

12 most costly conveyor maintenance mistakes

Proper maintenance keeps conveyors running efficiently

Fast Forward

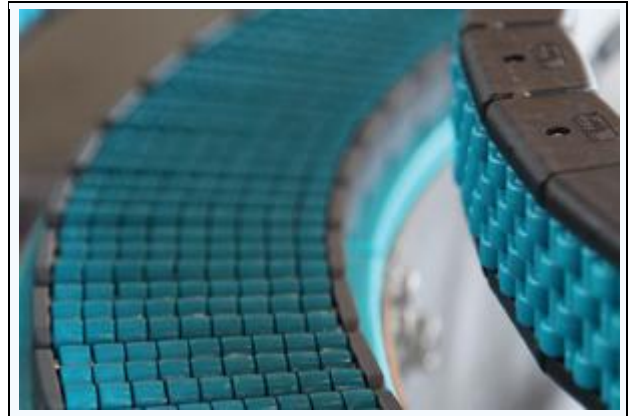
It is always the seemingly small things—like a conveyor breakdown—that raise havoc, escalate cost, and reduce profit.

Conveyors are critical in plants to keep production flowing.

Basic maintenance will keep production running efficiently.

By John T. Phelan, Jr.

In the hustle and bustle of a busy plant, many companies overlook the workhorse that is moving each order down the line until there is a breakdown. When throughput comes to a screeching halt, a conveyor system becomes a major issue—production stops, employees are idle, shipments are late, customers are upset, and the company's credibility is undermined.



Often taken for granted and ignored, a conveyor system is a critical link in a company's manufacturing and distribution system. Time after time, I hear someone say, "When can you get this thing fixed? We have orders piling up all over the place. The boss is on our backs."

It is always the seemingly small things—like a conveyor breakdown—that raise havoc, escalate cost, and reduce profit. To describe it in this way may seem overly dramatic until you have taken dozens of calls from desperate managers with a down production line.

There are precautions to take in order to help prevent a costly conveyor breakdown. Here are 12 of the most common material-handling system conveyor maintenance mistakes and how to avoid them:

1. Overlooking regular inspections. In most manufacturing operations, it is the production equipment that receives the attention; however, the flow of products is just as important to keep production running. A conveyor system, no matter how basic or complex, is regarded as an almost "invisible" link in the total process.

Everyone knows the value of changing home heating and air conditioning system filters regularly to avoid accumulated dirt and dust reducing airflow and damaging the system. Yet, too many of us fail to periodically take a few seconds to make a quick inspection. It is the same principle with conveyor systems. For example, if you have a belt conveyor, simply check the floor area underneath the conveyor while it is operating for dust-like shavings. If you see them, it is a sign that the belt is out of alignment, is not tracking properly, and is wearing unnecessarily and will eventually be damaged. You can always be aware of squeaks. They are not normal and signals that something needs attention.

Regular inspections also serve as a way to help familiarize employees stationed at conveyors to understand better the equipment they are using and to take ownership of its care.

2. Missing maintenance records. While some drive a vehicle until it falls apart, most of us take regular maintenance seriously, and the key is keeping a record. Automotive quick lube companies, for example, place a little sticker on the upper left hand corner of the windshield with the mileage due date for the next oil change. The concept makes sense for conveyor systems, too. The most basic method is a maintenance log kept on or near the system with information on what maintenance has been performed, the date, and any additional concerns that should be monitored. Many facilities today have asset/maintenance management systems to store electronic records, and conveyor systems should be included in these. This can be particularly useful in facilities where there are several shifts. It is also helpful if there is a change in personnel. Most importantly, it documents the history of the equipment. If there is ever an issue with a manufacturer, for example, a maintenance record can support your case.

3. Failing to take the temperature of motors and reducers. While motors may not have a fever, they can overheat. A temperature spike indicates something is causing an overload. In some cases, a conveyor is being used for materials it was not designed to handle, or an inappropriate conveyor has been pressed into service to fill a void. Catching motor problems early is important since replacing a burned out motor during production period means downtime; particularly since most facilities do not have a backup supply of motors.

4. Disregarding OSHA standards. Many companies view a safe workplace as an expression of their values and a commitment to their employees and customers. It can also serve as a competitive advantage. Yet, maintaining a high level of safety when it comes to equipment is not always easy. Because of the constant pressure in a production environment, it is easy to neglect equipment safety.

In my experience when reviewing facilities, it is typically very easy to spot missing chain guards on conveyors. The required pans underneath belt conveyors have either come off or been removed for one reason or another. More often than not, everyone is busy, and safety equipment is not reinstalled after being removed. Neglecting to do so can create avoidable injuries to employees.

Injuries are costly in time lost, the need to replace an employee, and Worker's Compensation cost. In many cases, investigations have revealed the cause of injuries is the direct result of missing safety equipment. To prevent unnecessary workplace injuries, employees should receive safety training specific to the equipment they will be working with each day. Newly hired workers should be properly trained and advised of the meanings of all conveyor warning labels.

5. Lacking adequate maintenance coverage. To reduce overhead expenses, many companies have adjusted by having fewer maintenance personnel on the job. This strategy has its advantages until situations

arise such as a maintenance person going on vacation leaving the facility with no coverage. Fewer maintenance personnel or similar coverage increases the odds for conveyor breakdowns.

A cost-effective solution is having an experienced and certified conveyor service person make periodic inspections and be available for immediate assistance when in-house coverage is not accessible.

6. Keeping an inadequate parts inventory. As many learn, often too late, certain parts may not be readily available when you need them, e.g., during a breakdown. While it is not practical to inventory every part, there are certain key components such as motors, couplings for line shafts, bearings, and photo eyes that should be kept on hand.

You can survey your conveyor system and draw up a list of key components including part numbers to store with the system in the maintenance log previously recommended.

7. Ignoring the warnings given by repeated breakdowns. An ongoing pattern of breakdowns is a message something is wrong. But, again, production demands often require quick fixes to get the line moving.

Yet, having to replace a coupling on a line shaft conveyor, for example, should be an alert that there is a problem that needs to be investigated further to find the root cause and resolved. This also becomes valuable information for catching problems on similar equipment in the plant. By disregarding the problem or not finding root causes, the consequences may be more down time incidents, additional costs, and employee frustration.

8. Becoming cliché: “If it isn’t broken, just let it go, and don’t worry about it.” We have all heard those words. We spot a frayed belt or find the lacing coming apart, but do not do anything about it, even though we know these are red flags indicating that costly lost time repairs will be needed—most likely at a critical moment during a peak production time.

It is common for a forklift to hit conveyor legs. Someone pushes them back in place, but the damage is done. The conveyor is out of alignment and begins to wear. It is another expensive repair bill in the making.

A photoelectric eye goes out, and we grab one from another location to keep the line moving. And then there are air line leaks. And everyone wonders why the conveyor system is not accumulating properly. Nothing is done about it, and everyone adjusts to a now inefficient and dysfunctional operation.

Waiting to make repairs until a conveyor system breaks down is a costly mistake.

9. Failing to care for the controls. As systems have become more technologically sophisticated, ignoring their maintenance can be disastrous. Here are two examples. First, switching scanners without recognizing each one is programmed for a particular divert can create chaos, as we all know. Yet, it happens all the time. Second, your system is at risk when lightning strikes, knocking out a control’s programming, the direct result of not having a proper surge protection. Again, more down time and costly emergency repairs are needed to get up and running.

10. Misusing a conveyor. A need arises and a conveyor system is pressed into service without consideration of its capabilities. One of the most common examples is placing larger, heavier cartons on a narrow conveyor. When this happens, there is stress and wear on the entire conveyor, which will eventually result in a breakdown. Take the conveyor's belt pull rating into consideration before increasing its workload and using it in ways it was not intended to avoid unnecessary wear and tear on the system.

Then, there are those times when changes are made to an air line that affects the air cylinders and other air operated parts of material handling and the entire system fails to function properly.

11. Avoiding those hard-to-reach places. Wherever there is equipment, there are difficult places to get to: sometimes up high, sometimes around the back, and most of the time where there is too little room to maneuver. These tough spots are the breeding ground for expensive repairs and operational issues. These places are rarely (sometimes, if ever) lubricated. This is where you find loose chains and sprocket set screws, causing extra strain on the system and creating an emergency waiting to happen. By making it a point to give these areas the special care they require, you could save yourself a lot of inconvenient interruptions later.

12. Failing to train employees in the operation of conveyors. One of the major causes of unnecessary maintenance costs is failing to train employees using the conveyors in their operation. They can become the eyes and ears for alerting their supervisors to potential problems. By knowing how conveyors operate, how to avoid their misuse and how to spot maintenance issues, employees become the first line of defense for minimizing problems and reducing costs.

While some may see it as "only a conveyor," others recognize it as an indispensable link in meeting production deadlines, filling orders properly and accurately, and reducing overhead costs. By properly caring for the machines that make your business run, you can certainly prevent costly downtime. Avoiding unnecessary mistakes with conveyors is simply good business.

ABOUT THE AUTHOR

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