

Reduced Suction for No Apparent Reason



Is the suction in your trim or dust collection system decreasing for no apparent reason? Has the system seemed to slow down over time? Does it seem like there are more jams than before? If the answer is yes to any of these questions, the following tips will help you troubleshoot the problem.

If you have a multiple blower system and only one of the systems seems to be slower or have less suction, the first thing to check is the blower rotation. Many times when a motor burns up or if there has been a power outage requiring re-wiring, a blower can be running in reverse rotation. A radial blade blower running in reverse has about 15 percent less suction than one running in the correct rotation.

Remember DO NOT use your finger on the shaft or belts to check rotation. Use a piece of paper. Have a qualified electrician reverse the power wires if the blower is running backwards.

If your filter has a dust collector, check the filter's differential pressure. If it's more than 4" it is contributing to the loss of suction. On older systems, make sure that the tubes to the pressure gauge are clear. If you have a portable gauge, plug it into the ports to confirm the reading. Plugged pressure tubing will give a false low differential reading in most cases.

If your system has a cyclone, check inside to see if the screen/tube guard is matted over with paper and dust. If it is, clean it with a wire brush using a confined space entry qualified crew and BE SURE to LOCK OUT the baler below. If someone enters the cyclone without locking out the baler, falling into the bale chamber almost always results in a fatal injury. Sometimes the screen is filled on the inside, which requires cutting or unbolting a section to allow the captured material to escape. Puhl highly

recommends using ONLY qualified crews for these tasks as serious and/or fatal injuries can and have happened when customers have attempted these tasks themselves.

Inspect the large-diameter return air duct for dust build up. A decades-old system can experience a significant dust build-up which reduces the outlet area of the system and decreases suction. The NFPA requires annual inspection of the return air ducts because build up (also called saltation) in the duct is also fuel for a potential fire.

Pneumatically-conveyed scrap and dust collection systems are very reliable and have few moving parts considering the hundreds if not thousands of tons of material they move annually. Nonetheless, they do require maintenance and inspections in order to be able to deliver the original suction as designed. If the suction changes for some unknown reason and if you have not added any equipment to the system or changed the duct system layout in the meantime, the items listed above are typically the most common reasons for the reduced suction.

Need assistance troubleshooting suction issues or other problems with your air-conveyed scrap system? We are here to help. Puhl engineers and sales techs have the know-how and experience to get your system back up to its original capability and more. Just give us a call at 615.230-9500 or [email us](#).