

SSG Transition Zone Charge Test

2/25/2016

Wheel 1 Board 1 8 Trans 21 Magnets

Test #	Gap	RPM	Resistor	Charge Amps	Primary Amps	Charge Volts	Discharge Volts	Primary Volts	Charge Hrs	Discharge Hrs	Primary Watt-Hrs	Charge Watt-Hrs	Discharge Watt-Hrs	D/C Ratio	D/P Ratio
1	0.225"	228	w/o	0.85	1.65	13.03	12.35	12.13	1.66	1.83	33.22	18.39	15.17	0.82	0.46
2	0.215"	231	w/o	0.86	1.64	13.03	12.33	12.37	1.40	1.66	28.40	15.69	13.71	0.87	0.48
3	0.215"	231	w/o	0.82	1.62	12.90	12.33	12.37	1.40	1.57	28.06	14.81	12.94	0.87	0.46
4	0.300"	213	w/o	0.79	1.47	13.00	12.31	12.37	1.40	1.50	25.46	14.38	12.37	0.86	0.49
5	0.125"	254	w/o	0.95	1.87	13.01	12.33	12.21	1.40	1.83	31.97	17.30	15.14	0.88	0.47
6	0.115"	257	w/o	0.97	1.90	13.12	12.32	12.34	1.40	1.78	32.82	17.82	14.72	0.83	0.45

Purpose of the above tests was to compare relative charge performance inside and outside the transition zones of 227 and 257 RPM. The SSG Wheel #1 has a low free spin time and maxes out at ~247 RPM. All the above runs were without any additional trigger resistance. The voltages used in the power calculations are averages from the written test data. The average amperages taken from computer data. The D/C ratio is the Charge battery input vs loaded output power. Load for Discharge test was 0.67 Ah. This is the charge efficiency. The D/P ratio is calculated Discharge power vs. Primary input power to the SSG. For the Joule enthusiasts the watt conversion is times 3600. This can be interpreted as the overall COP of the configured machine.