

P19330

Computer Chassis Cleaner

Recommendations for Future:

Project Specific:

- Consult experts on airflow/suction pressure
- Install a side door for easier access
 - Ergonomic issue
- Add functionality of pivoting motor that sits within air column cart and movement along y axis
 - Improve cleaning process by getting sides of computer
 - Code was written
- To pivot the air column that won't currently move because of gears binding
 - Use the thrust bearing supplied – place above the shaft collar that's above the mobile air column. This may result in the button having to be adjusted. Ensure the bearings are compressed fully before tightening the shaft collar. Additional fasteners may be required for higher load than originally designed.
 - Redesign a new smaller gear and tighten up the shaft collar. The smaller gear is off center due to it being a 5mm shaft and we have a 4.5mm shaft. This contributes to some binding.
 - Intake tubing redesign to avoid the moment created by the tubing that contributes heavily toward the binding.
- Redesign of the exhaust system
 - Try using a more powerful shop vac or utilize a second vacuum
 - Pressure is too low in the furthest exhaust tubing, redesign it so it has the exhaust in the center holes
 - Place restrictions on the holes closest to vacuum to increase pressure in the remaining holes
 - Complete redesign of exhaust system to ensure less dust retention of system, maximize efficiency of exhaust pressure and be more accessible for maintenance
- Increase the nozzle sizes. They use standard 1/8" NPT threaded holes, so typically nozzles for compressors will work in the system.
 - Calculations and testing should be done to ensure minimum back pressure
- Redesign system for use with ONLY small computer would be more efficient
 - More static options could be used with a smaller footprint
- Use a more solid door latch – not properly held down currently
- Reduce the size of the dolly – the platform the wheels are on doesn't have to be so large
- Stain and poly exterior of enclosure

General:

- Create expectations for personal responsibility early on
 - Communication within the team is so important
- Keep up with documentation as you go – especially edge

- Take lots of pictures
 - Record all data
- Make a detailed schedule and do everything you can to stick to it
 - Schedule in slack time in case things do get behind – plan for it
- Be prepared for things to go wrong/not as you expected
- Get help from SMEs early on
- Don't get an idea and run with it unless you are SURE it will work – save yourself time and rework
- Prototype and test and early as possible