**Inputs**

|  |  |
| --- | --- |
| Energy Converter Specifications | |
| Engine | Cummins |
| Engine weight |  |
| Engine power |  |
| Engine RPM range |  |
| Engine peak torque |  |
| Generator |  |
| Generator weight |  |
| Generator RPM range |  |
| Generator peak torque |  |
| Generator quantity |  |
| Generator Efficiency @peak power of engine |  |
| Motor Inverter Specifications | |
| Motor |  |
| Motor weight |  |
| Motor RPM range |  |
| Motor peak torque |  |
| Motor quantity |  |
| Motor peak power |  |
| Motor peak power duration |  |
| Motor continuous power |  |
| Energy Storage Specifications | |
| Max battery capacity |  |
| Battery weight |  |
| Battery C-Rate max |  |
| Battery max charging power |  |
| Battery duration for max charging |  |
| Battery continuous charging |  |
| Battery max discharging power |  |
| Battery duration for max charging |  |
| Battery continuous charging |  |

**Outputs**

|  |  |
| --- | --- |
| Vehicle Specifications | |
| Vehicle weight | 2702 |
| Final drive ratio | 8.672 |
| Lap time | 29556.1 |
| Fuel Consumption (mpg) | 180.36/32 |

**A graph of a vehicle power

Description automatically generated**

**A graph of a vehicle speed

Description automatically generated**

**Plots: Energy Converter**

**A graph of blue lines

Description automatically generated**

**A diagram of a generator operating points

Description automatically generated**

**A graph of a graph

Description automatically generated**

**A graph of a heat load

Description automatically generated**

**A graph of a number of black and white lines

Description automatically generated**

**A graph of red lines

Description automatically generated**

**A diagram of a engine speed chart

Description automatically generated**

**A graph of energy converter power response

Description automatically generated**

**Plots: Motor  
A graph of a motor power

Description automatically generated**

**A graph of a motor engine

Description automatically generated**

**A graph of a motor heat

Description automatically generated**

**A graph of a motor heat

Description automatically generated**

**Plots: Energy Storage**

**A blue line graph with white text

Description automatically generated**

**A graph of a battery

Description automatically generated**

**A graph of a battery

Description automatically generated**