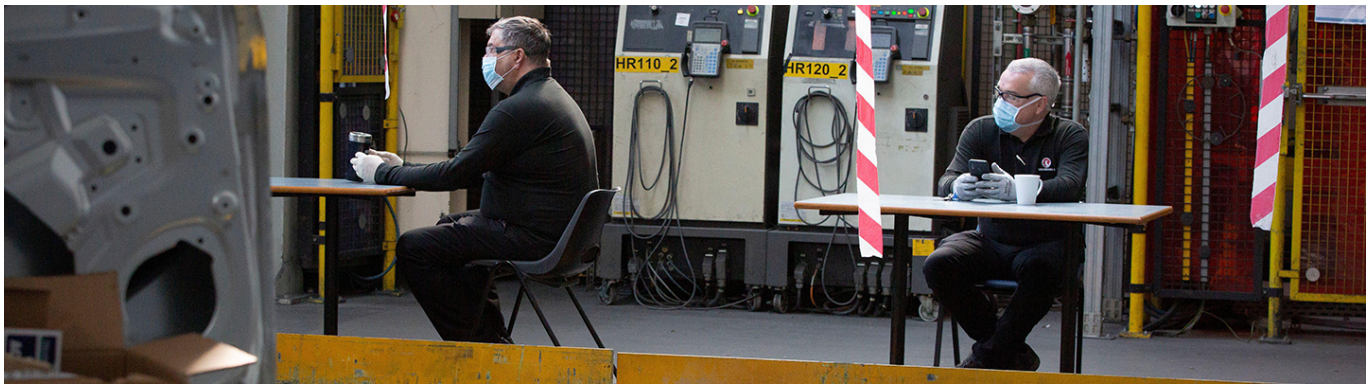


Machining

Hazard Management: What to Consider as You Reopen Your Facility Amid the COVID-19 Pandemic

Holly B. Martin | Jun 30, 2020

What are manufacturing companies experiencing as they reopen and ramp up production following the COVID-19 crisis? Here's what you need to know about returning to work under "new normal" conditions.

For a company more used to running at speeds of around 200 mph, the deliberate process of adapting operations to the new constraints of working amid the COVID-19 pandemic has been a new kind of challenge for Joe Gibbs Racing.

"Monday, March 16, we got the phone call that we needed to work from home moving forward," says Mark Bringle, the technical sponsorship and marketing director at the top NASCAR race team based in Huntersville, North Carolina.

Every employee was kept out of the building until the beginning of May, when North Carolina's first phase opened up and NASCAR started getting approval for races. Meanwhile, Joe Gibbs Racing worked furiously to prepare a safety plan for going back to work and negotiated with authorities for permission to do so.

> **"Accountability is key, so once you put a procedure in place and appropriately train your employees, you have to hold people accountable to make sure that they are following the procedures."**
> Brandon Hody
> Concurrent Technologies

"We had to go through three different layers of approval," Bringle says. "At the state level, NASCAR and the racing teams had meetings with the governor. Then we had our challenges with Mecklenburg County because it was being hit hard with the virus."

Finally, the company worked through the rules and requirements needed for approval in Huntersville.

"It was quite an undertaking to get our safety plan and procedures in place," Bringle says.

Disinfecting Your Workplace Safely

An important element of reopening is making sure you reduce the risk of exposure to the COVID-19 virus.

The CDC has produced ***a website*** that helps both companies and individuals understand best practices for cleaning and disinfecting their workplaces.

Cleaning and disinfecting routines include the use of disinfectant products such as sprays, concentrates and wipes. The Environmental Protection Agency has issued ***a list of approved disinfectants*** against COVID-19.

Using these products requires caution, of course, and the EPA offers the following six steps for safe and effective use of disinfectants:

Step 1: Check that your product is EPA approved by finding the EPA registration number on the product and then checking to see if it is on the ***EPA's list of approved disinfectants***.

Step 2: Read the directions. Follow the product's directions. Check "use sites" and "surface types" to see where you can use the product. Read the "precautionary statements."

Step 3: Pre-clean the surface. Make sure to wash the surface with soap and water if the directions mention pre-cleaning or if the surface is visibly dirty.

Step 4: Follow the contact time. You can find the contact time in the directions. The surface shouldremain wet the whole time to ensure the product is effective.

Step 5: Wear gloves and wash your hands. For disposable gloves, discard them after each cleaning. For reusable gloves, dedicate a pair to COVID-19 disinfection. Wash your hands after removing the gloves.

Step 6: Lock it up. Keep product lids tightly closed and store out of reach of children.

Three Layers of Hazard Controls

The COVID-19 pandemic has affected many industries worldwide, and machine shops are no exception.

At its onset, the COVID-19 pandemic brought extraordinary health, safety and economic challenges to these businesses, requiring them to find ways to manage stay-at-home orders and temporary workplace closures.

Now those businesses are starting to learn how to plan and manage the risky process of returning to work, handling such issues as social distancing on the shop floor or implementing new cleaning routines.

OSHA's Hierarchy of Hazard Controls

While developing their safety plan, the managers at Joe Gibbs Racing had to take into consideration the Occupational Safety and Health Administration's ***recommendations for eliminating workplace hazards***.

Read more about reopening in the MSC Direct Reopen Safely Guide

According to OSHA, employers have three basic lines of defense they can use to protect their employees from hazards:

- Engineering controls
- Administrative and work practice controls
- Personal protective equipment, or PPE

The effectiveness of each layer at controlling hazards increases as you move from PPE up to engineering controls.

In some cases, the engineering controls block can be further divided, so that the highest control level would be elimination, or removing all risk or potential hazard exposure, followed by substitution, or replacing the hazard with something less hazardous. But in the case of COVID-19, these two additional levels of control don't apply, leaving engineering controls as the highest, most effective level of control.

How to Manage Engineering Controls

Engineering controls are built-in technologies that guard, isolate or redirect hazards to keep them away from people so that they can't come in contact with them. These types of controls don't need any special procedures for telling employees what to do because they are built in to the work environment.

According to Brandon Hody of Concurrent Technologies, one example of an engineering control for preventing the spread of COVID-19 would be putting up ***plexiglass guards*** between workstations. These guards block the spread of any virus-laden particles from an infected person who may be in the workplace.

"Another example would be a ***touchless paper towel dispenser***," says Hody, who consults with shops to help them provide safe working environments.

"It doesn't completely eliminate the hazard because people can still touch it, but now there's no reason for people to do that," he adds.

Dealing with Administrative and Work Practice Controls

The next level of controls to prevent exposure to hazards is administrative and work practice controls, which are procedures, plans and policies that employers put in place.

"Social distancing, for example, would be an administrative control, because you tell people according to policy, they can't get within 6 feet of somebody else," Hody says.

However, even with protective administrative and work policies in place, employers can't always control an employee who decides to stray from the rules.

"The reason that administrative and work practice controls are less effective than engineering controls is that people don't have to necessarily listen or follow your procedures," Hody says.

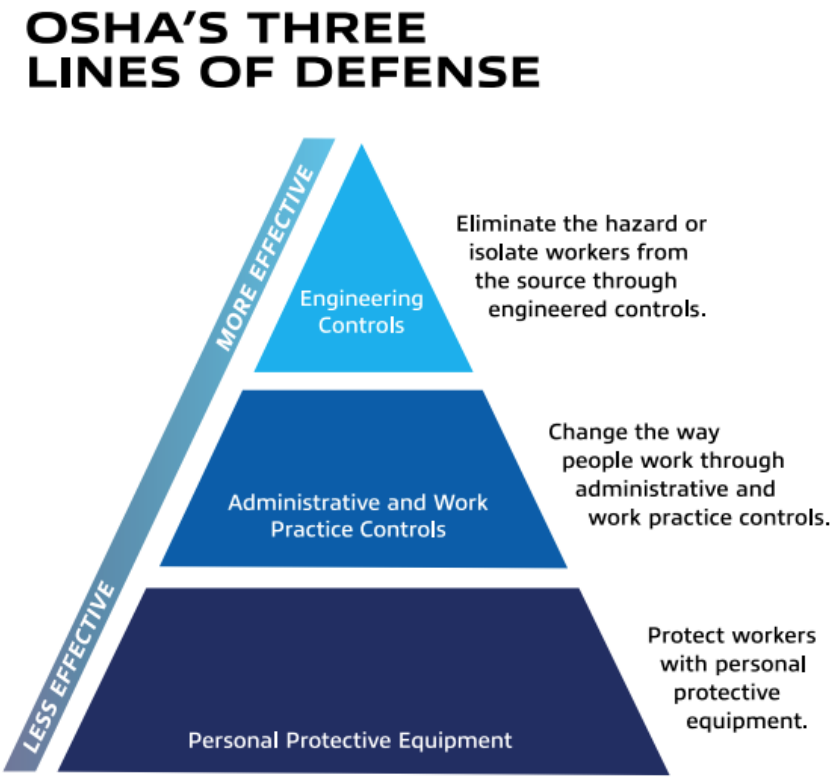
"Accountability is key, so once you put a procedure in place and appropriately train your employees,

you have to hold people accountable to make sure that they are following the procedures," he adds.

Read more: Best Practices for Reopening Safely After COVID-19: What Manufacturers Need to Know

The COVID-19 safety procedures at Joe Gibbs Racing include several administrative controls, and according to Bringle, every employee has to sign off on this guidance before being allowed back to work.

For example, to get into the building, employees must be listed on the schedule. Then they must go through a screening process, have their temperature taken, and answer questions about their health and exposure to the virus. None of the break rooms, conference rooms or workout rooms are open, and employees are urged to bring in their lunch and eat at their workstations or outside (but within the fence).



"Once you've entered the building, you're required to wear a mask and there are ***sanitation stations*** and ***COVID-19 signs*** reminding everybody of the code of conduct all over the building," Bringle says. "Internally, we've set up all of our workstations so that there's as much distance in between each person as possible, and everybody's required to stay at their machine or workstation."

The company also changed to a 12-hour, four days on, four days off schedule, partly to keep up with a heavy racing schedule, but also to reduce some of the COVID-19 hazard.

"Normally, we'd have a first and second shift in the CNC department, so you'd have one person coming in, then later a second person come to run machines in that same area, so that would be a greater risk of transmitting disease," Bringle says. "But this way, only one person works the same area for four days, and then our janitorial staff does an extensive cleaning of that area, so that when that second group comes in, everything's totally sanitized."

The Use of PPE Controls

On the hierarchy of controls for preventing workplace hazards, the least effective method is the last line of defense: using personal protective equipment, or PPE.

For protection against COVID-19, PPE can include ***gloves***, ***face shields*** and ***N95 respirators***.

Essentially, it's anything a person puts on and wears to protect themselves, Hody notes.

According to ***the Centers for Disease Control and Prevention***, N95 FFR respirators can filter out airborne particles, including the COVID-19 virus. However, an N95 respirator with an exhalation valve does not provide the same level of protection because the valve allows unfiltered exhaled air to escape.

Technically speaking, cloth face masks are not true PPE, according to Hody.

"The cloth mask is not really there protecting you, but it's protecting others from you if you are shedding the virus but don't know it," Hody explains.

"So, the requirement to wear them is more of an administrative policy control that businesses put in place to protect everyone in the building."

Social Distancing in a Machine Shop

Recently, a large machine shop asked Hody for ideas on ways to keep 6 feet of separation between employees. On his advice, the shop is now mandating that a person works the same piece of equipment every day, rather than possibly spreading the virus across other equipment.

"That way, if someone tests positive for COVID-19, you can almost contact trace employees because you know that 'Bill' was assigned to CNC machine 5," he says. "Then, maybe once you do a deep cleaning, you can switch him up to work, say, Grinder 3, so that he doesn't get bored."

The shop also has broken down its large number of employees into smaller work groups to further help with hazard control.

"If you have morning meetings, it's easier to social distance in a smaller group, and if an employee tests positive, you hopefully can contain that spread, and makes it easier to narrow it down where the infection came from," Hody says. "And since you know which machine that they were on, you can specifically clean that machine and it helps you contain everything better."

What unique challenges have you faced as you reopen your shop? How have you managed them?