Report on usefulness of data collected and plausibility of the Electric car’s motor

ECE 492

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# Introduction

The aim of this report is to analyze the usefulness of the experimental data collected in order to understand the plausibility of the Electric Vehicle motor operating in steady state. Data was analyzed to determine if the experimental behavior of the motor matched the theoretical1 expectation of two linear and one hyperbolic relationships. Consistency between theoretical and experimental data behavior would suggest the Electric Vehicle motor is plausible for application in the Lafayette Formula Electric Vehicle.

# Data Collection

# Data Analysis

## Constant Load Torque

Figure 1 Motor speed at constant load torque

## Constant Motor Speed

Figure 2 Load torque at constant low motor speed

Figure 3 Load torque at constant high motor speed

## Constant Supply Current

Figure 4 Load Torque at constant supply current

# Results and Conclusion

# Reference

1Hussein, Zainab. *Theoretical relation of the Formula Electric Car Physical Parameters of Load Torque, Supply Current and Motor Speed*. March 24, 2017