

MSD Team P17453

Weekly Update

Week 2

2/2/17 - 2/9/17

Weekly Accomplishments:

- Began machining valve seat block
  - Decided it best to use the CNC for the three main parts
  - Projected to be complete by at least next Thursday (2/16/17)
- Obtained solenoid coil drivers and received shipments from MSC Direct and McMaster-Carr
- Completed initial wall plugin testing of solenoid valves and confirmed initial wiring setup
- Measured old P16452 pressure vessel to ensure that our plate will line up correctly
  - Updated drawings to fix minor discrepancy in hole placement on valve seat block
- Prepared order for hose clamps, pressure safety relief valve, pressure regulator, and more  $\frac{1}{2}$ "- $\frac{3}{8}$ " barb hose fittings from MSC Direct
- Created solenoid coil wiring diagram
- General BOM updates

To do by next week:

- Complete machining the three main parts
  - Valve seat block, valve housing, collector
- Finalize order for hose clamps, pressure safety relief valve, pressure regulator, and more  $\frac{1}{2}$ "- $\frac{3}{8}$ " barb hose fittings from MSC Direct
- Determine the locations of digital inputs/outputs on the DAQ in the lab
- Complete pressureless test of solenoid valves firing using the Signal Express software and DAQ
- Machine 8020 L brackets to hold the solenoid valves if 8020 order arrives
- If parts machined by Tuesday, do pressure test for leakage
- Begin assembling separate systems
  - 8020 frame with air tank
  - Solenoid valve attachment brackets
  - Pressure vessel assuming parts are completed
  - Hose connections
  - Electrical wiring setup

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Meeting Notes

2/7/17

Meeting Accomplishments:

- Updated BOM with McMaster-Carr → MSC Direct and added column to track actual price paid after discounts
- Began machining valve seat block
- Obtained solenoid coil drivers
- Submitted MSC, 8020, and McMaster-Carr orders
- Created solenoid coil wiring diagram

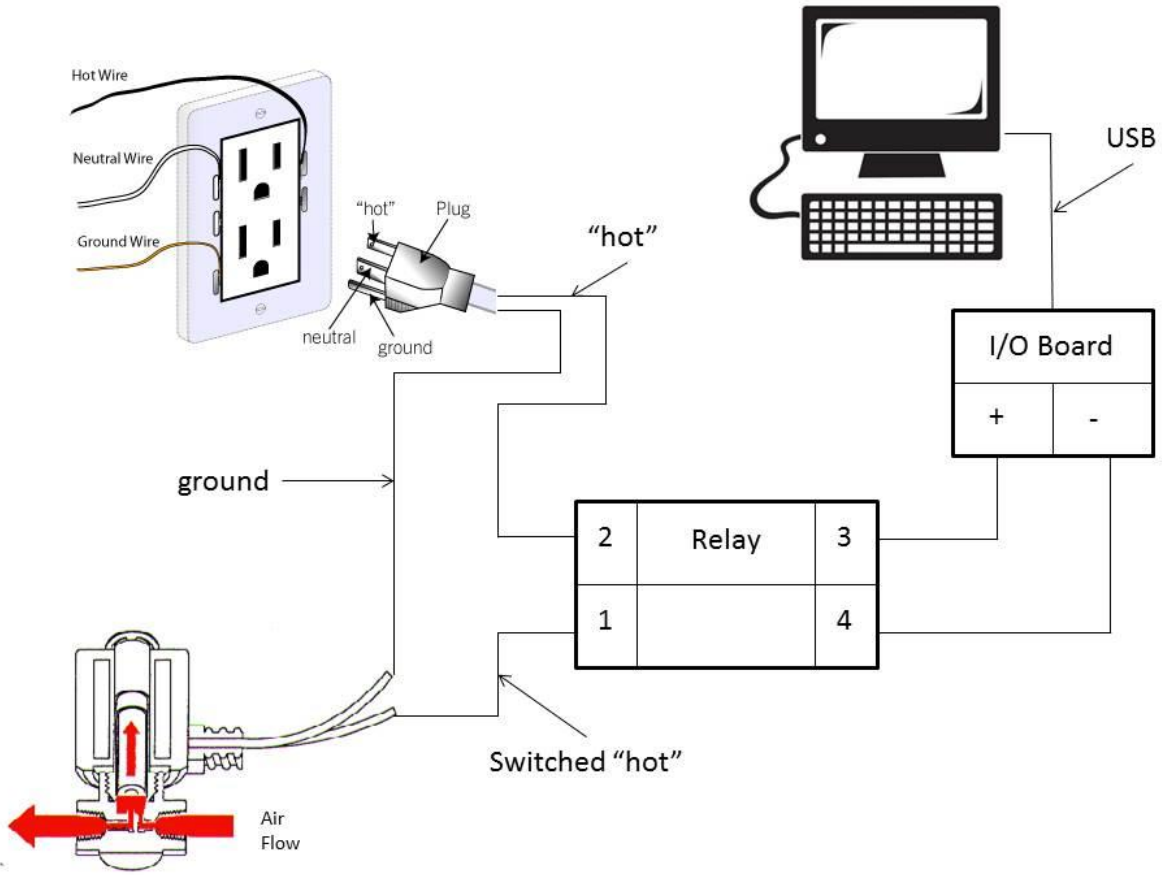
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Meeting Notes

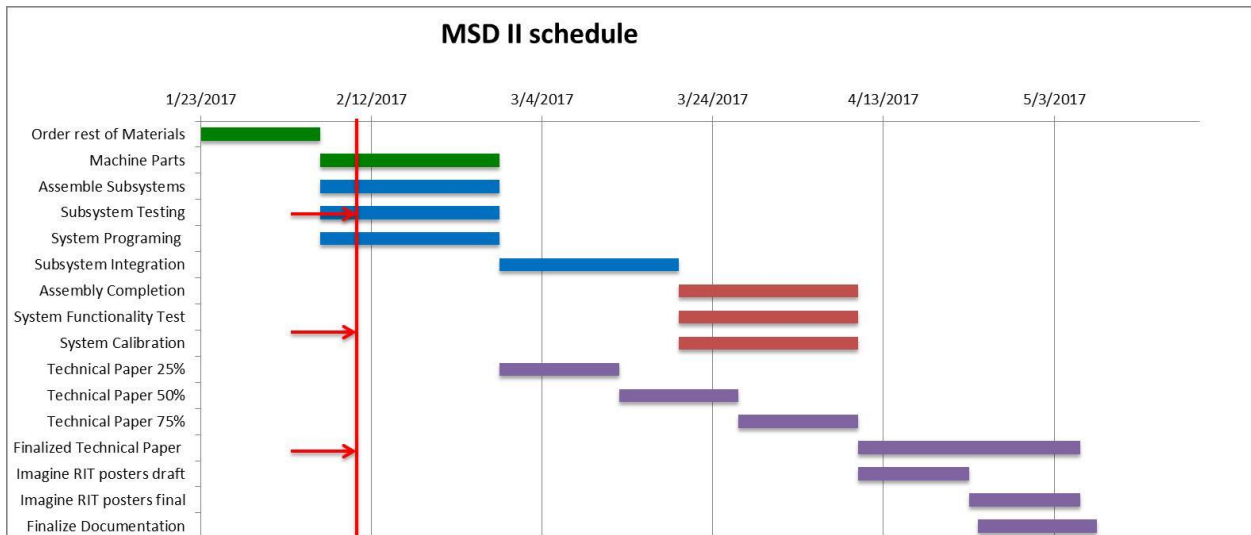
2/9/17

Meeting Accomplishments:

- Decided to use the CNC to machine parts
  - Estimated to be complete by Tuesday or Thursday (2/14/17 or 2/16/17)
- Received parts ordered on 2/7/17
  - Ordered incorrect hose clamps (3 -  $\frac{1}{8}$  instead of  $\frac{3}{8}$  diameter)
- Updated BOM to reflect correct hose clamps, pressure regulator, and safety relief valve
- Completed initial testing of solenoid valves and confirmed initial wiring setup
- Alex showed Carvey and Ryan the location of our lab space that we have available
- Measured old P16452 pressure vessel to ensure that our plate will line up correctly
  - Updated drawings to fix minor discrepancy in hole placement on valve seat block
- Prepared order for hose clamps, pressure safety relief valve, pressure regulator, and more  $\frac{1}{2}$ " - $\frac{3}{8}$  barb hose fittings from MSC Direct



Solenoid Coil Wiring Diagram



Gantt Chart: Team progress through week 3.