Project Report

11/09/07

Monitor Lift and Paint Cap Remover
Dan Zachs, Pat Keating,
Thuy Pham and Katie Zilm
Previous Work Completed

The Monitor Lift
Previous Work Completed
The Monitor Lift

- We attached the monitor mounting bracket to the back support plate.
- The bracket is designed specifically for our monitor (Samsung 275 T) and was bolted into the back plate.
Previous Work Completed
The Monitor Lift

Support Bar
Guide Rail
Mounting Bracket
Work Completed
The Monitor Lift

- After bolting the guide rail support beams to the base plate, we found that some of the bolts protruded under the plate.
- We located the problematic areas and countersunked the holes in the base plate.
- Now the screws are flush with the plate and the plate rests flat on the desktop.
Work Completed
The Monitor Lift

- We decided to trim the base plate for the monitor lift so it was even on both sides
Work Completed
The Monitor Lift

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- This was accomplished by using a horizontal saw to cut the aluminum plate.
Work Completed
The Monitor Lift

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Work Completed

The Monitor Lift

- We put the linear actuator through force and moment testing now that the guide rails are being used.
- The system can take more than the weight of the monitor (23 lbs) and support a greater moment.
Work Completed
The Paint Cap Remover
Work Completed
The Paint Cap Remover

- We built an aluminum encasement to house the motor and the circuitry.
- Encasement is made from Galvanized Aluminum.
- Is screwed into the front of the motor plate.
Work Completed
The Paint Cap Remover

Galvanized Aluminum Frame

Screws are threaded through the front of the encasement and secure it to the device
Work Completed
The Paint Cap Remover

- We cut a hole in the encasement for the depression switch
- The hole is just big enough to secure the switch comfortably and allow the wires to remain enclosed in the encasement
Work Completed
The Paint Cap Remover

- We also drilled a hole for the power cord to go into the circuit.
- Inside the encasement the power cord will be attached to the fuse, and then the rest of the circuit
Work Completed
The Paint Cap Remover

- Cut the back plate down into an “L” shape to make it easier to use the clamp

- The user now has a free range of rotation with the clamp handle
Work Completed
The Paint Cap Remover
Future Work

- Finish up the circuitry with both projects
- Install the switch in the Monitor Lift
- Install safety fuses
- Do final testing of amperage and voltage maximums
Project Review

- We’ve come along very nicely in both projects
- Both projects are already operational
- We only need to complete the finishing touches
- All team members are putting in hard work to finish up the tasks needed
Hours Worked

Patrick: 14 hrs
Thuy: 13 hrs
Dan: 14 hrs
Katie: 13 hrs