

Best Practices for **Machine Shops**



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Introduction

This guide's primary objective is to provide machine shops employers with specific safety and health work practices that many operations in their industry have successfully adopted and implemented. It also will help these employers prevent occupational injuries and illnesses. Each chapter addresses a different concern and practical accident-prevention measures.

BWC realizes companies within this industry have individual needs and that not all the information presented here is pertinent to every employer. But, by improving safety and preventing accidents, you can protect your work force while at the same time reduce your workers' compensation costs.

Employers throughout Northeast and Central Ohio supplied information for this publication.

More than half of the 13 employers interviewed are "job shops," providing contract work for other employers. Some of the employers, however, produce their own products. The number of employees ranged from 30 to 800.

Through the development and implementation of the following best practices, one employer from the Canton area received BWC's Governor's Excellence Award for Safety and has received the Occupational Safety and Health Administration (OSHA) SHARP Award for several years.

Results

- A number of employers have reduced their workers' compensation claims significantly.
- One employer reduced claims cost (total medical and total indemnity paid) from \$134,000 to \$17,000.
- Another employer's claims cost for the same time period went from \$210,00 to \$53,000.
- Yet another proactive company reduced claims cost in the same time period from \$160,000 to \$5,800.

For this same time period:

- One employer reduced the number of claims filed with BWC from 110 to 53, a 52-percent reduction;
- Another employer reduced claims by 67 percent;
- Two of the employers interviewed for this project had not experienced a lost-time claim for four years.

These employers pay only 46 percent of the base rate for their workers' compensation insurance. The primary factor that permits this type of discount is directly related to senior management's commitment to safety. It is clear to see how this gives these employers a competitive edge in the marketplace.

Management commitment

A willingness to treat employees as individuals and not machines is a common thread among the employers interviewed for this guide. One business owner said, "These people are like family. I want to provide them with the safest work environment possible. They are my most valuable resource. I want them to be able to go home every day and see their wives and children in the same condition as when they left for work in the morning."



The businesses value and support safety like all other business functions. They identify short- and long-term goals, and develop systems to track and measure results.

Designating an individual or group of individuals to coordinate the company's safety activities is clearly illustrative of senior management's support and commitment for safety. Charge this person or group with developing and coordinating of the firm's safety process. Front-line supervisors are held accountable for the actual implementation of the various elements of the process.

Hold managers and supervisors accountable for safety like other business functions — quality, production, labor cost, waste, etc. One element to hold managers and supervisors accountable for safety is to include safety as an element of the employee's performance review. Business leaders should hold their supervisors and managers accountable for monthly reports regarding safety inspections, employee training, incident reports, safety meetings, etc.

Another illustration of management's support and commitment for safety includes their involvement with safety meetings, facility audits and employee training. One company president personally provides training sessions for hourly staff on a monthly basis. In addition, the president participates in training classes provided by outside vendors.

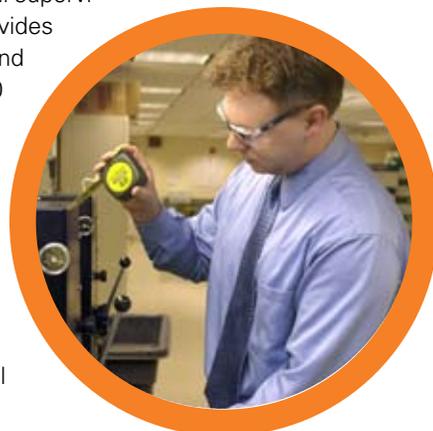
Safety has no price tag for the majority of these employers. The leaders of the businesses interviewed for this guide display their commitment and dedication to safety by providing time and resources for their management team and hourly staff. This includes, but is not limited to, company-sponsored incentive programs, comprehensive employee training programs, professional development for supervisory and hourly staff, equipment maintenance and modifications, and personal protective equipment.

Probably the most critical element with all the employers interviewed for this guide is the attitude that they want to prevent their staff from getting hurt. They show sincere care for their staff and families.

Because of market demand, all employers offer staff comprehensive benefit packages that include, but are not limited to, above average wages, health insurance, vacations and 401k plans.

Senior management demonstrates commitment to safety by the use of time and financial resources devoted for employee safety and equipment safety. For example one employer provides \$30,000 for training on cranes and hoists for all supervisors and equipment operators. Another employer provides safety training for all staff members on a weekly and monthly basis. Another employer spends \$400 to \$500 a month for new slings and material moving supplies.

One more key element that reflects senior management's support for safety is the development and implementation of a drug and alcohol-testing program. Generally, this involves a process of testing employees prior to employment, after accidents and randomly throughout the year. In addition, employers provide staff training on the effects of drugs and alcohol abuse associated with accidents in the workplace.



The majority of senior managers interviewed regularly attend professional safety and health seminars and workshops. These workshops include seminars provided by BWC's Division of Safety & Hygiene and other private consulting and/or business associations.

All employers have developed a strong relationship with their local BWC customer service offices. The majority of the employers interviewed have used BWC's on-site services and the Division of Safety and Hygiene's training center and video and reference libraries.

Commitment means:

- Treating employees as individuals, not machines;
- Placing the same value on safety as all other business functions;
- Holding supervisors accountable for safety;
- Including safety on employee safety performance;
- Management participation;
- No price tag for safety expenditures;
- Sincerely caring about staff and their families;
- Offering above average wages and benefits;
- Providing drug and alcohol testing;
- Attending safety conferences;
- Building a relationship with BWC's Division of Safety & Hygiene.

Pre-employment screening

Employers who developed a comprehensive pre-employment screening and interview process experienced the fewest accidents and lowest workers' compensation claims cost. These employers conduct extensive background reviews for all potential employees. Generally, a member of senior management, often part owner of the company, conducts initial interviews. Department managers, supervisors and group leaders conduct additional interviews. Although not all employers are involved in BWC's Drug-Free Workplace Program, the majority have implemented a drug-screening program for potential employees and post-accident cases.

Effective pre-employment screening includes:

- Drug-screening for pre-employment and post-accident.

Accident analysis

Accident analysis (investigation) is a crucial element for any safety process. Statements from several employers indicate to determine the real cause of accidents, managers (including senior management), supervisors and employees must be involved in the accident analysis/investigation process. In addition, employers must hold front-line supervisors and employees accountable to report and follow up with incident reports. The majority of employers providing information for this guide typically assigned the coordination of this process to one or two key individuals within the company. However, these key people review and share reports with staff members during weekly work group meetings, monthly safety training and regular safety committee meetings. Many employers said the time and resources used for accident analysis and investigation is returned many times by the useful information identified to prevent future accidents.

Useful accident analysis includes:

- Employee involvement;
- Follow-up incident reports;
- Sharing incident reports with staff.

Claims management

To control and reduce the cost of workers' compensation claims and premiums, employers identify a person in senior management to coordinate their efforts. These coordinators work with their managed care organizations (MCOs), BWC claims service specialists and third-party administrators to manage existing claims. Strategies such as transitional and return-to-work programs help lower costs. In addition, employers make the most of the BWC settlement process to reduce and/or eliminate the high cost of claims. Employers that develop strong relationships with their BWC representatives and MCOs tend to have fewer claims cost than other employers do.

Effective claims management includes:

- A claims coordinator.

Employee training

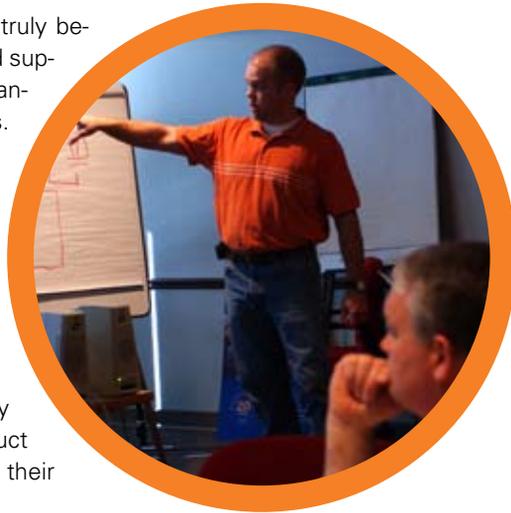
Employee training is a key element for an effective loss-prevention process. As stated, senior managers have availed themselves of BWC's Division of Safety & Hygiene training center. Courses attended by employers include, but are not limited to:

- Accident analysis;
- Controlling workers' compensation costs;
- Ssafety Works for Industry seminar series (This includes workshops on ergonomics, lockout/tag out, personal protective equipment, powered industrial trucks, emergency action and fire prevention, etc.).

Aside from the division's training center, many employers permit their staff to attend seminars and workshops provided by several employer associations throughout the state. These include seminars and workshkops conducted by the Ohio Manufacturers Association, National Federal of Independent Business, American Society of Safety Engineers, National Safety Council and local chapters of the National Tooling and Machining Association. Also, many employers have provided hourly staff with the Occupational Safety and Health Administrations (OSHA's) 30-hour and 10-hour training courses.

Proactive employers who value their staff and truly believe there is a cost benefit to safety provide and support training for their associates that exceeds mandates from OSHA and other regulatory agencies.

Many employers regularly provide staff training, and several employers provide training to their staff on a monthly basis. A number of employers report employee training is essential to keep their staff aware of safety concerns while performing their job functions. One method employers use to accomplish this task and hold supervisors accountable for safety is to require front-line staff members to conduct daily or weekly toolbox safety discussions with their co-workers.



Several employers interviewed have developed written standard operating procedures for all jobs and tasks within the company. Specific safe operating procedures (SOP) comply with OSHA as well as other safety and health requirements. These procedures serve as a valuable tool for training new and/or reassigned employees. Several employers have developed placards with SOPs for illustration on machinery and equipment.

It's important to provide time and resources to educate staff on safety and health issues applicable to the specific business. In addition to the mandated training by federal standards, employers should provide comprehensive training for all staff regarding job-specific standard operating procedures.

Make qualified instructors in-house or outside the organization available to provide training for employees.

Employee training includes:

- Seminars and workshops;
- Exceeding OSHA minimum requirements;
- Supervisor accountability;
- Weekly safety toolbox meetings;
- Written operating procedures;
- Qualified instructors.

Employee involvement

Employee involvement is exhibited in a variety of methods. Employers use safety committees and work groups as the most common method to promote employee involvement.

Safety committees or project teams focus their efforts on hazard correction and abatement, equipment modifications to improve safety and efficiency, and safety and health program review and development. Generally, these teams or work groups meet on a monthly basis for an hour at a time. Depending on the circumstances, some teams meet weekly.

To promote employee involvement, several companies assign hourly staff the task of providing safety training for new employees (on-the-job training). To ensure staff members are competent, management allocates time and resources for professional development. Employers accomplish this through the use of local safety and health seminars and workshops. Also, employers provide hourly staff opportunities to assist with departmental safety inspections.

To involve employees:

- Hold monthly, one-hour safety committee meetings;
- Encourage professional development.

Employee recognition

Employers illustrate employee recognition through the use of company-sponsored luncheons, family dinners, holiday parties, flexible work schedules, etc. Other illustrations of employee recognition that employers provide include opportunities to attend the All-Ohio Safety Congress & Expo, year-end bonuses, employee of the month plaques and special recognition certificates for staff members who assisted with special projects.

Some employers feature staff members in monthly newsletters for achievements in their career and/or job performance.

Employers with the greatest success primarily show their associates they value them as individuals. They recognize staff members through positive re-enforcement (a pat on the back for a job well done).

Employee recognition means:

- Positive reinforcement;
- Rewards for achievement.

Hazard recognition and abatement

Safety audits or inspections are critical to the safety process. The majority of employers interviewed for this guide rely on outside experts to assist them with annual safety audits. In addition to comprehensive annual inspections, employers generally require safety teams or department supervisors to conduct routine inspections of work areas. The most proactive employers have senior management directly involved in this process. The business owner assists safety and health specialists during annual facility evaluations.

The most beneficial way to use safety inspections is for employers to prioritize items, assign responsibility to appropriate staff and hold staff accountable for corrective actions.



When using in-house staff to conduct safety audits, employee training is vital. Train staff members on all applicable safety and health standards, company standard operating procedures and industry guidelines. For example, the maintenance staff should know and understand the National Electrical Code prior to conducting electrical safety inspections. Also, machine operators should know and understand OSHA and American National Standards Institute's standards for equipment and machinery when performing machine guarding audits.

Hazard recognition and abatement means:

- Supervisory routine inspections;
- Prioritization of inspection items;
- Staff accountability for corrections;
- Insuring employee training occurs.

Written safety programs

A written safety program is another key element to any organization's safety process. Employers should review applicable state and federal safety requirements for written programs that apply to their businesses. Below is a brief summary of written programs that apply to most businesses in the machining and fabrication industry.

- Accident investigation
- Crane/hoist/sling inspection
- Confined space
- Emergency action/fire prevention
- First aid
- Bloodborne pathogens
- Hazard communication
- Hearing conservation
- Lockout/tag out
- Personal protective equipment
- Powered industrial trucks
- Respiratory protection
- Electrical safety work practices
- Mechanical safety guarding

Industry standards are typically used to assist employers in developing site-specific programs that comply with federal and state regulations.

BWC's safety services

BWC's goal is to protect injured workers and employers from loss as a result of workplace accidents, and to enhance the general health and well-being of Ohioans and the Ohio economy. The combination of proactive safety strategies outlined in this manual and a hands-on claims management will help you reduce injuries and lower costs.

To learn about the safety services BWC offers, visit BWC's Web site, ohiobwc.com, or call 1-800-OHIOBWC, to request a *Safety Services Catalog*.