

Comparing Motors Lab

In this lab you will construct a simple DC motor and compare this to a standard St. Louis Motor. Remember that a motor is a device that converts electrical energy into mechanical energy.

1. Construct a simple motor.

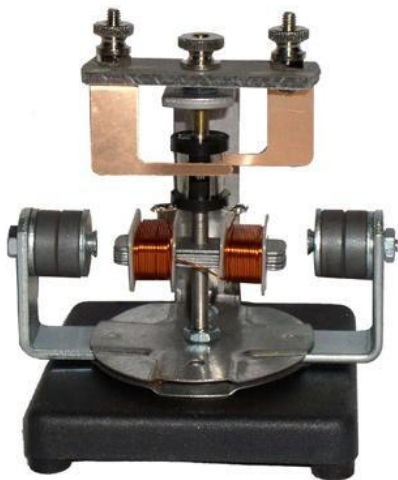
Using the model that is provided to you, assemble necessary materials and construct your own motor. You can also go to this site to help you: <http://www.wikihow.com/Build-a-Simple-Electric-Motor>

In the space below, sketch your motor. Draw the pathway of the electricity through the motor.

What were some of the things you needed to adjust to get your motor working?

2. Use a St. Louis Motor.

Using the presentation in class as a guide, label the diagram below. Once that is complete, attach the leads to a battery to start the motor. Answer the questions on the following page.



3. Analysis Questions

- Describe some of the things you needed to adjust to get your motor working?
- What happens to the speed of the armature as you move the field magnets further apart?
- What happens as you move the field magnets closer to the armature?
- Which component of the simple motor you constructed has the same role as the split ring commutator in the St. Louis Motor?