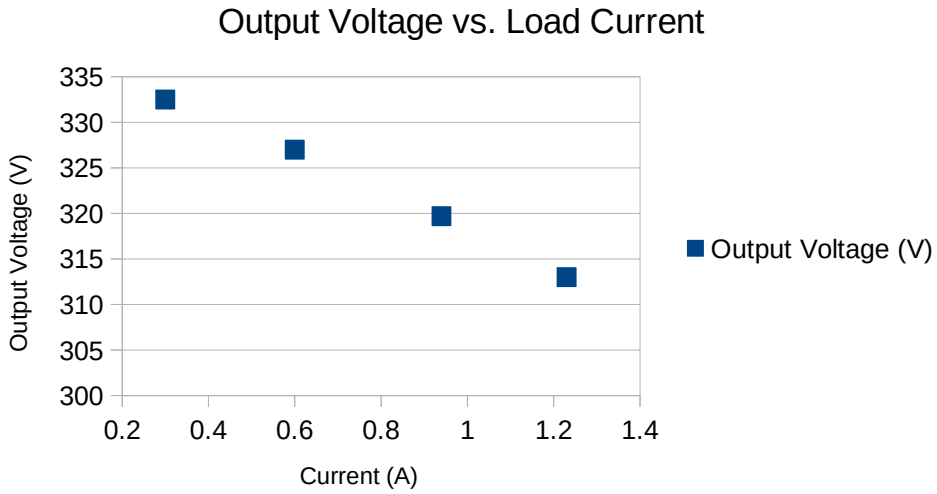
Generator Load Regulation (5/4/2023)

Purpose: The purpose of this test is to see how much the output voltage of the generator varies just from changing the load.

Description: The induction generator with excitation capacitors is spun using a Dayton 6K748A motor. Presumably at around 3450RPM as this is the max RPM of the motor. Note that this is not necessarily a constant rotation source; it likely slows down as its load torque increases affecting the results of the test. Several resistive loads are attached across the output of the generator and the resulting output current and voltage is measured.

Results:

Load Resistance (Ω)	Current (A)	Output Voltage (V)
250	1.23	313
333	0.94	319.7
500	0.6	327
1000	0.3	332.5



Analysis: The output voltage seems to decrease approximately linearly with increaseing load current.