Week 3 Report

This week I was not entirely able to complete the goals that I had previously laid out for myself to accomplish. This was entirely due to a case of influenza that I had contracted in the middle of the past week. The cold had hindered my attendance in class and my ability to finish homework assignments. But now that I have fully recovered I am prepared to return to my normal workload.

During the week however, I was able to run Multisim simulations of our previously designed circuit. It had been sometime since I have looked at them and it was a good chance to review. It was originally thought that our flyback inductor circuit would not be sufficient and that an integrated circuit design would be necessary. But, after discussing the design with Mr. Price he said that he now understands what it is that our circuit is doing and that it will work for our application.

I also ran a real world test of our flyback inductor circuit using only a 9 volt battery to drive it and with no external power supply. I was able to read a very high voltage output of 40.8 volts with the use of an oscilloscope. This data was interpreted with a LabView program that Tristan Ramas had written for Dr. Kotha’s lab research purposes.
Figure 1. oscilloscope reading of flyback inductor circuit.
Figure 2. Solidworks drawing of 5th generation mold, the pellet press.

Through communication with Dr. Hennessy I have arrived at the idea of the pellet press. I am convinced that this design will work due to the success of the washer mold. This design will make it easier to remove the transducer.

Hours worked 8