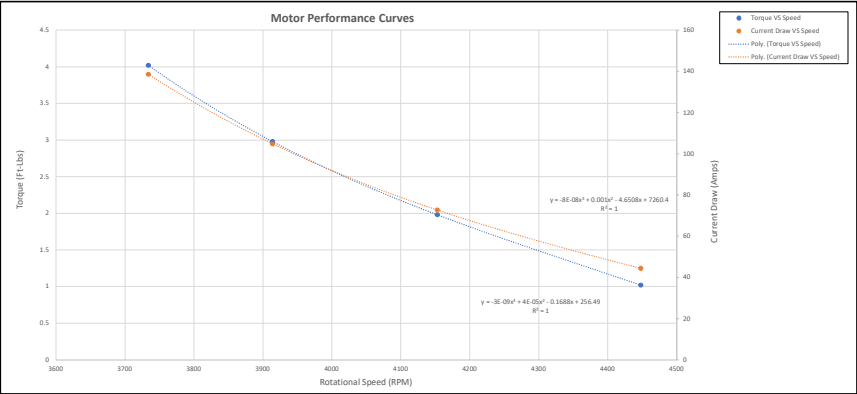
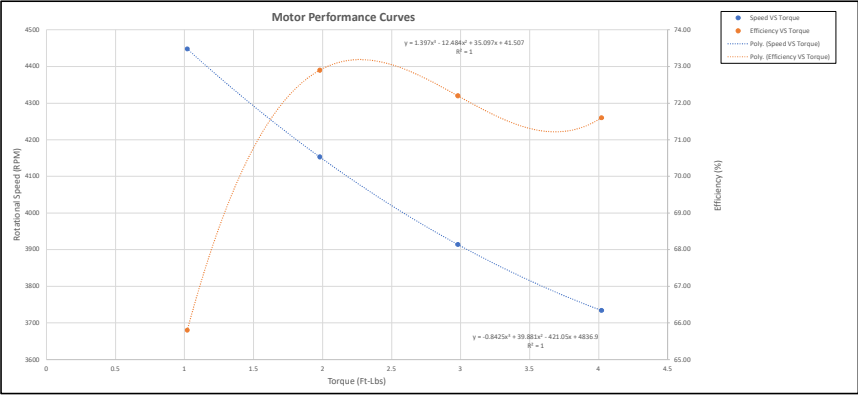
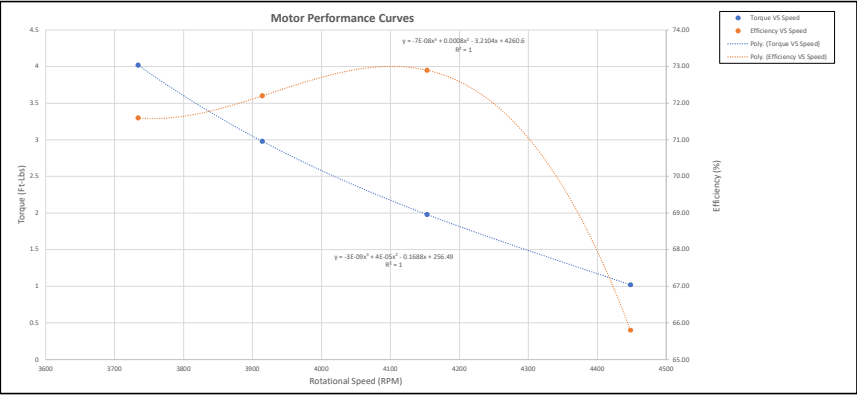


Engineering Performance Test Report

Performance Spec (PS) Number: 52

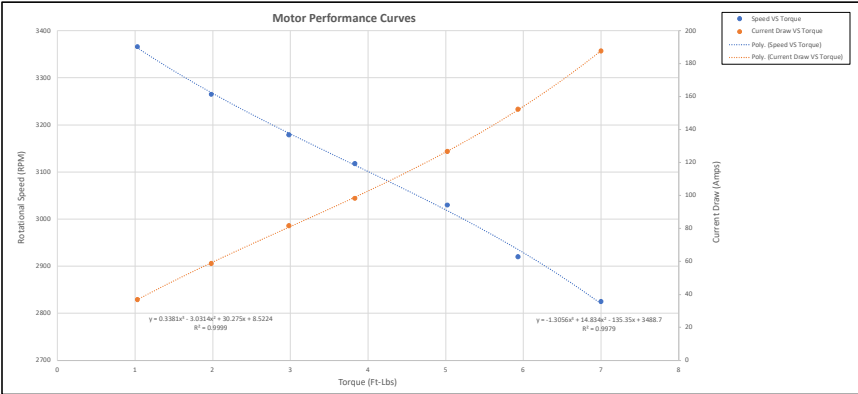
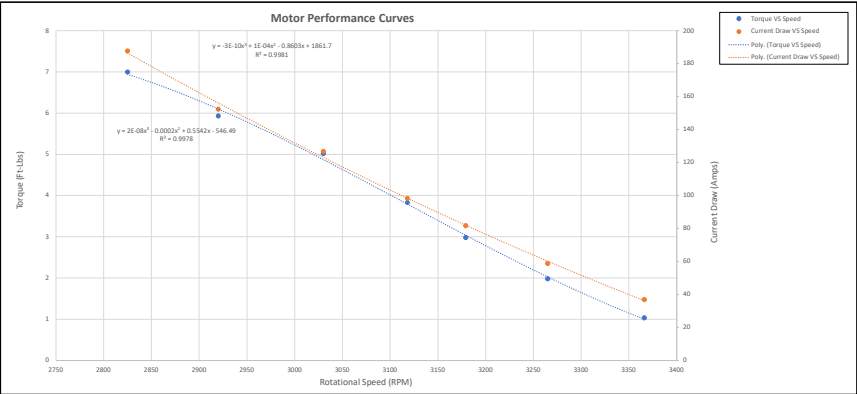
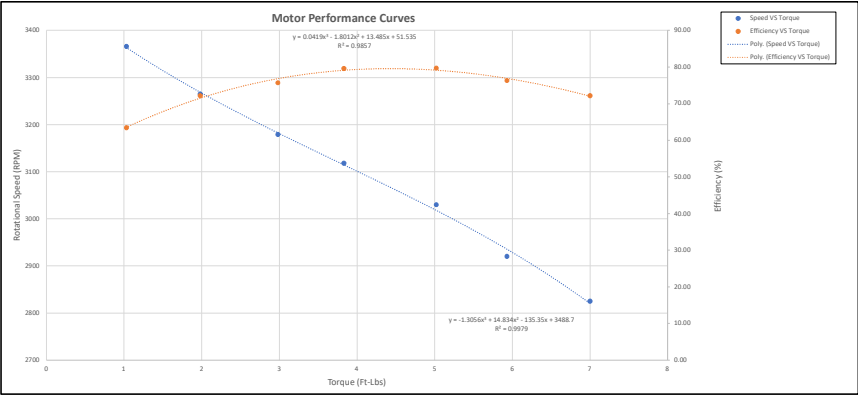
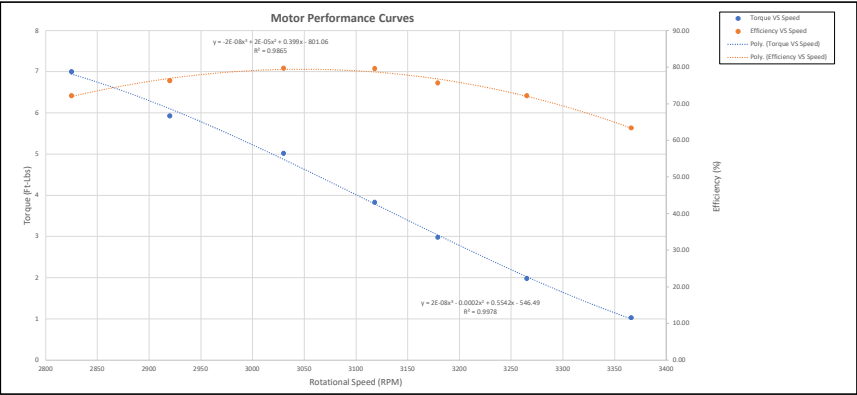
System Voltage (V): 24 - (1 * 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
1.02	4448	23.4	41.4	3.3	2.98	44.38	1.31	0.86	65.80
1.98	4153	22.9	69.7	3.3	3	72.7	2.15	1.57	72.96
2.98	3914	22.5	101.9	3.3	2.96	104.86	3.08	2.22	72.20
4.02	3734	21.9	135.6	3.3	2.99	138.59	4	2.86	71.60



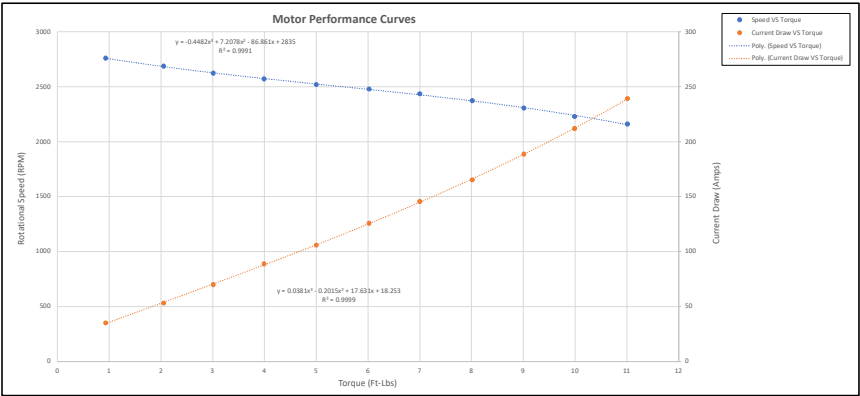
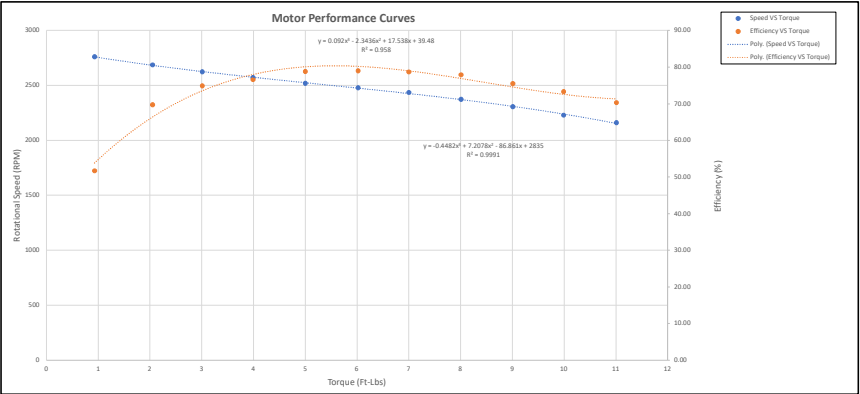
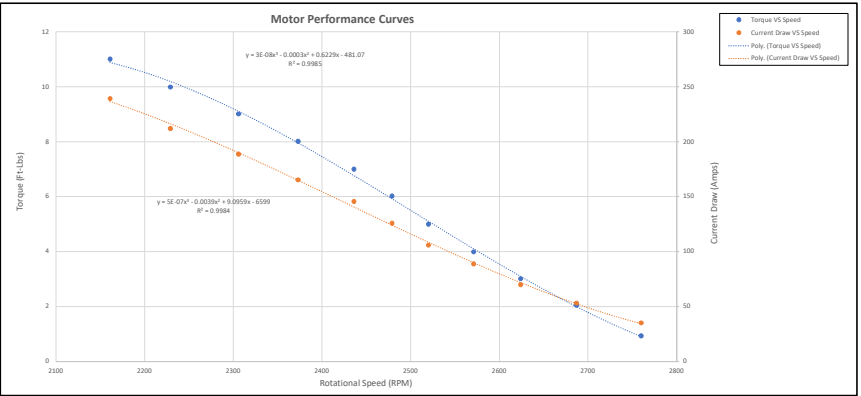
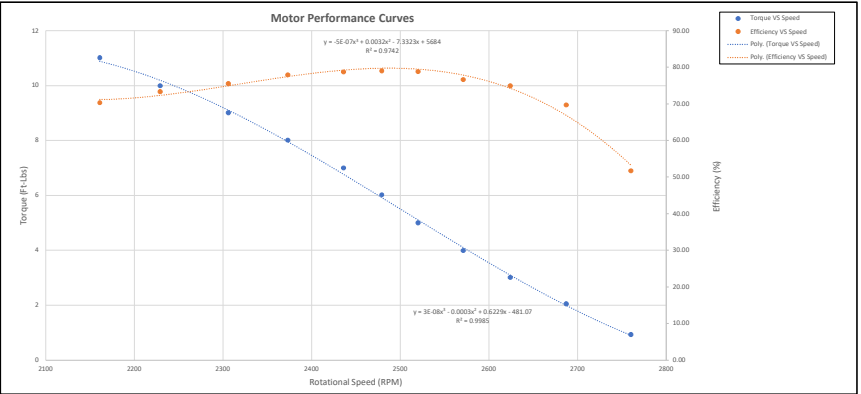
Engineering Performance Test Report
Performance Spec (PS) Number: 52
System Voltage (V): 24 - (1 * 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
1.03	3366	23.5	31.9	5.5	5.02	36.92	1.04	0.66	63.40
1.98	3295	23.2	33.8	5.5	5.04	38.84	1.71	1.23	72.20
2.98	3179	22.8	36.7	5.5	4.98	41.68	2.38	1.8	75.20
3.83	3118	22.6	39.3	5.6	5.02	44.32	2.86	2.27	79.60
5.02	3030	22.1	42.1	5.6	5.04	47.14	3.63	2.89	79.70
5.93	2920	21.7	44.7	5.6	5	49.7	4.32	3.3	76.30
7	2825	21.2	48.7	5.6	5.05	53.75	5.22	3.76	72.20



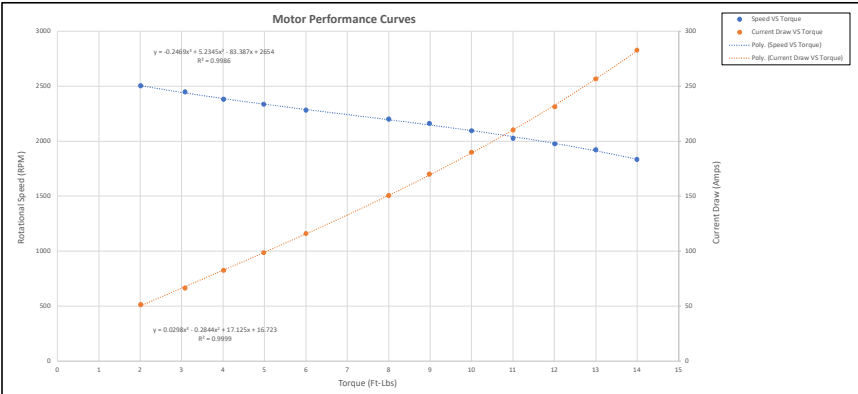
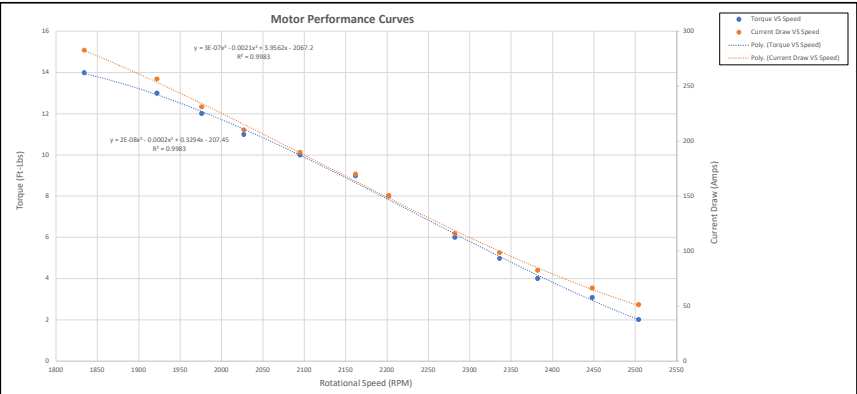
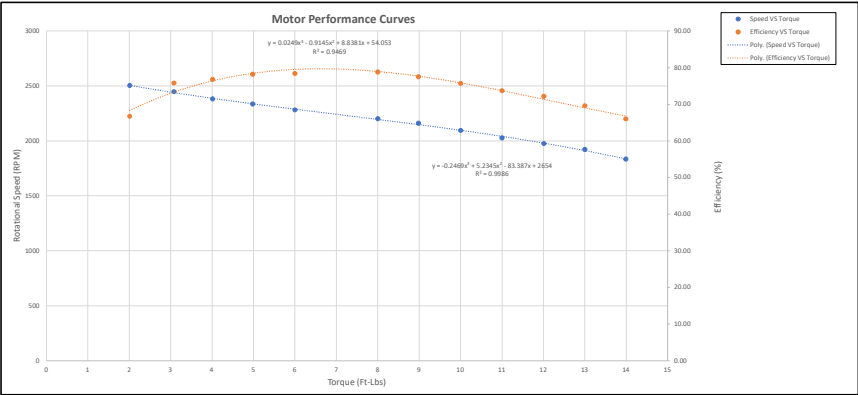
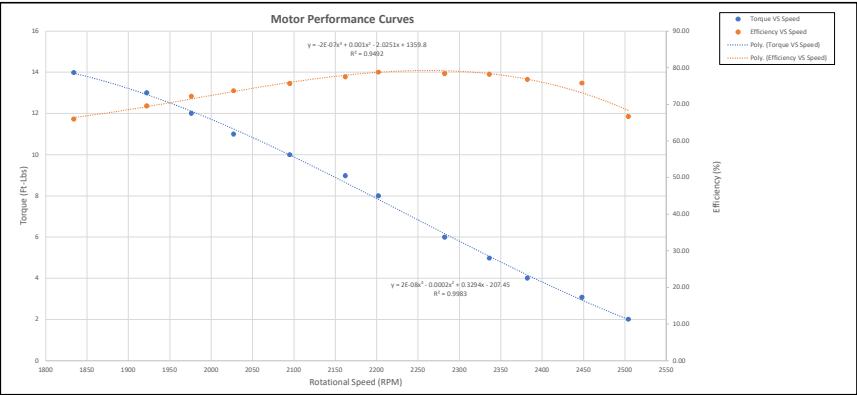
Engineering Performance Test Report
Performance Spec (PS) Number: 52
System Voltage (V): 24 - (1 * 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amper)	Field Voltage (Volts)	Field Current (Amper)	Total Current (Amper)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
0.93	2760	23.6	27.1	8.7	7.97	35.07	0.95	0.49	51.70
2.05	2687	23.3	45.1	8.7	7.98	53.08	1.5	1.05	69.70
3.01	2624	23.1	62	8.8	7.92	69.92	2.01	1.51	74.90
3.99	2571	22.7	80.7	8.8	7.99	88.69	2.55	1.95	76.60
5	2520	22.5	97.9	8.8	7.96	105.86	3.04	2.4	78.80
6.02	2479	22.2	117.8	8.8	8.01	125.81	3.6	2.84	78.00
7	2436	21.9	137.5	8.8	8.11	145.61	4.13	3.25	78.70
8.01	2373	21.6	157.4	8.9	7.85	165.25	4.64	3.62	77.90
9.01	2306	21.2	181	8.9	7.76	188.76	5.24	3.96	75.50
9.99	2229	20.8	203.6	8.9	8.77	211.87	5.79	4.24	73.30
11.01	2161	20.5	231.1	8.9	8.12	239.22	6.44	4.53	70.30



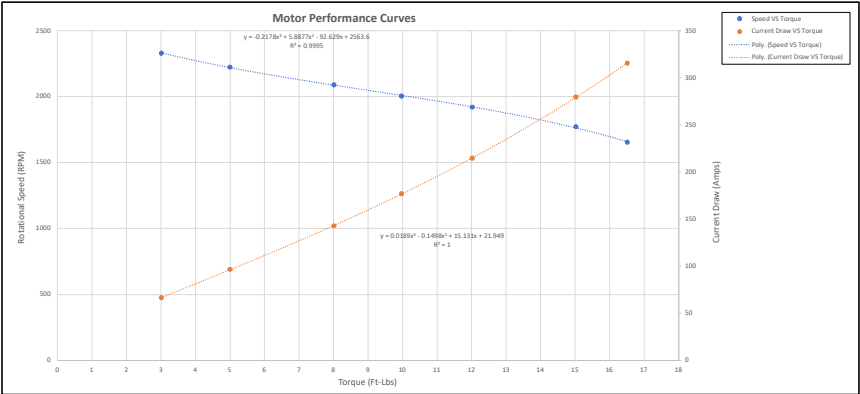
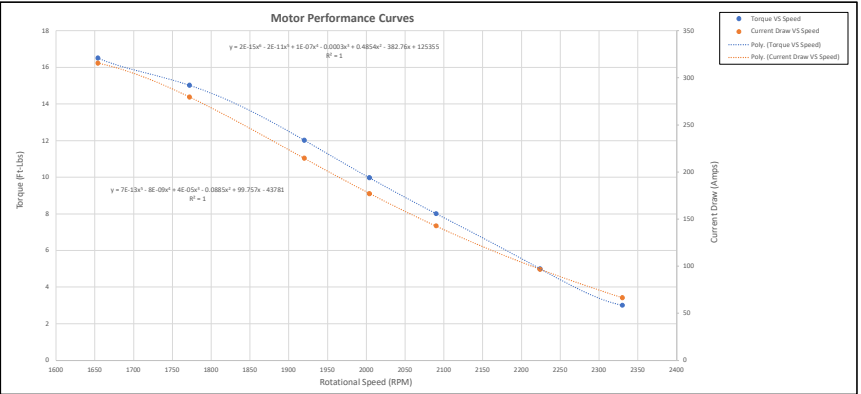
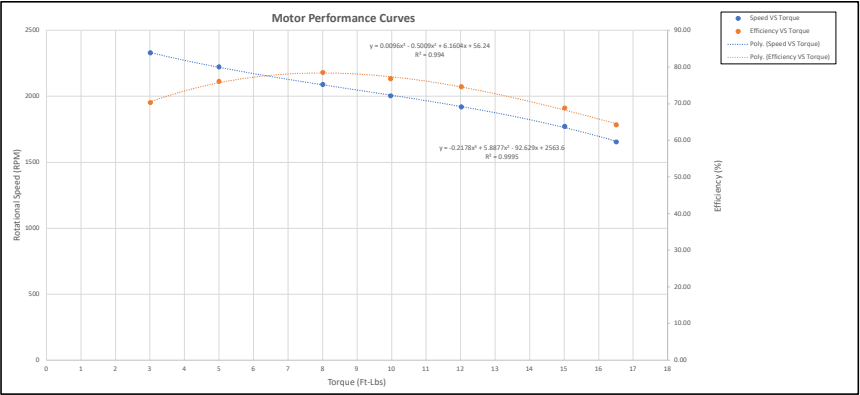
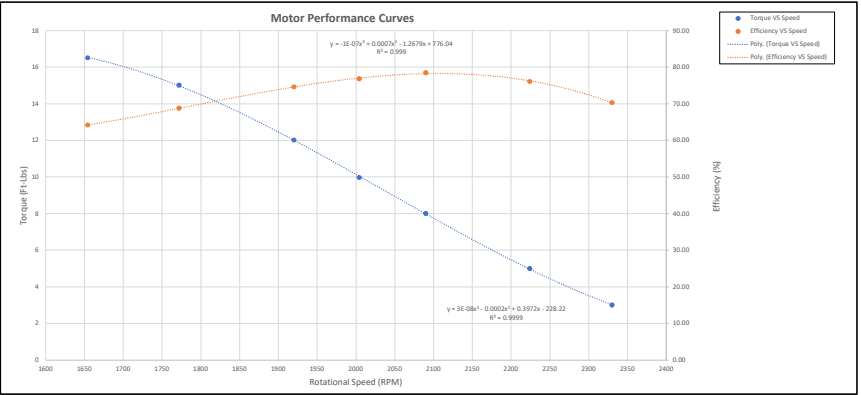
Engineering Performance Test Report
Performance Spec (PS) Number: 52
System Voltage (V): 24 - (1 ± 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
2.01	2504	23.4	41.2	10.9	9.99	51.19	1.44	0.96	66.70
3.08	2448	23.1	56.3	11	9.93	66.24	1.9	1.44	75.80
4.01	2382	22.8	72.6	11	9.93	82.53	2.37	1.82	76.80
4.98	2336	22.6	88.6	11.1	10.02	98.62	2.83	2.22	78.20
6	2282	22.4	106	11.1	9.98	115.98	3.33	2.61	78.40
8	2202	21.8	140.6	11.2	10	150.6	4.26	3.36	78.80
8.98	2162	21.5	160	11.2	10.05	170.05	4.77	3.7	77.50
10	2095	21.2	180.1	11.3	9.85	189.95	5.27	3.99	75.70
11	2027	20.9	200.2	11.3	9.92	210.12	5.76	4.25	73.70
12.01	1976	20.6	221.1	11.4	10.18	231.38	6.27	4.52	72.20
13	1922	20.2	246.7	11.4	10.01	256.71	6.83	4.76	69.60
13.99	1834	19.8	272.8	11.4	10	282.8	7.4	4.89	66.00



Engineering Performance Test Report
Performance Spec (PS) Number: 52
System Voltage (V): 24 - 1 * 0.015

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
3.01	2330	23.2	54.5	12.8	11.98	66.48	1.9	1.34	70.30
5	2224	22.7	84.6	12.9	12.03	96.63	2.78	2.12	76.10
8.01	2090	22	130.9	13	11.91	142.81	4.06	3.19	78.50
9.97	2004	21.5	164.8	13.1	12.05	176.85	4.95	3.81	76.80
12.02	1920	20.9	202.5	13.1	12.24	214.74	5.89	4.39	74.60
15.02	1772	19.9	267.8	13.2	11.75	279.55	7.36	5.07	68.80
16.51	1654	19.4	303.5	13.3	12.14	315.64	8.1	5.2	64.20

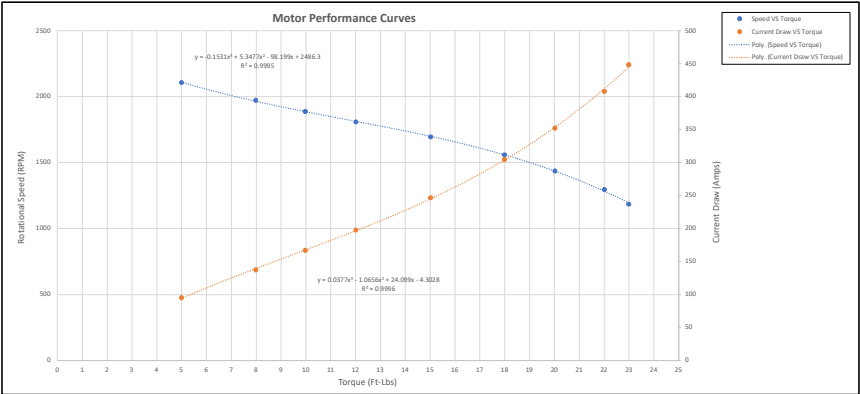
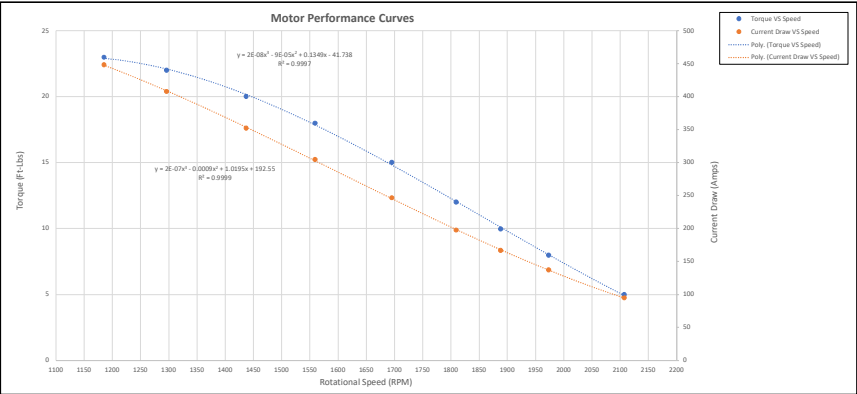
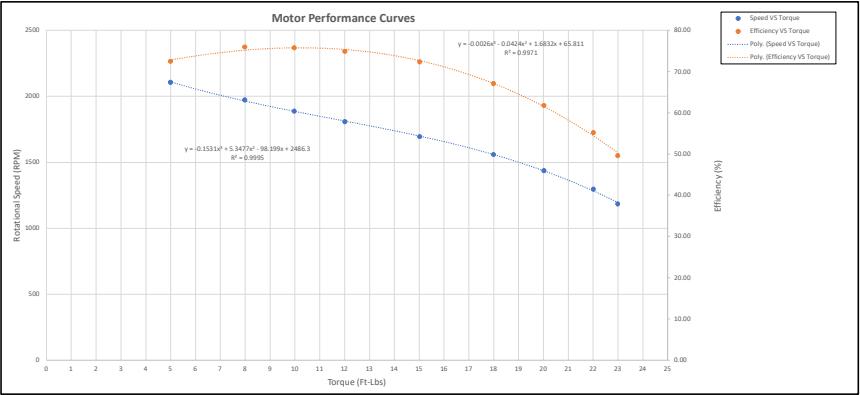
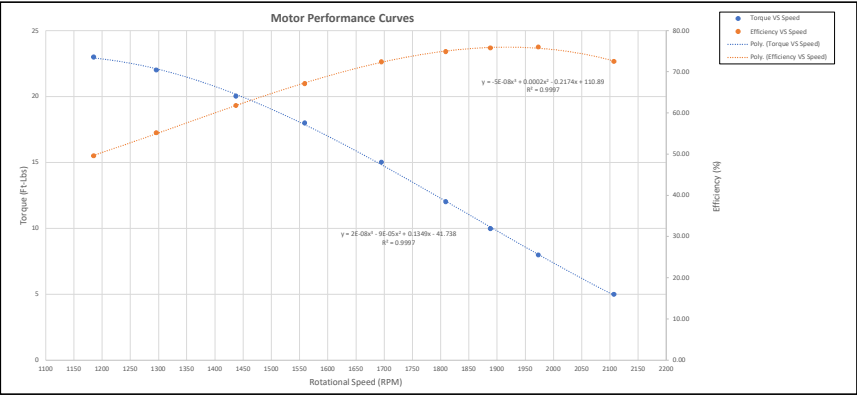


Engineering Performance Test Report

Performance Spec (PS) Number: 52

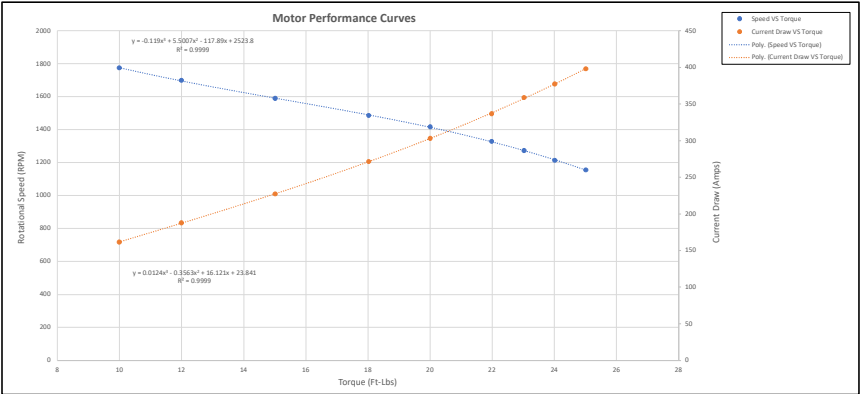
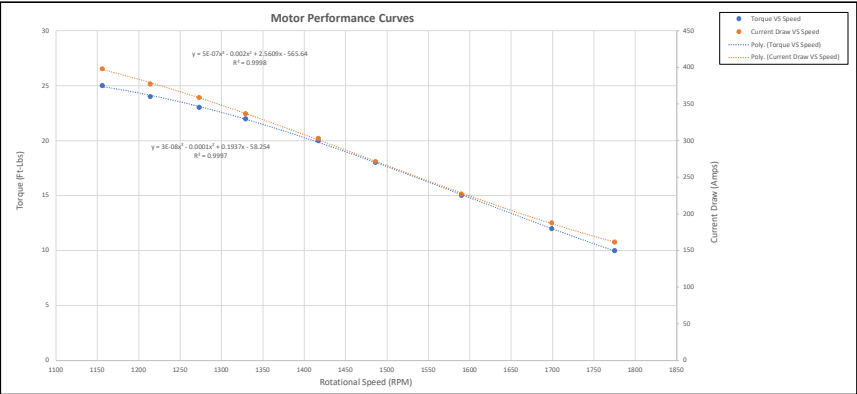
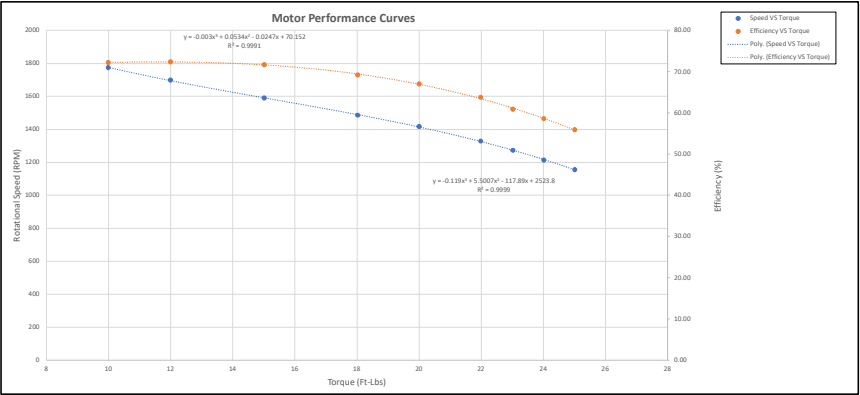
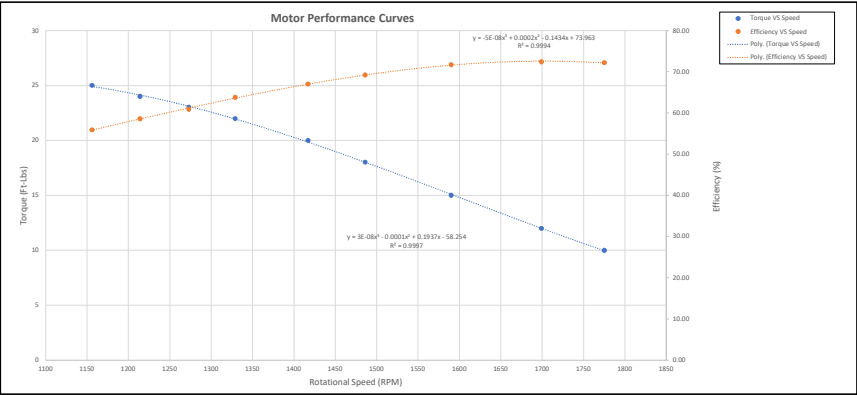
System Voltage (V): 24 - (1 * 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amper)	Field Voltage (Volts)	Field Current (Amper)	Total Current (Amper)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
4.99	2107	22.7	80.1	15.8	15.04	95.14	2.76	2	72.50
7.98	1973	22.4	122.2	16	15.12	137.32	3.95	3	76.00
9.97	1888	21.7	151.7	16.2	15.08	166.78	4.73	3.59	75.80
12.01	1809	21.2	182.6	16.3	15.1	197.7	5.52	4.13	74.90
15.02	1695	20.5	231.8	16.5	14.97	246.77	6.7	4.85	72.40
17.99	1559	19.6	290	16.7	14.87	304.87	7.36	5.34	67.10
20.02	1437	18.9	337.3	16.9	15.07	352.37	8.86	5.48	61.80
22.01	1296	18	393	17	14.9	407.9	9.84	5.43	55.20
22.99	1185	17.4	433.5	17.2	15.08	448.58	10.46	5.19	49.60



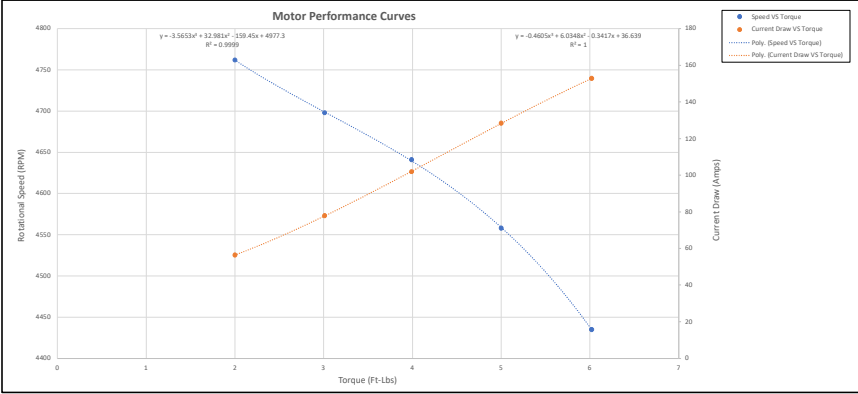
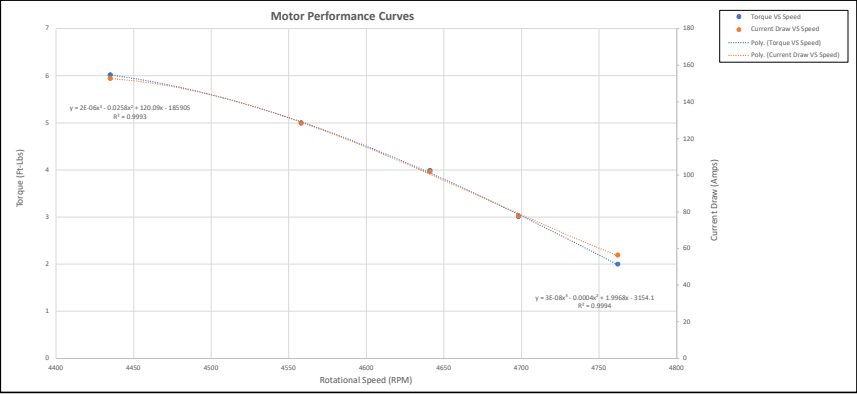
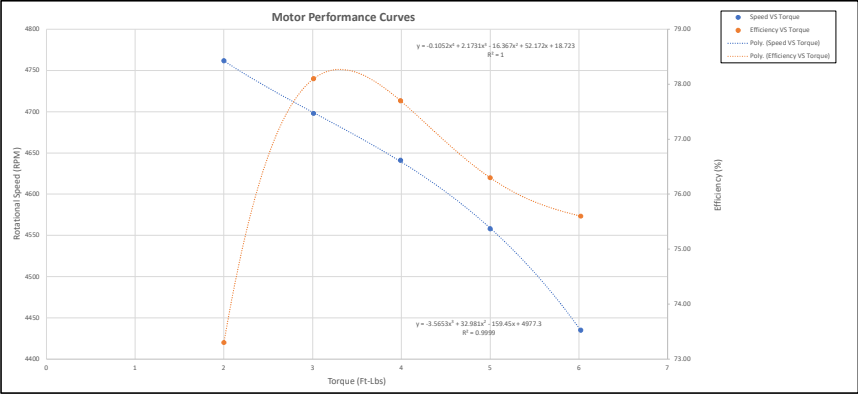
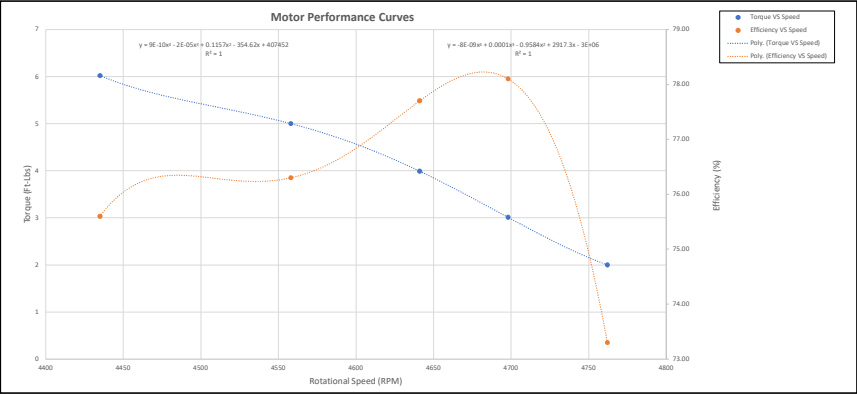
Engineering Performance Test Report
Performance Spec (PS) Number: 52
System Voltage (V): 24 - (1 * 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
9.99	1775	21.8	141.6	20.4	19.95	161.55	4.68	3.38	72.20
11.99	1699	21.4	167.8	20.8	19.85	187.65	5.36	3.88	72.40
15.01	1590	20.8	207.3	21.2	19.93	227.23	6.34	4.55	71.70
18.02	1486	20.1	251.5	21.7	19.97	271.47	7.36	5.1	69.20
20	1417	19.7	282.9	22	20.2	303.1	8.05	5.4	67.00
21.98	1329	19.1	316.7	22.4	19.94	336.64	8.71	5.56	63.80
23.02	1273	18.8	338.6	22.9	20.26	358.86	9.16	5.58	60.90
24.01	1214	18.5	367.5	23.2	19.93	377.43	9.48	5.55	58.60
25.01	1156	18.2	377.9	23.6	20.07	397.97	9.85	5.51	55.90



Engineering Performance Test Report
Performance Spec (PS) Number: 52
System Voltage (V): 36 - 1 * 0.015

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amper)	Field Voltage (Volts)	Field Current (Amper)	Total Current (Amper)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
2	4762	35.3	51.4	5.7	4.98	56.38	2.47	1.81	73.30
3.01	4698	34.9	72.9	5.7	4.96	77.86	3.45	2.69	78.10
3.99	4641	34.6	97	5.7	4.91	101.91	4.53	3.52	77.70
5	4558	34.2	123.4	5.7	4.97	128.37	5.69	4.34	76.30
6.02	4435	33.8	147.8	5.8	5	152.8	6.73	5.08	75.60

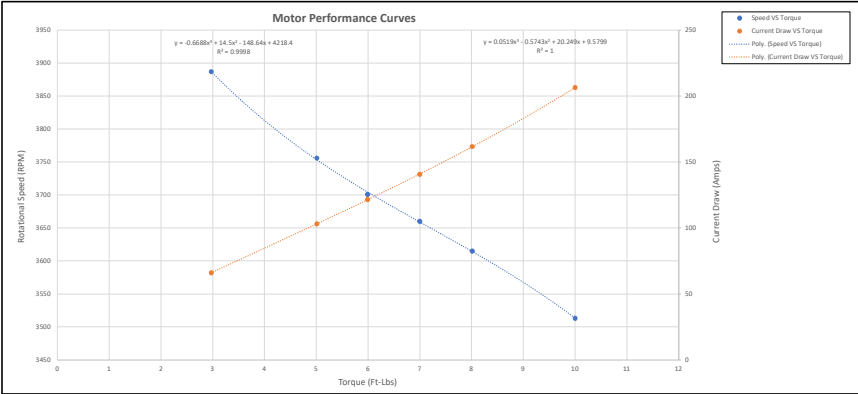
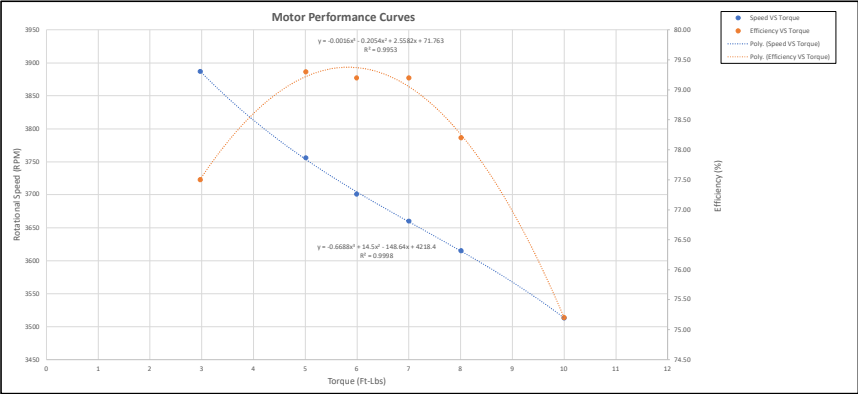
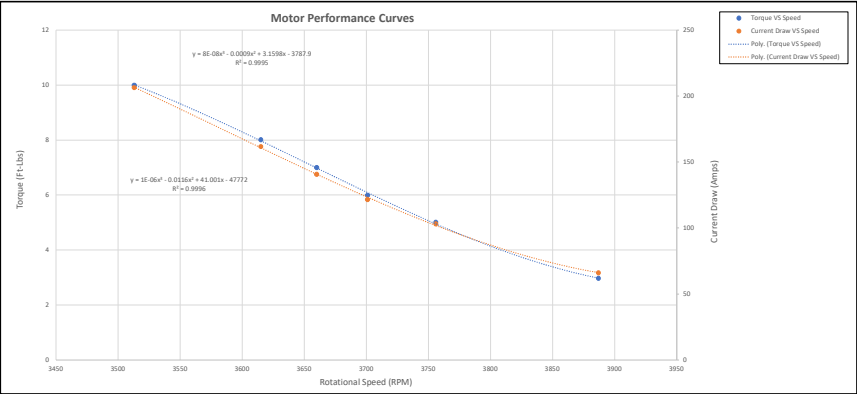


Engineering Performance Test Report

Performance Spec (PS) Number: 52

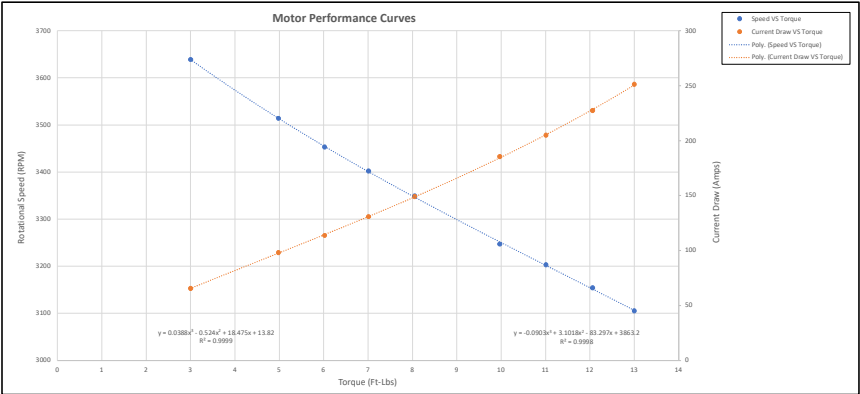
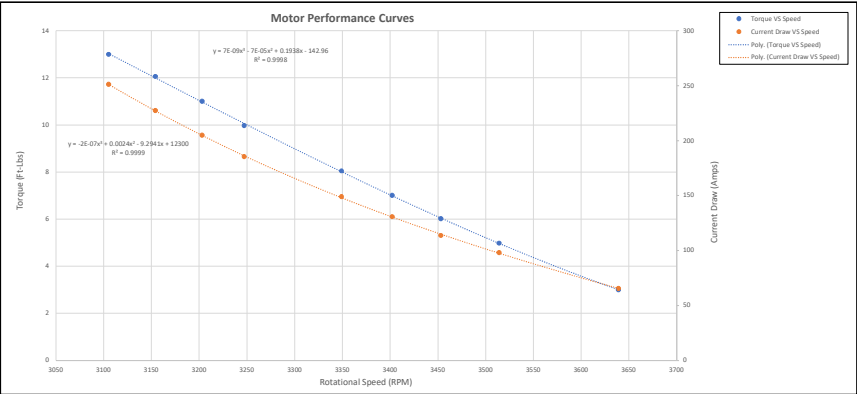
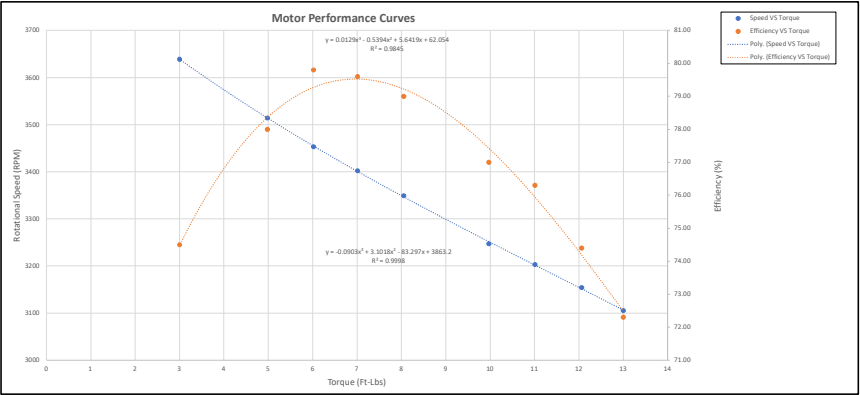
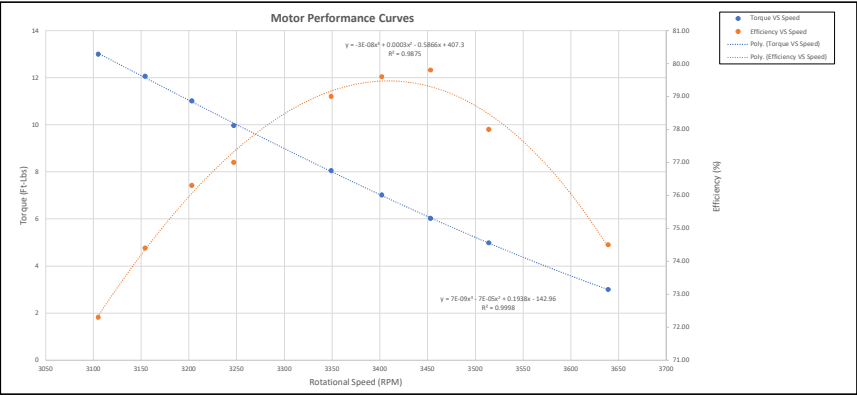
System Voltage (V): 36 - 1 * 0.015

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amper)	Field Voltage (Volts)	Field Current (Amper)	Total Current (Amper)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
2.97	3887	35.2	58	10.1	8.01	66.01	2.84	2.2	77.50
5.01	3756	34.6	95	10.1	8.08	103.08	4.52	3.58	79.30
5.99	3701	34.3	113.6	10.2	8.04	123.64	5.33	4.22	79.20
7	3660	34	132.6	10.2	8.05	140.65	6.16	4.88	79.20
8.01	3615	33.7	153.7	10.3	8.05	161.75	7.05	5.51	78.20
10	3513	33	198.5	10.3	7.99	206.49	8.89	6.69	75.20



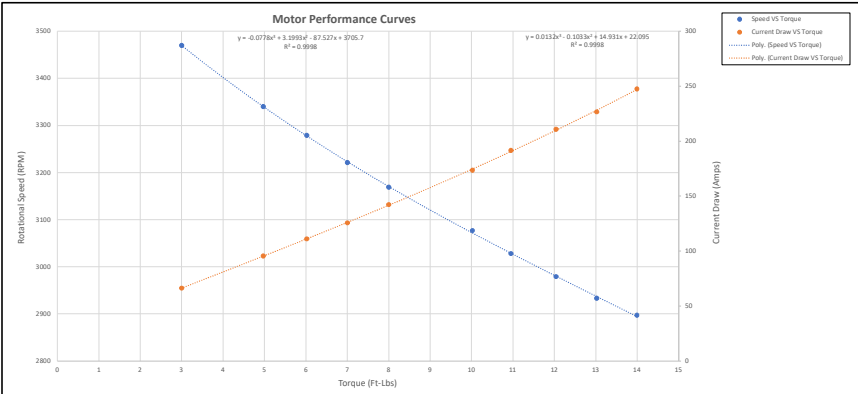
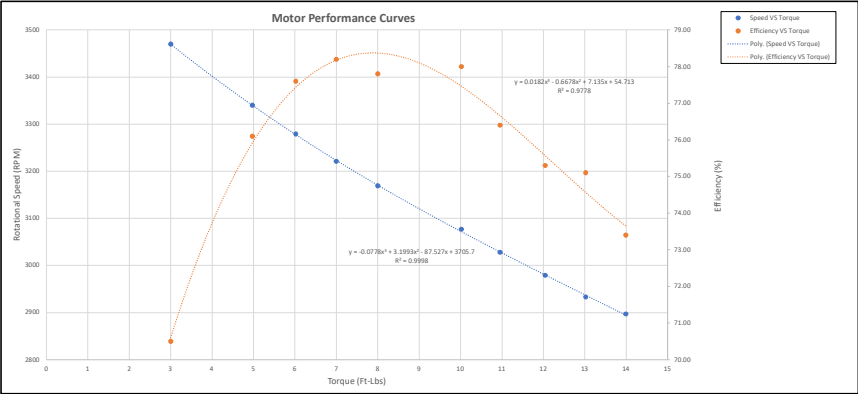
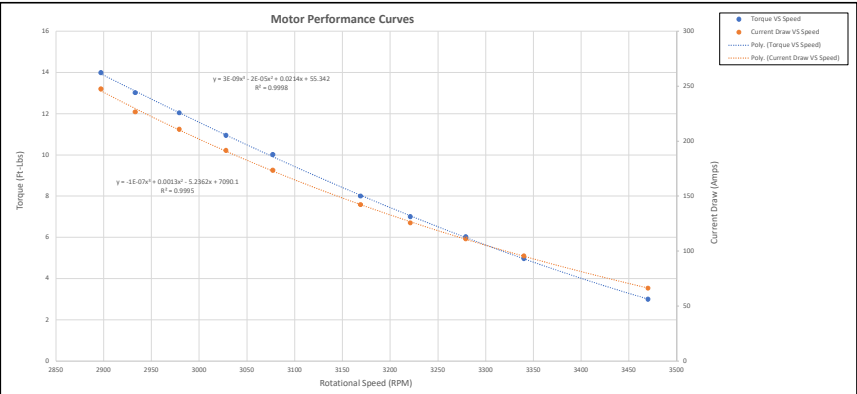
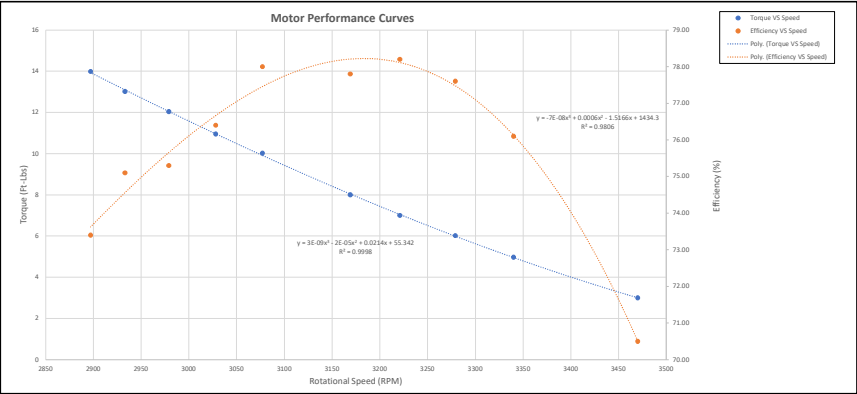
Engineering Performance Test Report
Performance Spec (PS) Number: 52
System Voltage (V): 36 - 1 * 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
3	3639	35.2	55.5	12.5	10.05	65.55	2.79	2.08	74.50
4.98	3514	34.7	88.8	12.6	10.05	98.85	4.27	3.33	78.00
6.02	3453	34.5	103.7	12.7	10.03	113.73	4.86	3.96	79.80
7.01	3402	34.2	120.7	12.7	10.08	130.78	5.7	4.54	79.60
8.05	3349	33.9	138.9	12.8	10.05	148.95	6.49	5.13	79.00
9.97	3247	33.3	175.4	12.9	10.12	185.52	8.01	6.16	77.00
11.01	3203	33	194.9	13	10.01	204.91	8.8	6.72	76.30
12.06	3154	32.7	217.4	13	10.05	227.45	9.7	7.24	74.40
13	3105	32.4	241.2	13.1	10.02	251.22	10.63	7.69	72.30



Engineering Performance Test Report
Performance Spec (PS) Number: 52
System Voltage (V): 36 - (1 * 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
3	3470	35.2	54.2	16	12.09	66.29	2.82	1.98	70.50
4.97	3340	34.8	83.5	16.1	12.04	95.54	4.15	3.16	76.10
6.02	3279	34.6	99	16.2	12.06	111.06	4.84	3.76	77.60
7	3221	34.3	113.7	16.2	11.99	125.69	5.49	4.29	78.20
8	3169	34	130.2	16.3	12.04	142.24	6.2	4.82	77.80
10.02	3077	33.6	161.5	16.4	12.07	173.57	7.53	5.87	78.00
10.95	3028	33.3	179.5	16.5	12.01	191.51	8.27	6.32	76.40
12.04	2979	33	198.9	16.6	11.94	210.84	9.07	6.83	75.30
13.02	2933	32.7	214.6	16.6	12.05	226.65	9.68	7.27	75.10
13.99	2897	32.5	235.4	16.7	12.13	247.53	10.52	7.71	73.40

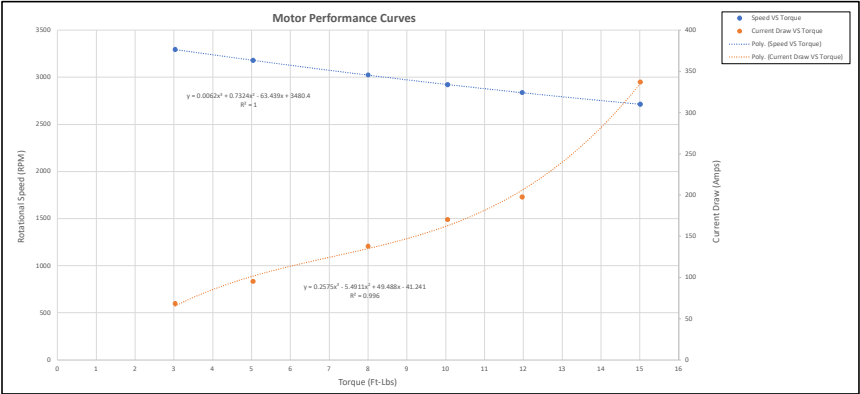
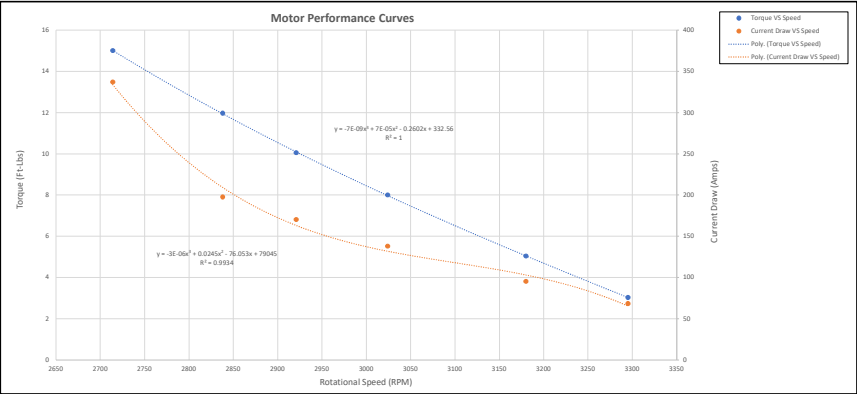
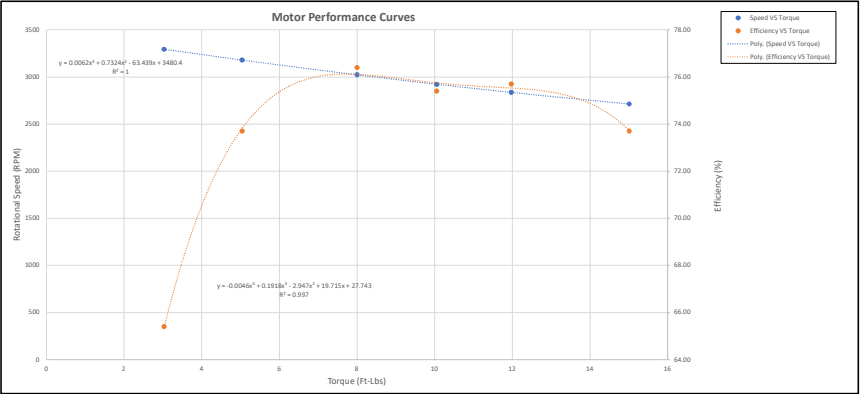
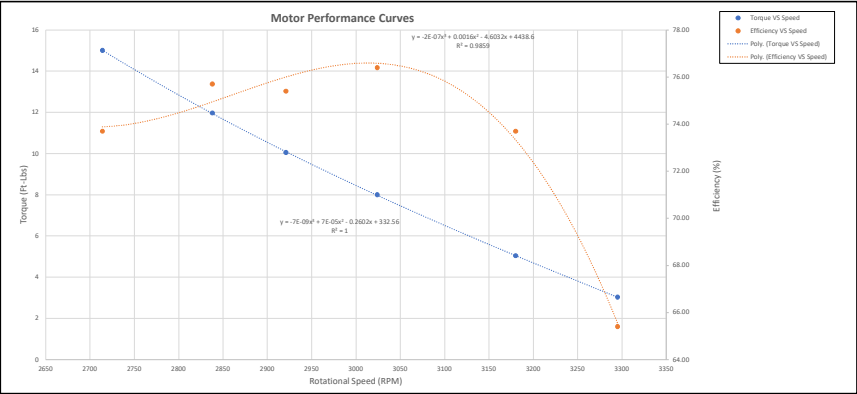


Engineering Performance Test Report

Performance Spec (PS) Number: 52

System Voltage (V): 36 - 1 * 0.015

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amper)	Field Voltage (Volts)	Field Current (Amper)	Total Current (Amper)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
3.03	3295	35.2	53.1	19.7	15.09	68.19	2.91	1.9	65.40
5.04	3180	34.8	80.2	19.9	15.05	95.25	4.14	3.05	73.70
8	3024	34.2	122.9	20	15.07	137.97	6.03	4.61	76.40
10.05	2921	33.7	155.2	20.2	15.02	170.22	7.41	5.59	75.40
11.97	2838	33.2	182.5	20.4	15.13	197.63	8.55	6.47	75.70
15.01	2714	32.5	321.9	20.6	15.19	337.09	10.53	7.76	73.70

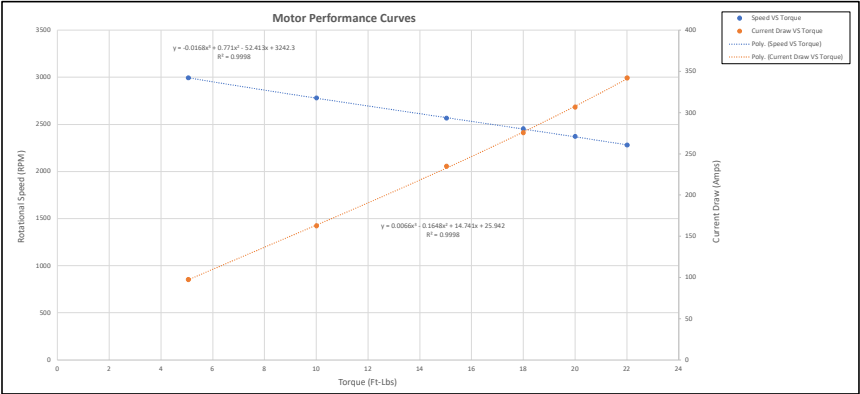
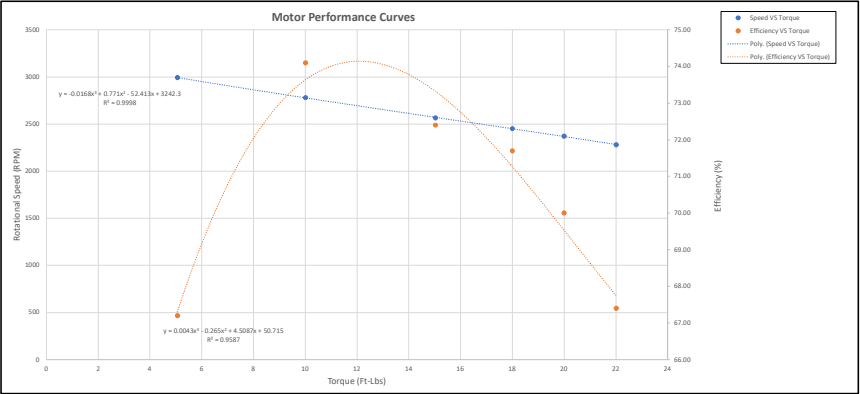
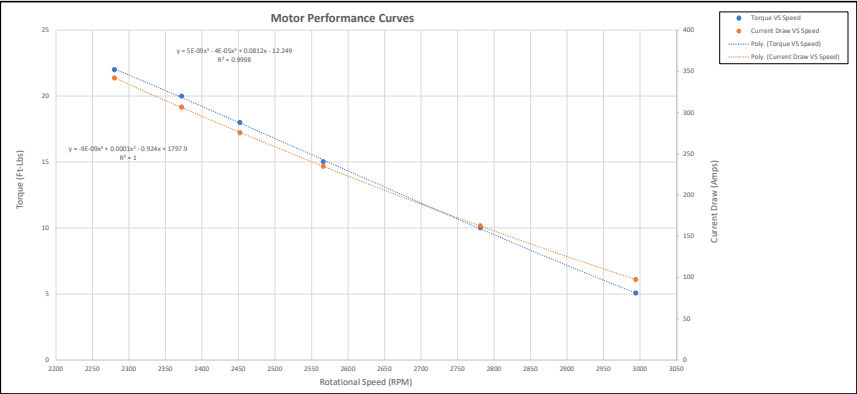
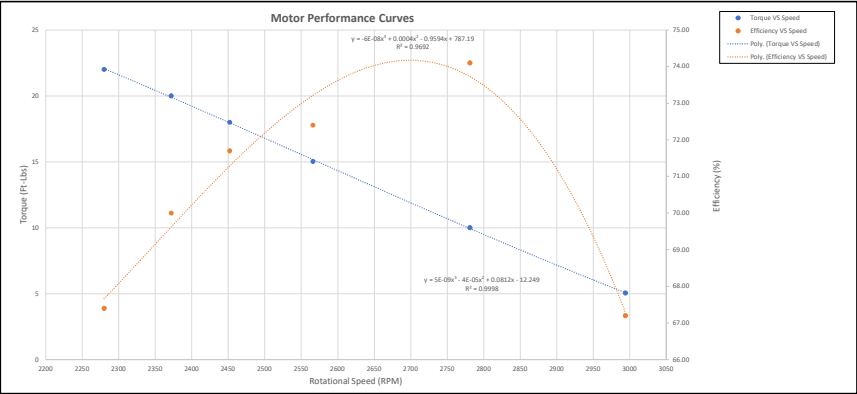


Engineering Performance Test Report

Performance Spec (PS) Number: 52

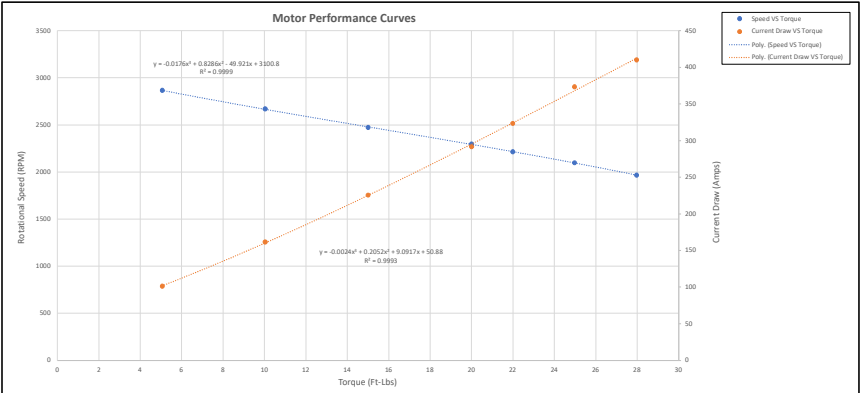
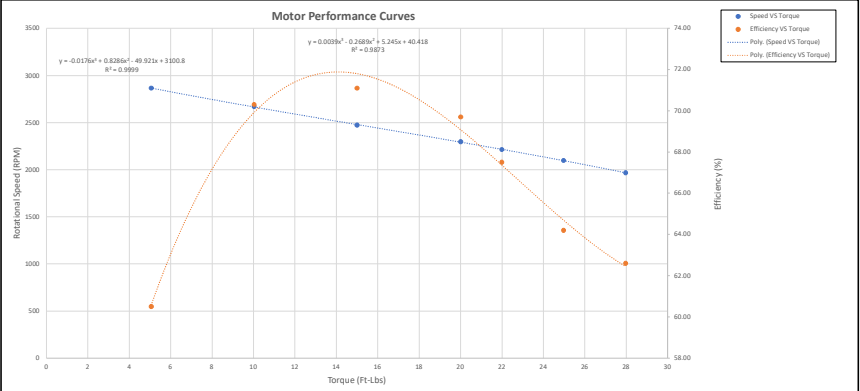
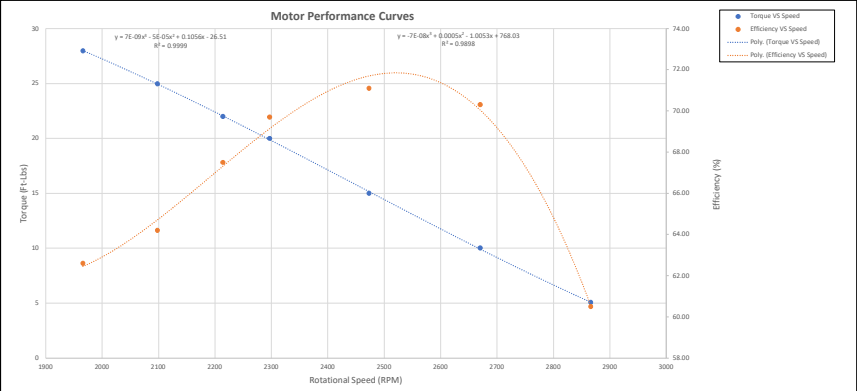
System Voltage (V): 36 - 1 * 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amper)	Field Voltage (Volts)	Field Current (Amper)	Total Current (Amper)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
5.06	2994	34.9	77.3	25	20.12	97.42	4.29	2.88	67.20
10.04	2781	33.9	142.5	25.5	20.04	162.54	7.15	5.3	74.10
15.03	2566	32.8	214.9	26	20.02	234.92	10.14	7.34	72.40
18	2452	32.1	255.3	26.5	20.23	275.53	11.72	8.4	71.70
20	2372	31.7	286.5	27	20.17	306.67	12.9	9.03	70.00
22.01	2180	31.1	322	27.5	20	342	14.17	9.55	67.40



Engineering Performance Test Report
Performance Spec (PS) Number: 52
System Voltage (V): 36 - 1 * 0.015

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
5.06	2866	34.9	76.2	29.9	25.03	101.23	4.57	2.76	60.50
10.03	2670	33.9	136.6	31	25.08	161.68	7.26	5.11	70.30
15	2473	33	200.4	32	25.16	225.56	9.93	7.06	71.30
20	2297	32	266.7	33	25.05	291.75	12.55	8.75	69.70
21.99	2214	31.5	298.5	34	25	323.5	13.73	9.27	67.50
24.97	2098	30.8	348.2	35	25.24	373.44	15.55	9.97	64.20
27.97	1966	30	385	36.1	25.15	410.15	16.72	10.47	62.60

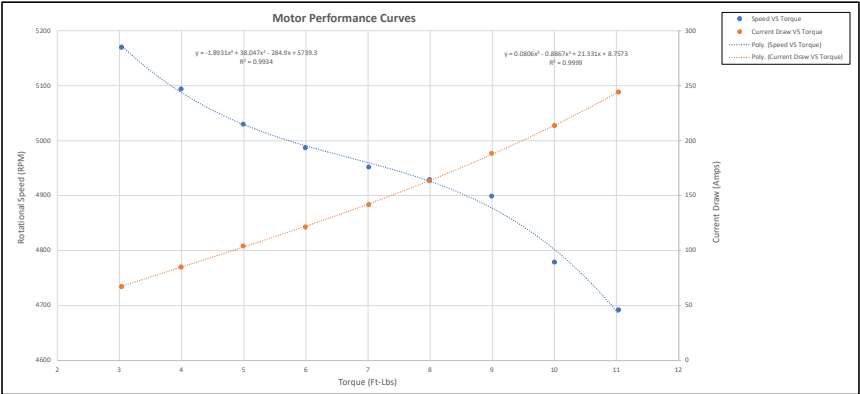
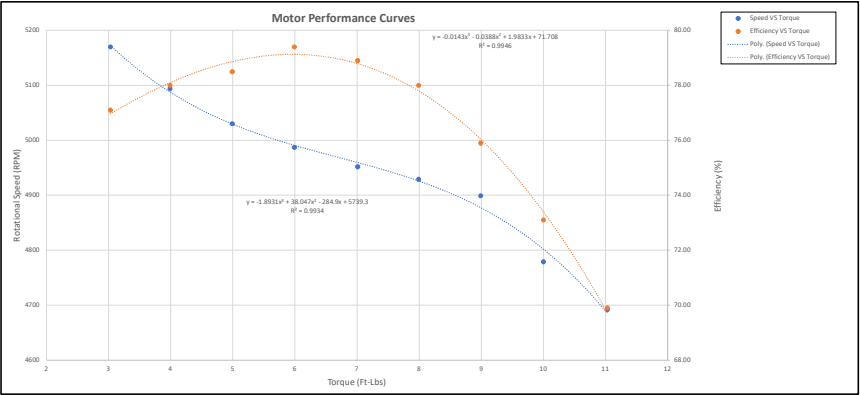
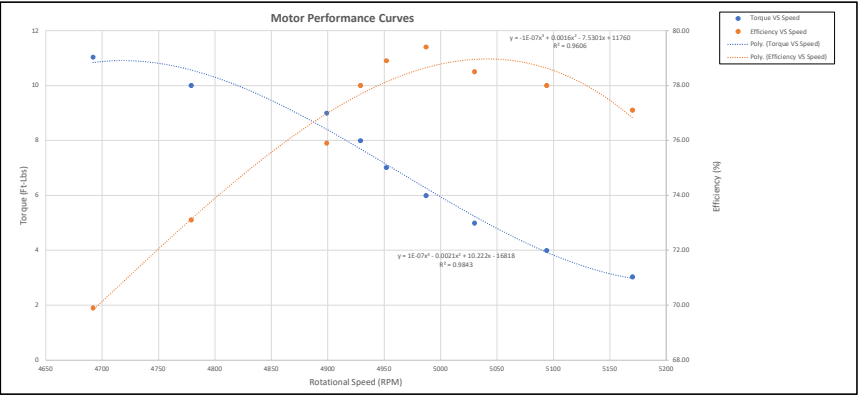


Engineering Performance Test Report

Performance Spec (PS) Number: 52

System Voltage (V): 48 - 1 * 0.015

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amper)	Field Voltage (Volts)	Field Current (Amper)	Total Current (Amper)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
3.03	5170	47.3	59.2	10.8	8.05	67.25	3.87	2.98	77.10
3.99	5094	47	76.9	10.9	8.03	84.93	4.96	3.87	78.00
4.99	5030	46.7	96.1	10.9	8.02	104.12	6.13	4.78	78.50
5.99	4987	46.4	113.4	11	8.06	121.46	7.17	5.69	79.40
7.01	4952	46	133.8	11	7.97	141.77	8.37	6.61	78.90
7.99	4929	45.6	155.4	11	8.07	163.47	9.61	7.49	78.00
8.99	4899	45.2	180.4	11.1	8.05	188.45	11.05	8.39	75.90
10	4779	44.7	205.8	11.1	7.89	213.69	12.46	9.1	73.10
11.03	4692	44.2	236.1	11.2	8.08	244.18	14.11	9.86	69.90

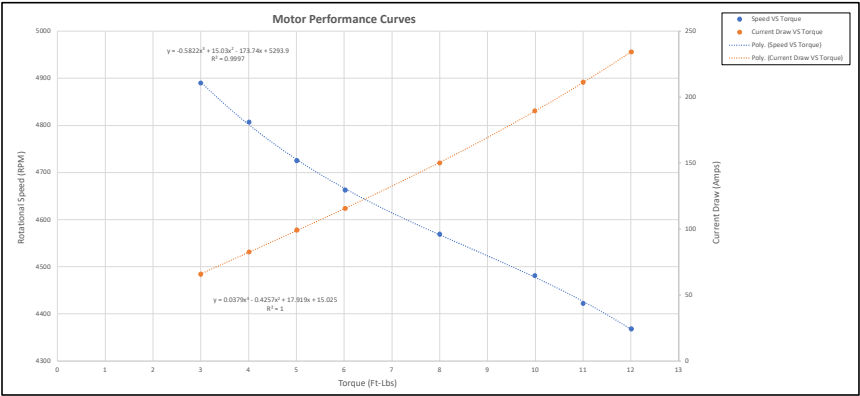
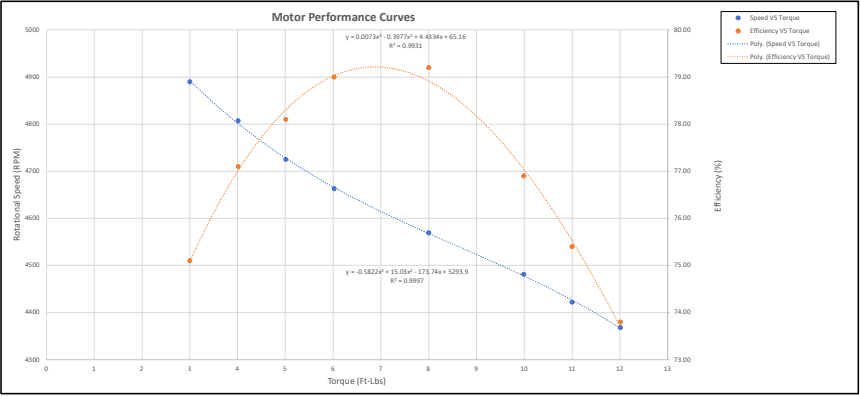
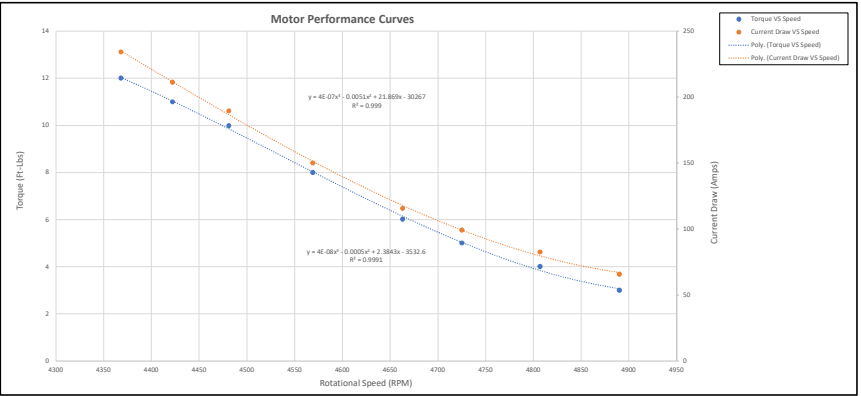
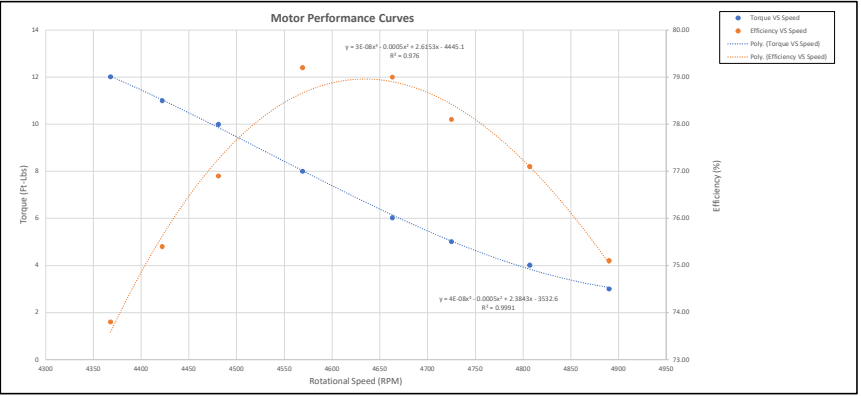


Engineering Performance Test Report

Performance Spec (PS) Number: 52

System Voltage (V): 48 - 1 ± 0.015

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amper)	Field Voltage (Volts)	Field Current (Amper)	Total Current (Amper)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
3	4890	47.3	55.8	13.4	10	65.8	3.71	2.79	75.10
4.01	4807	47	72.6	13.5	10	82.6	4.76	3.67	77.10
5.01	4725	46.7	89.2	13.5	10.02	99.22	5.77	4.5	78.10
6.02	4663	46.5	105.6	13.6	10.03	115.63	6.76	5.34	79.00
8	4569	45.9	140.1	13.6	9.95	150.05	8.79	6.96	79.20
9.99	4481	45.3	179.8	13.7	9.83	189.63	11.09	8.53	78.90
11	4422	44.8	201.3	13.8	10.06	211.36	12.28	9.26	75.40
12.01	4368	44.4	224.3	13.8	9.98	234.28	13.53	9.99	73.80

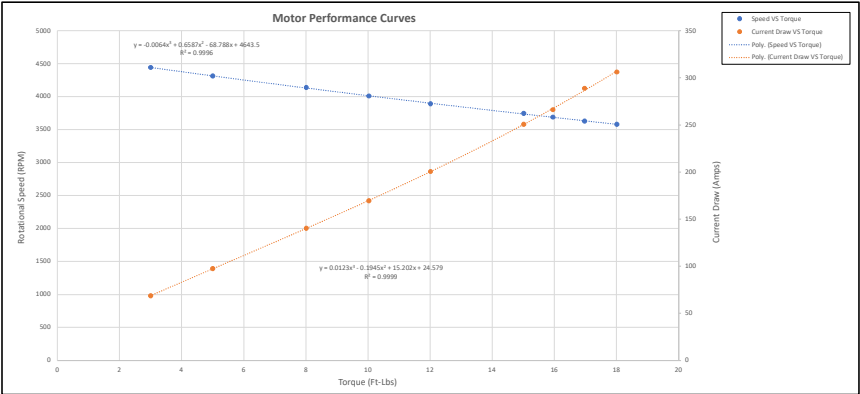
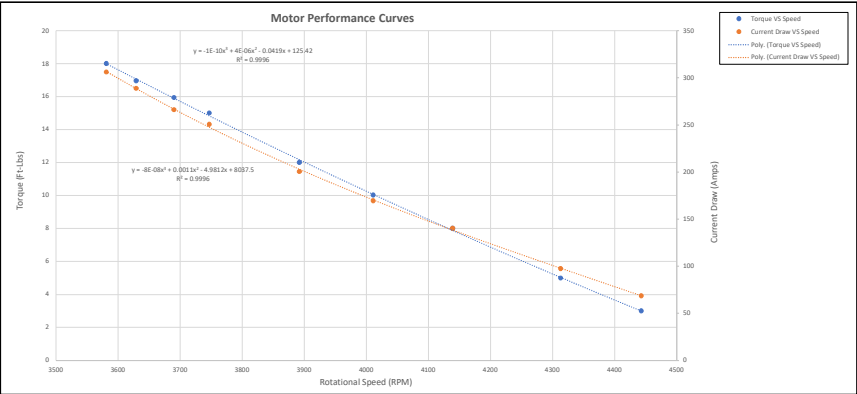
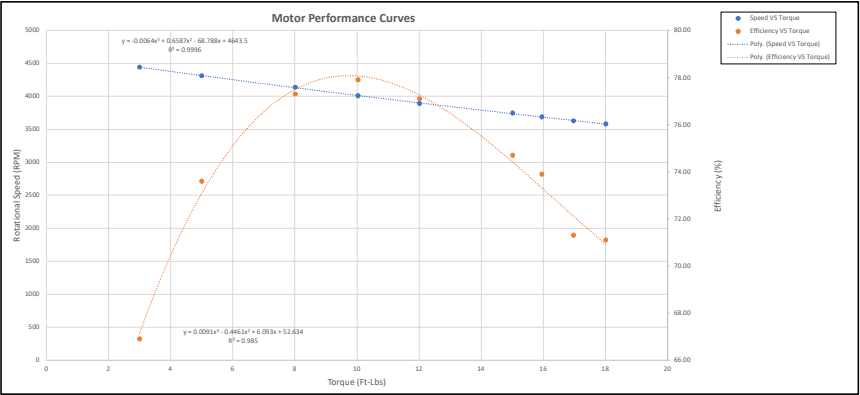
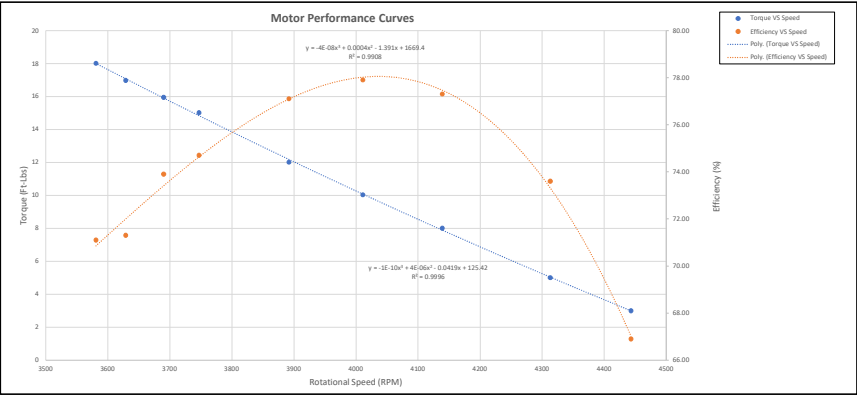


Engineering Performance Test Report

Performance Spec (PS) Number: 52

System Voltage (V): 48 - (1 * 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
3	4443	47.3	53.6	20	15.01	68.61	3.8	2.54	66.90
5	4313	46.8	83.5	20.1	15.02	97.52	5.58	4.11	73.60
8.01	4139	46.1	125.3	20.3	15.01	140.31	8.16	6.31	77.30
10.03	4011	45.5	154.6	20.4	14.96	169.56	9.83	7.66	77.90
12.01	3892	44.8	185.5	20.6	15.02	200.52	11.55	8.9	77.10
15.01	3747	44.1	235.4	20.8	15.24	250.64	14.34	10.7	74.70
15.95	3690	43.8	251.2	21	15	266.2	15.16	11.2	73.90
16.97	3629	43.6	273.9	21.2	15	288.9	16.44	11.72	71.30
18.01	3581	43.2	291.1	21.4	15.07	306.17	17.28	12.28	71.10

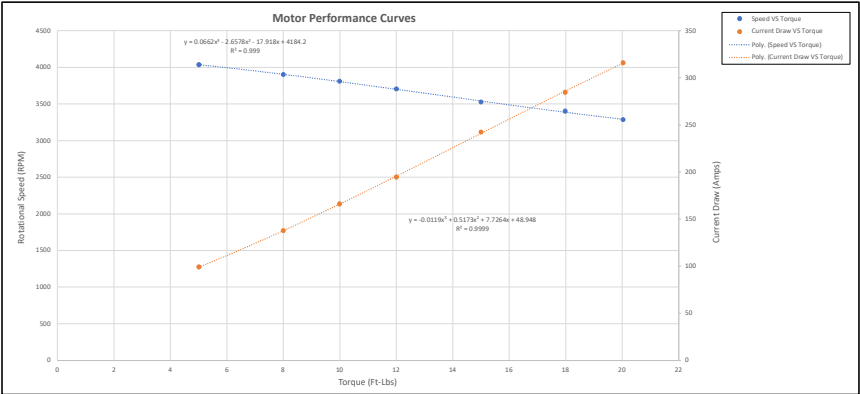
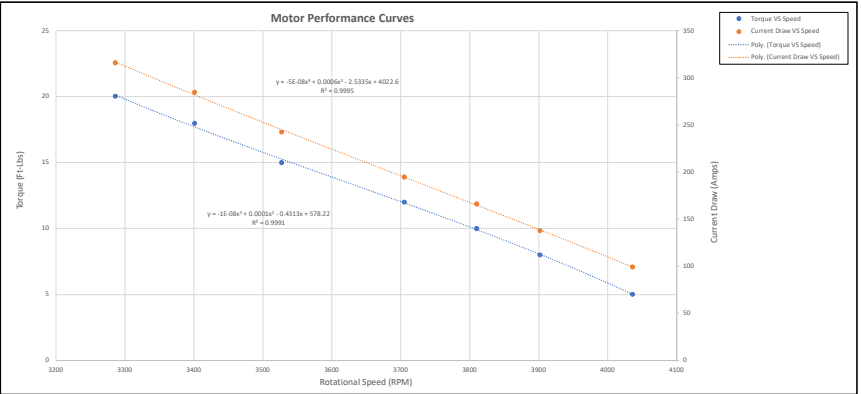
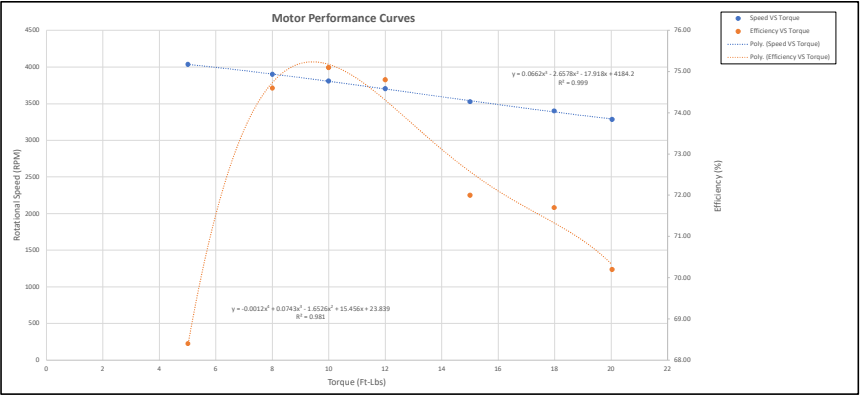
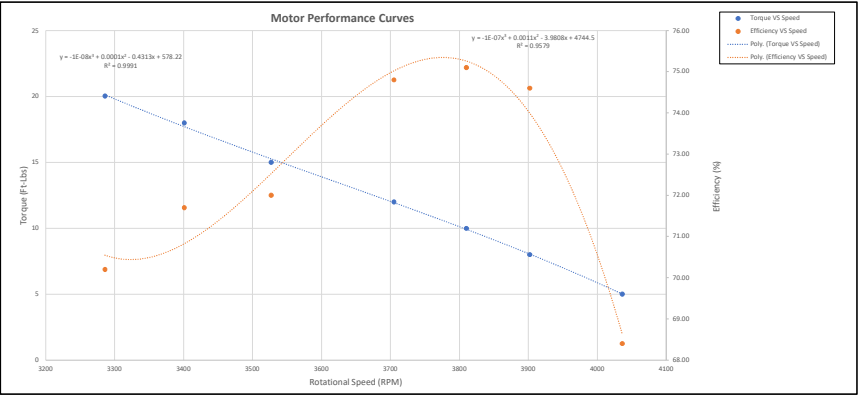


Engineering Performance Test Report

Performance Spec (PS) Number: 52

System Voltage (V): 48 - 1 * 0.0153

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
5.01	4036	46.9	79.1	24.4	20.08	99.18	5.63	3.85	68.40
8	2902	46.3	117.6	24.9	20.1	137.7	7.97	5.94	74.60
9.99	3910	45.8	146	25.4	20.14	166.14	9.65	7.24	75.10
12	3705	45.4	174.6	25.8	20.11	194.71	11.31	8.46	74.80
15	3527	44.6	222.2	26.3	20.19	242.39	13.98	10.07	72.00
17.98	3401	43.8	264.4	26.7	20.24	284.64	16.34	11.64	71.20
20.03	3286	43.2	295.7	27.2	20.23	315.93	17.84	12.53	70.20



Engineering Performance Test Report

Performance Spec (PS) Number: 52

System Voltage (V): 48 - (1 * 0.015)

Torque (Ft-Lbs)	Speed (RPM)	Applied Voltage (Volts)	Armature Current (Amps)	Field Voltage (Volts)	Field Current (Amps)	Total Current (Amps)	Power In (Horsepower)	Power Out (Horsepower)	Efficiency (%)
5	3859	46.9	77.2	40.2	35.05	112.25	6.21	3.67	59.20
9.99	3600	45.9	139.3	39.2	24.99	164.29	9.87	6.85	69.40
12	3495	45.3	164.2	38.2	24.97	189.17	11.25	7.99	71.00
15	3355	44.5	205.2	37.1	25.1	230.3	13.49	9.58	71.00
17.99	3236	43.9	245.6	35.9	24.89	270.49	15.65	11.09	70.90
19.96	3163	43.4	274.2	34.8	25.08	299.28	17.16	12.03	70.10
24.95	2975	42.4	353.6	33.6	25.14	378.74	21.23	14.14	66.60

