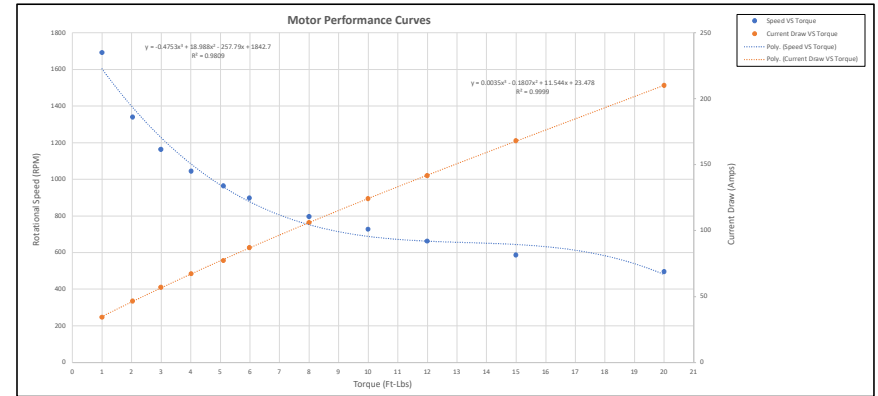
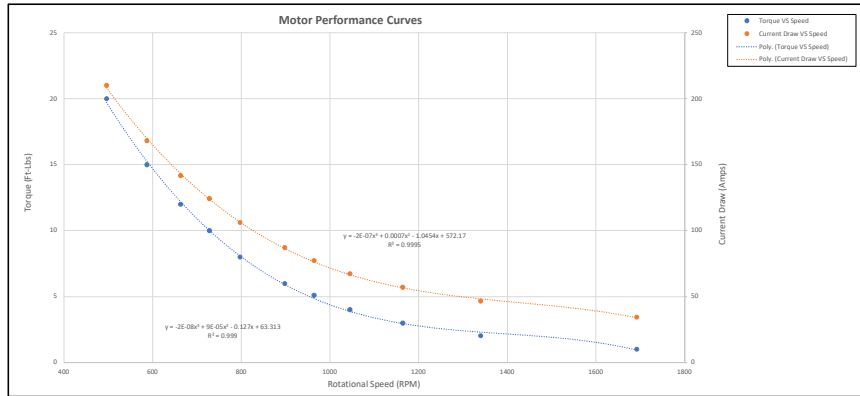
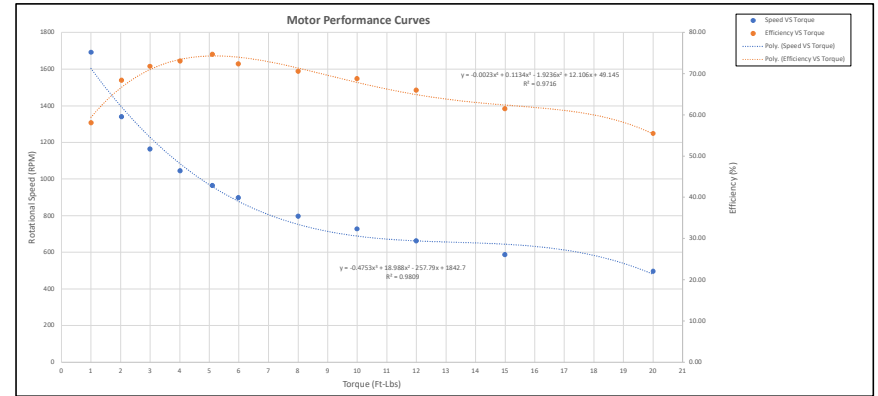
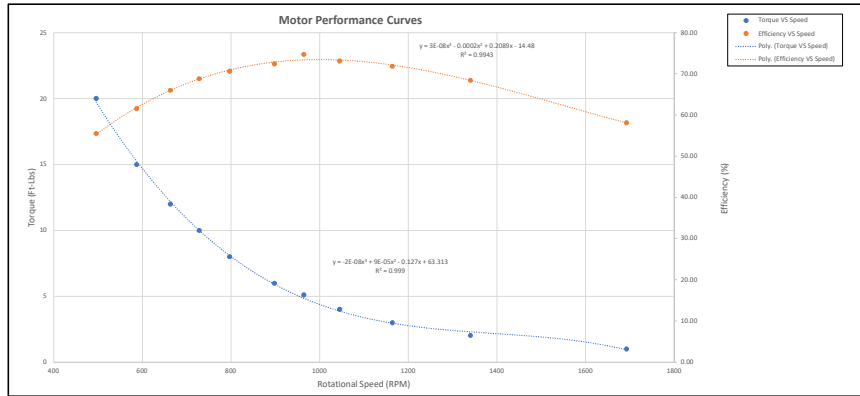


Engineering Performance Test Report

Performance Spec (PS): 3

System Voltage (V): 12 - (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	1692	12.1	34.3	0	0	34.3	0.56	0.32	58.10
2.03	1340	12.1	46.6	0	0	46.6	0.76	0.52	68.40
2.99	1164	12.1	57	0	0	57	0.92	0.66	71.80
4.01	1045	12.1	67.3	0	0	67.3	1.09	0.8	73.10
5.1	964	12.1	77.3	0	0	77.3	1.25	0.94	74.70
5.98	898	12.1	87.1	0	0	87.1	1.41	1.02	72.60
8	797	12.1	106.1	0	0	106.1	1.72	1.21	70.60
9.99	728	12.1	124.2	0	0	124.2	2.01	1.39	68.80
11.99	663	12.1	141.6	0	0	141.6	2.3	1.51	66.00
14.99	587	12.1	168.2	0	0	168.2	2.73	1.68	61.50
20	486	12.1	210.1	0	0	210.1	3.4	1.89	55.50

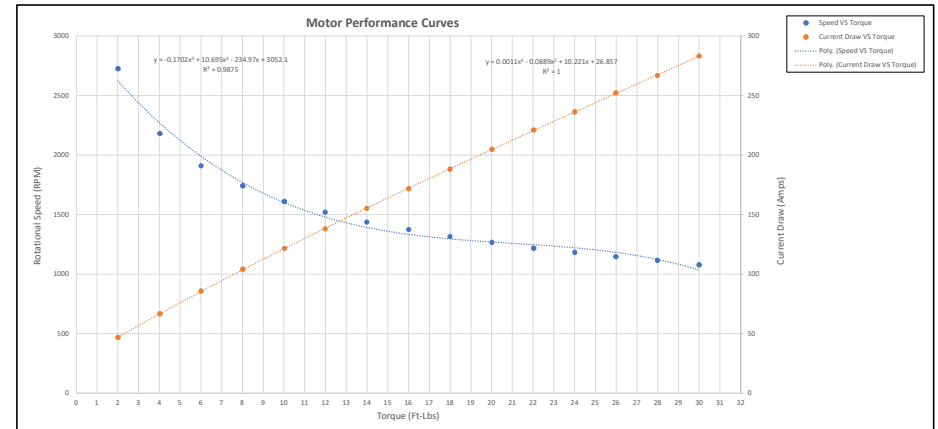
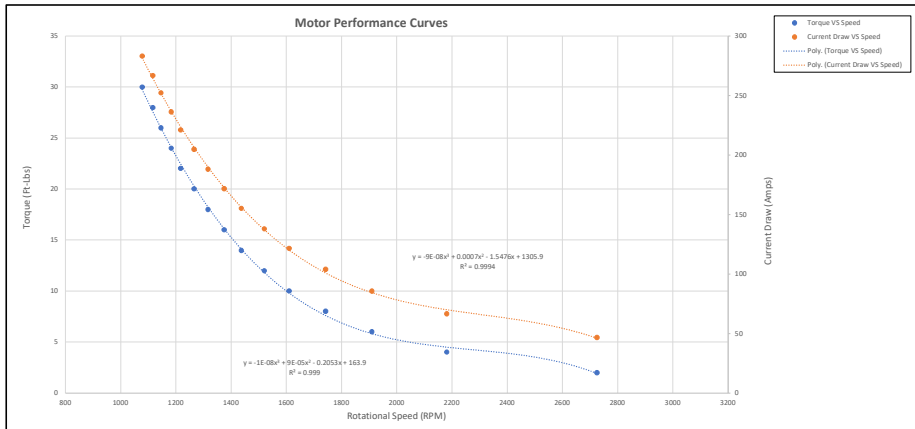
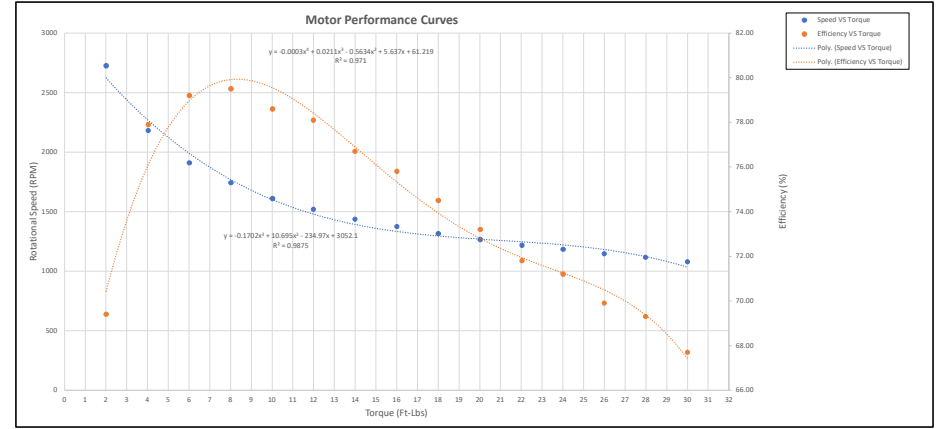


Engineering Performance Test Report

Performance Spec (PS): 3

System Voltage [V]: 24 - (± 0.015)

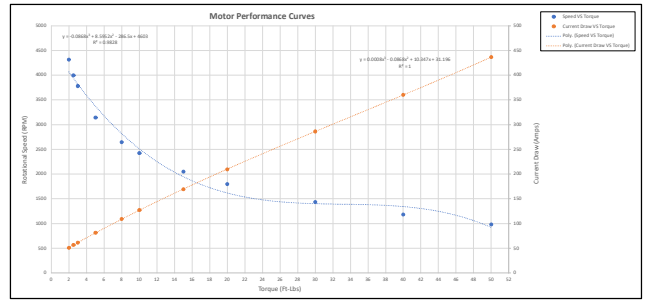
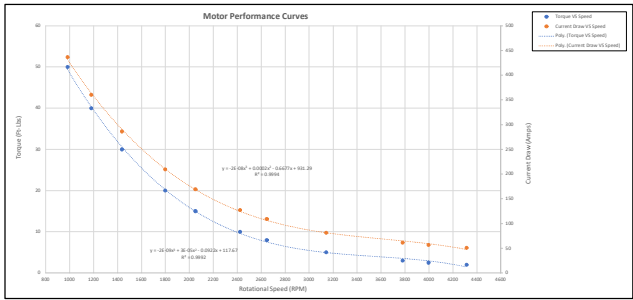
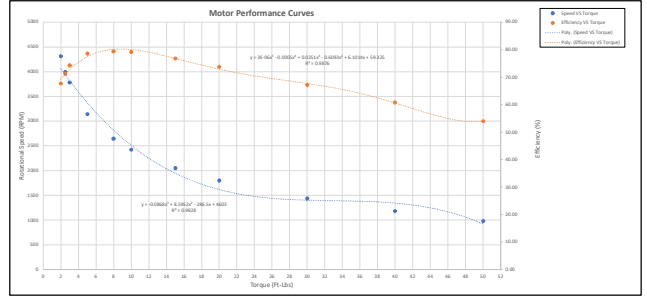
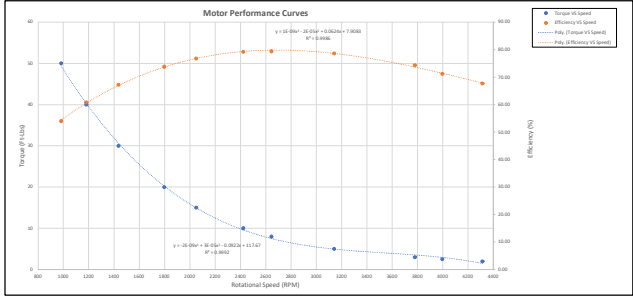
Torque [ft-Lbs]	Speed [RPM]	Armature Voltage [Volts]	Armature Current [Amps]	Field Voltage [Volts]	Field Current [Amps]	Total Current [Amps]	Power In [Horsepower]	Power Out [Horsepower]	Efficiency [%]
2.01	2725	24	46.7	0	0	46.7	1.5	1.04	69.40
4.03	2181	24	66.7	0	0	66.7	2.15	1.67	77.90
6.01	1910	24	85.8	0	0	85.8	2.76	2.19	79.20
8.02	1742	24	104	0	0	104	3.35	2.66	79.50
10.02	1610	24	121.6	0	0	121.6	3.91	3.07	78.60
11.99	1520	24	138.1	0	0	138.1	4.44	3.47	78.10
13.99	1437	24	155.3	0	0	155.3	4.99	3.83	76.70
16.01	1375	24	171.8	0	0	171.8	5.53	4.19	75.80
18	1316	24	188.1	0	0	188.1	6.05	4.51	74.50
20.02	1266	24	204.8	0	0	204.8	6.59	4.83	73.20
22.03	1217	24	221.1	0	0	221.1	7.11	5.1	71.80
24.01	1183	24	236.2	0	0	236.2	7.6	5.41	71.20
25.99	1146	24	252.2	0	0	252.2	8.12	5.67	69.90
27.98	1116	24	266.8	0	0	266.8	8.58	5.95	69.30
30	1078	24	283.1	0	0	283.1	9.1	6.16	67.70



Engineering Performance Test Report

Performance Test #10-3
Series Voltage (V): 36 (± 0.025)

Time (s)	Current (A)	Speed (RPM)	Power (W)	Efficiency (%)	Temperature (°C)	Notes
1.99	4.14	35.4	50.8	0	0	50.8
2.01	3.96	36.0	58.6	0	0	58.6
3	3.70	36.3	64.5	0	0	64.5
5.01	3.42	37	69.2	0	0	69.2
7.98	2.86	36.5	109.4	0	0	109.4
10.99	2.62	36.8	127	0	0	127
15.01	2.02	35.8	159.4	0	0	159.4
18.01	1.78	35	200.2	0	0	200.2
30	1.44	34.8	288.2	0	0	288.2
39.99	1.01	30.7	390.2	0	0	390.2
50.01	0.84	28.4	498.4	0	0	498.4



Engineering Performance Test Report

Performance Spec (PS): 3

System Voltage (V): 48 - (I * 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 (%)
2.05	5491	47.4	50.4	0	0	50.4	3.2	2.15	67.10
2.99	4923	47.4	50.5	0	0	50.5	3.76	2.81	74.36
4.01	4462	47.3	69.6	0	0	69.6	4.41	3.34	77.30
5	4154	47.1	79.9	0	0	79.9	5.04	3.95	78.40
8	3569	46.7	108.1	0	0	108.1	6.76	5.44	80.40
9.99	3309	46.3	126.7	0	0	126.7	7.87	6.29	80.00
15.05	2845	45.7	168.8	0	0	168.8	10.34	8.15	78.90
19.99	2540	45.1	207.5	0	0	207.5	12.53	9.67	77.20
30.01	2083	43.9	282	0	0	282	16.58	11.9	71.80
39.99	1776	42.7	355.5	0	0	355.5	20.31	13.52	66.50
49.99	1540	41.6	431.4	0	0	431.4	24.06	14.66	60.90

