



OSHA Compliance Manual

PREFACE

Safety programs, efforts and activities just doesn't satisfy the law, it can save your bowling center money and help it run more efficiently. Frequently, an effective safety process can help management discover inefficiencies they were not aware of previously. By lowering costs of doing business (insurance rates, administrative costs, operational expenses, “re-do” work, etc.), a bowling center can compete in previously inaccessible markets.

If you would like to reduce the costs and risks associated with workplace injuries and illnesses, you need to address safety and health right along with operations. Safety should be managed like any other company function. Just as you plan, organize and control your center’s bowling experience, you should plan, organize and control your safety program.

This compliance manual presents several safety issues to consider regarding Occupational Safety & Health Administration (OSHA), compliance with safety standards, and offers example program statements, forms and ideas.

If you have any questions regarding this manual, the information contained in it, or would like on-site safety assistance, feel free to contact the Bowling Proprietor’s Association of America (BPAA) or Boretti, Inc.

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Prepared in accordance with appropriate OSHA regulations. Boretti, Inc. services, procedures, evaluations, solution ideas, findings, activities and actions are based upon current occupational and health standards and requirements, current reference sources, and accepted industrial safety and health principles and practices. They relate only to those conditions specifically discussed herein. The client is responsible for the safety, health and environmental conditions of their workplace, and for the implementation and maintenance of this safety program. We do not make any warranty, expressed or implied that your business is safe or healthful or that it complies with all laws, codes or standards.



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CHAPTER 1

INTRODUCTION

OSHA – HISTORY & PURPOSE

On December 29, 1970, the Occupational Safety & Health Act was signed into law. The OSH Act's mission is to “assure safe and healthful working conditions for working men and women; by authorizing enforcement of the standards developed under the Act; by assisting and encouraging the States in their efforts to assure safe and healthful working conditions; by providing for research, information, education, and training in the field of occupational safety and health; and for other purposes.”

In passing this act, congress found that personal injuries and illnesses arising out of work situations impose a substantial burden upon, and are a hindrance to, interstate commerce in terms of lost production, wage loss, medical expenses, and disability compensation payments. As a result, the purpose of the OSH Act is to assure so far as possible every working man and woman in the Nation safe and healthful working conditions, and to preserve human resources.

Assuring safe and healthful working conditions and preservation of human resources is accomplished using the following methods:

- Encouraging employers and employees to reduce the number of occupational safety and health hazards at their workplace, and to perfect existing programs for providing safe and healthful working conditions.
- Outlining separate but dependent responsibilities and rights for employers and employees with respect to achieving safe and healthful working conditions.
- Authorizing the Secretary of Labor to set mandatory occupational safety and health standards, and creating the Occupational Safety & Health Administration (OSHA).

OSHA focuses on three strategies to accomplish its mission:

- Strong, fair and effective enforcement;
- Outreach, education and compliance assistance; and
- Partnerships and cooperative programs.

WHO IS COVERED

Nearly every working man and woman in the nation comes under OSHA's jurisdiction, with some exceptions. The OSH Act covers private sector employers and their employees in the 50 states and certain territories under federal authority.

The OSH Act does not cover:

- The self-employed;
- Members of immediate family of farm employers that do not employ outside workers;
- Worker conditions that are regulated under worker safety or health requirements of other federal agencies (i.e., nuclear regulatory commission, mining, transportation);
- Employees of state and local governments; some states have their own occupational safety and health plans that cover these workers.

Bowling Centers are not exempted from the OSH Act, and therefore are covered by it.

Under the OSH Act, it is the *required* duty of each employer to:

- Furnish to each of his/her employees a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm; and,
- Comply with occupational safety and health standards promulgated under this Act.

Employees also have a duty under the OSH Act: each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued which are applicable to his/her own actions and conduct.

EMPLOYER & EMPLOYEE RIGHTS AND RESPONSIBILITIES

The OSH Act provides certain minimum rights and responsibilities of employers and employees. These are designed to reduce workplace hazards and to implement safety and health programs.

There are 26 States with OSHA-approved state plans that provide the same rights and protections, and in some cases additional rights may be granted by that state. What follows is a synopsis of the basic employee and employer rights and responsibilities allowed by the OSH Act.

OSHA Employee / Employer Rights

<i>Employee Rights</i>	<i>Employer Rights</i>
<ul style="list-style-type: none"> • Get training from your employer as required by OSHA standards 	<ul style="list-style-type: none"> • Request from the OSHA Consultation Service its free training and on-site consultation for workplace safety and health
<ul style="list-style-type: none"> • Request information from the employer about OSHA standards, worker injuries and illnesses, job hazards and workers' rights 	<ul style="list-style-type: none"> • Participate on advisory committees and in public hearings for developing, changing or revoking standards
<ul style="list-style-type: none"> • Request action from your employer to correct hazards and violations 	<ul style="list-style-type: none"> • Apply for variances from standards if equivalent safety is provided by other means
<ul style="list-style-type: none"> • File a complaint with OSHA if you believe that there are either violations of OSHA standards or serious workplace hazards 	<ul style="list-style-type: none"> • Participate in OSHA workplace inspection
<ul style="list-style-type: none"> • Be involved in OSHA's inspection of your workplace 	<ul style="list-style-type: none"> • Observe worksite monitoring/measuring of harmful substances regulated by OSHA
<ul style="list-style-type: none"> • Find out the results of an OSHA inspection 	<ul style="list-style-type: none"> • Contest any OSHA citations, penalties, and abatement (correction) requirements through formal and informal proceedings
<ul style="list-style-type: none"> • Get involved in any meeting or hearings to discuss any objections your employer has to OSHA's citations or to changes in abatement deadlines 	<ul style="list-style-type: none"> • Protection by law from disclosure of trade secrets after an inspection or subsequent proceedings
<ul style="list-style-type: none"> • File a formal appeal of deadlines for correction of hazards 	<ul style="list-style-type: none"> • Receive from the manufacturer a safety data sheet (SDS) for any regulated substance
<ul style="list-style-type: none"> • File a discrimination complaint 	
<ul style="list-style-type: none"> • Request a research investigation on possible workplace health hazards 	

<i>Employee Rights</i>	<i>Employer Rights</i>
<ul style="list-style-type: none"> • Provide comments and testimony to OSHA during rulemaking on new standards 	

OSHA Employee / Employer Responsibilities

<i>Employee Responsibilities</i>	<i>Employer Responsibilities</i>
<ul style="list-style-type: none"> • Read the OSHA poster at the workplace 	<ul style="list-style-type: none"> • Provide a workplace free from serious recognized hazards and comply with standards, rules and regulations issued under the OSH Act
<ul style="list-style-type: none"> • Comply with all applicable OSHA standards 	<ul style="list-style-type: none"> • Make sure employees have and use safe tools and equipment and properly maintain this equipment
<ul style="list-style-type: none"> • Follow all lawful employer safety and health rules and regulations, and wear or use prescribed protective equipment while working 	<ul style="list-style-type: none"> • Use color codes, posters, labels or signs to warn employees of potential hazards
<ul style="list-style-type: none"> • Report hazardous conditions to the supervisor 	<ul style="list-style-type: none"> • Establish or update operating procedures and communicate them so that employees follow safety and health requirements
<ul style="list-style-type: none"> • Report any job-related injury or illness to the employer, and seek treatment promptly 	<ul style="list-style-type: none"> • Provide medical examinations and training when required by OSHA standards
<ul style="list-style-type: none"> • Exercise rights under the OSH Act in a responsible manner 	<ul style="list-style-type: none"> • Post, at a prominent location within the workplace, the OSHA poster (or the state-plan equivalent) informing employees of their rights and responsibilities
<ul style="list-style-type: none"> • Cooperate with OSHA compliance officer conducting an inspection if he or she inquires about safety and health conditions in the workplace 	<ul style="list-style-type: none"> • Report to the nearest OSHA office within 8 hours any fatal accident or one that results in the hospitalization of three or more employees
	<ul style="list-style-type: none"> • Keep records of work-related injuries and illnesses. (Note: Employers with 10 or fewer employees and employers in certain low-hazard industries are exempt from this requirement)
	<ul style="list-style-type: none"> • Provide employees, former employees and their representatives access to the Log of Work-Related Injuries and Illnesses (OSHA Form 300)

<i>Employee Responsibilities</i>	<i>Employer Responsibilities</i>
	<ul style="list-style-type: none"> • Provide access to employee medical records and exposure records to employees or their authorized representatives
	<ul style="list-style-type: none"> • Provide to the OSHA compliance officer the names of authorized employee representatives who may be asked to accompany the compliance officer during an inspection
	<ul style="list-style-type: none"> • Not discriminate against employees who exercise their rights under the Act
	<ul style="list-style-type: none"> • Post OSHA citations at or near the work area involved. Each citation must remain posted until the violation has been corrected, or for three working days, whichever is longer. Post abatement verification documents or tags
	<ul style="list-style-type: none"> • Correct cited violations by the deadline set in the OSHA citation and submit required abatement verification documentation

ENFORCEMENT & CONSULTATION

As stated earlier, OSHA focuses on three strategies to accomplish its mission: 1) strong, fair and effective enforcement; 2) outreach, education and compliance assistance; and 3) partnerships and cooperative programs certain minimum rights and responsibilities of employers and employees. These are designed to reduce workplace hazards and to implement safety and health programs.

Enforcement

Enforcement plays an important part in OSHA's efforts to reduce workplace injuries, illnesses, and fatalities. A strong, fair and effective enforcement program establishes the foundation for OSHA's efforts to protect the safety and health of the nation's working men and women by focusing its enforcement resources on sites in more hazardous industries, especially those with high injury and illness rates. When the agency finds employers who fail to uphold their employee safety and health responsibilities, those who repeatedly and willfully violate the law, OSHA deals with them strongly.

While OSHA does not currently classify bowling as a hazardous industry, bowling centers are not immune from OSHA inspections. Since OSHA began keeping records of inspections in 1972, there have been approximately 325 OSHA inspections of bowling centersⁱ, 40% of which have been conducted in the past five yearsⁱⁱ.

Establishments are selected for OSHA enforcement inspections using the following priority:

- Reports of Imminent Dangers – these are situations where someone has called OSHA to help prevent accidents about to happen.
- Fatalities / Serious Accidents – in these situations, accidents have already occurred, resulting in death or injuries serious enough to send employees to the hospital.
- Complaints – OSHA has received a complaint about unsafe conditions and hazards in the workplace.
- Referrals – provided to OSHA by other government agencies.
- Targeted Inspections – such as the Site Specific Targeting Program, which focuses on employers that report high injury and illness rates, and special emphasis programs that zero in on hazardous work.
- Follow-Up – inspections that follow-up to verify the employer's compliance with OSHA corrections.

ⁱ Information current as of October 2018: source www.osha.gov Inspection Data Industry 1972 – 2018 NAICS Search Results

ⁱⁱ Information current as of October 2018: source www.osha.gov Inspection Data 2013-2018 Industry NAICS Search Results

Consultation

The other side of OSHA offers a variety of compliance assistance and outreach products and services to help employers prevent and reduce workplace fatalities, illnesses, and injuries. These include such items as compliance assistance information, publications and tools available on OSHA's website (www.osha.gov); education and training courses available through OSHA Institutes located throughout the nation; and free onsite consultation services.

OSHA's Consultation Service is a free service whereby an OSHA Consultant comes to the workplace to identify potential hazards and ways to correct them, improve their occupational safety and health management systems, and even qualify for a one-year exemption from routine OSHA inspection. OSHA's Consultation Service assistance includes an appraisal of:

- Mechanical systems, physical work practices, and environmental hazards of the workplace; and
- Aspects of the employer's present job safety and health program.

Consultation programs are funded largely by OSHA and run by state agencies at no cost to the employer who requests help. OSHA Consultation Service does not propose penalties or issue citations for hazards identified by the consultant. The employer must correct all serious hazards and potential safety and health violations, which the consultant identifies. However, if an employer does not correct violations identified through consultation assistance, the consultant may refer the employer for a possible inspection. The employer's name and firm as well as any information about the workplace will not be routinely reported to OSHA enforcement staff.

FEDERAL VS. STATE PROGRAM

Federal OSHA has jurisdiction over the entire nation and its territories, while specific state OSHA programs have jurisdiction over the state in which it operates.

The OSH Act applies to employment performed in a workplace in a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, Guam, the Trust Territory of the Pacific Islands, Wake Island, Outer Continental Shelf Lands defined in the Outer Continental Shelf Lands Act, Johnston Island, and the (Panama) Canal Zone. States are encouraged to develop their own OSHA program with guidelines that must meet at minimum, federal OSHA standards.

The following states and territories have approved OSHA Plans:

- Alaska
- Arizona
- California
- Connecticut*
- Hawaii
- Indiana
- Iowa
- Kentucky
- Maryland
- Michigan
- Minnesota
- Nevada
- New Jersey*
- New Mexico
- New York*
- North Carolina
- Oregon
- Puerto Rico
- South Carolina
- Tennessee
- Utah
- Vermont
- Virgin Islands*
- Virginia
- Washington
- Wisconsin
- Wyoming

* **Connecticut, New Jersey, New York and Virgin Islands** OSHA Plans cover public sector (State & local government) employment only.

In the event a bowling center is inspected by or requests assistance from OSHA, where your center is located will determine the OSHA organization with which you will interact. For a complete list of state plans and contact information, please visit OSHA at the following website: <http://www.osha.gov/dcsp/osp/states.html> .

REQUIREMENTS THAT AFFECT THE BOWLING CENTER

Bowling centers are not exempt from the OSHA standards. The following is a brief outline of the OSHA standards that apply to bowling centers:

Standard	Code
Acetylene (for Welding)	1910.102
Electrical: General	1910.303
Electrical: Safeguards for Personnel Protection	1910.335
Electrical: Selection & Use of Work Practices	1910.333
Electrical: Training	1910.332
Electrical: Use of Equipment	1910.334
Electrical: Wiring Design & Protection	1910.304
Electrical: Wiring Methods, Components and Equipment for General Use	1910.305
Emergency Action Plan	1910.38
Employee Alarm Systems	1910.165
Exit Routes: Maintenance, Safeguards and Operational Features	1910.37
Exits / Exit Routes	1910.36
Fire Detection Systems	1910.164
Fire Prevention Plan	1910.39
Fire Suppression: Automatic Sprinklers	1910.159
Fire Suppression: Portable Fire Extinguishers	1910.157
Flammable & Combustible	1910.106
Guarding Floor and Wall Openings and Holes	1910.23
Guarding of Portable Powered Tools	1910.243
Hand & Powered Tools and Equipment: General	1910.242
Hazards Communication (Safety with Chemicals)	1910.1200
Ladders: Fixed	1910.27
Ladders: Portable Metal	1910.26
Ladders: Portable Wood	1910.25
Lockout / Tagout	1910.147
Material Handling: General	1910.176
Medical / First Aid	1910.151
Noise	1910.95
Oxygen (for Welding)	1910.104
Personal Protective Equipment: Eye & Face	1910.133
Personal Protective Equipment: Foot	1910.136
Personal Protective Equipment: Hand	1910.138
Personal Protective Equipment: Head	1910.135

Standard	Code
Personal Protective Equipment: Respirator	1910.135
Safeguarding: Abrasive Wheels (Grinders)	1910.215
Safeguarding: General Requirements	1910.212
Safeguarding: Mechanical Power Transmission Apparatus	1910.219
Sanitation	1910.141
Stairs	1910.24
Ventilation	1910.94
Walking-Working Surfaces: General	1910.22
Welding: Arc	1910.254
Welding: General Requirements	1910.252
Welding: Oxygen-Gas	1910.253
Welding: Resistance	1910.255

NOTE: Some state plans require additional, specific written safety plans. The list above is not all-inclusive. Standards and their application change continuously.

For specific information contained in the standard, go to the following OSHA website to look up the code:

http://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1910

Keep in mind that many of these standards require safety training be conducted in recognition and control of the hazards that may be present.

General Duty Clause

The General Duty Clause is used where no specific standard applies to a recognized hazard, and it essentially states (the employer) “shall furnish a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.” The clause obligates employers to take additional steps towards safety if the well being of employees is in jeopardy. The General Duty Clause extends OSHA’s authority beyond specific requirements of the OSHA standards when a recognized hazard exists in the workplace.

Posting Requirements

Each employer shall post and keep posted a notice or notices, to be furnished by the Occupational Safety and Health Administration, U.S. Department of Labor, informing employees of the protections and obligations provided for in the OSH Act. The notice or notices shall be posted by the employer in each establishment in a conspicuous place or places where notices to employees are customarily posted. Each employer shall take steps to insure that such notices are not altered, defaced, or covered by other material

Where a State has an approved poster informing employees of their protections and obligations, posting this poster by employers covered by the State plan will constitute compliance with the posting requirements.

OSHA posters and posting requirements can be found at <http://www.osha.gov/pls/publications/pubindex.list>. For bowling centers in states with State OSHA plans, visit the appropriate website for that plan.

Recordkeeping Requirements

In general, employers are required to keep records of occupational injuries and illnesses that have occurred in their establishments. OSHA and the Bureau of Labor Statistics randomly collect records to determine injury performance in a particular industry.

Bowling centers are not exempt from these recordkeeping requirements and therefore must keep records of any occupational injuries and illnesses that have occurred in their establishments. It should be noted that some State OSHA plans may have more stringent recording requirements.

Reporting Requirements

As part of the OSH Act, certain types of accidents must be reported by the employer to OSHA. The basic requirement is as follows:

- Report must be made within eight (8) hours
 - A work-related incident resulting in a fatality
- Report must be made within twenty-four (24) hours
 - A work-related incident resulting in in-patient hospitalization
 - A work-related incident resulting in an amputation
 - A work-related incident resulting in the loss of an eye

The employer must orally report the fatality/multiple hospitalization by telephone or in person to the Area Office of the Occupational Safety and Health Administration (OSHA), U.S. Department of Labor that is nearest to the site of the incident. The employer may also use the OSHA toll-free central telephone number, 1-800-321-OSHA (1-800-321-6742).

When reporting an accident to OSHA, be prepared to provide the following information for each fatality or multiple hospitalization incident:

- The establishment name;

- The location of the incident;
- The time of the incident;
- The number of fatalities or hospitalized employees;
- The names of any injured employees;
- The contact person and his/her phone number; and
- A brief description of the incident.

It should be noted that State OSHA plans may have more stringent reporting requirements and specific contact information. These can be found in Appendix B.

CHAPTER 2

OSHA

INSPECTIONS



RIGHT OF ENTRY

OSHA, as an agency representing the Secretary of Labor, is authorized to:

- Enter any factory, plant, establishment, construction site, or other area, workplace or environment where work is performed by an employee of an employer; and
- Inspect and investigate during regular working hours and at other reasonable times, and within reasonable limits and in a reasonable manner, any such place of employment and all pertinent conditions, structures, machines, apparatus, devices, equipment, and materials therein, and to question privately any such employer, owner, operator, agent or employee.

This means that an OSHA Compliance Health & Safety Officer (CHSO) can, upon presentation of appropriate credentials, may enter any workplace to perform a safety inspection: this includes bowling centers.

Refusal of Entry

An employer has a right to require that the CHSO seek an inspection warrant prior to entering an establishment and may refuse entry without such a warrant. When entry is refused, the OSHA Compliance Health & Safety Officer will advise the employer that the refusal will be reported to the Assistant Area Director and that the agency may take further action, which may include obtaining legal process.



WHAT TO EXPECT

First and foremost, always remember that an OSHA Compliance Health & Safety Officer (CHSO) is a person. Assaulting a Compliance Officer is punishable by incarceration and fine.

When an OSHA Compliance Health & Safety Office enters the workplace to conduct an inspection, the following process can be anticipated:

Presentation of credentials—The onsite inspection begins with the presentation of the compliance officer's credentials, which include both a photograph and a serial number. There have been unscrupulous individuals who have impersonated Compliance Officers. If there is reason to suspect that this person may not be a Compliance Officer, contact the OSHA office to verify their credentials. The CHSO cannot collect any penalties nor promote any sale of any safety product or service.

Opening Conference—The compliance officer will explain why OSHA selected the workplace for inspection and describe the scope of the inspection, walk-around procedures, employee representation and employee interviews. The employer then selects a representative to accompany the compliance officer during the inspection. An authorized representative of the employees, if any, also has the right to go along. In any case, the compliance officer will consult privately with a reasonable number of employees during the inspection.

Walk-around—Following the opening conference, the compliance officer and the representatives will walk through the portions of the workplace covered by the inspection, inspecting for hazards that could lead to employee injury or illness. The compliance officer will also review worksite injury and illness records and posting of the official OSHA poster. During the walk-around, compliance officers may point out some apparent violations that can be corrected immediately. While the law requires that these hazards must still be cited, prompt correction is a sign of good faith on the part of the employer. Compliance officers try to minimize work interruptions during the inspection and will keep confidential any trade secrets they observe.

Closing Conference—After the walk-around, the compliance officer holds a closing conference with the employer and the employee representatives to discuss the findings. The compliance officer discusses possible courses of action an employer may take following an inspection, which could include an informal conference with OSHA or contesting citations and proposed penalties. The compliance officer also discusses consultation and employee rights.



VIOLATIONS & CITATIONS

Following an OSHA compliance inspection, violations of applicable OSHA standards may be cited, with appropriate penalties. OSHA penalties range from \$0 to \$129,336 depending upon how likely the violation is to result in serious harm to employees. OSHA must issue a citation and proposed penalty within six months of the violation's occurrence.

Citations describe OSHA requirements allegedly violated, list any proposed penalties and give a deadline for correcting the alleged hazards. Violations, and associated penalty ranges, are categorized as follows:

- Other-Than-Serious – A violation that has a direct relationship to job safety and health, but probably would not cause death or serious physical harm. Penalties are discretionary, but may range up to \$12,934.
- Serious – A violation where there is substantial probability that death or serious physical harm could result and that the employer knew, or should have known, of the hazard. A penalty is proposed and can range up to \$12,934 per violation.
- Willful – A violation that the employer intentionally and knowingly commits. Willful violations carry penalties of up to \$129,336.
- Repeated – A violation of any standard, regulation, rule or order where, upon re- inspection, a substantially similar violation is found. Repeated violations can bring penalties of up to \$129,336.
- Failure to Abate – Failure to correct a prior violation may result in civil penalties of up to \$12,934 **per day** for each day the violation continues beyond the prescribed abatement date.

Penalties may be reduced based on an employer's good faith (i.e., having a written, active, effective safety program), inspection history (i.e., no history of OSHA violation), and size of business. For serious violations, OSHA may also reduce the proposed penalty based on the gravity of the alleged violation. No good faith adjustment will be made for alleged willful violations.

The General Duty Clause may be cited and penalties assessed when no standard exists or when a standard exists, but it is clear the hazards involved warrant additional precautions beyond what the current standard requires. For the General Duty Clause to be cited, the following conditions need to be met:

- Failure to keep the workplace free of hazards,
- The hazard is recognized.



Citations using the General Duty Clause resulting from the hazard causing or was likely to cause death or serious physical harm, and there was a feasible and useful method to correct the hazard. In short, just because an OSHA standard doesn't exist for a hazard in a bowling center doesn't mean a citation and penalty won't be applied.

Although OSHA does not cite employees for violations, the OSH Act requires that each employee "shall comply with all occupational safety and health standards and all rules, regulations, and orders issued under the Act" that are applicable.

APPEAL

When OSHA issues a citation, it also offers the employer an opportunity for an informal conference with the OSHA Area Director to discuss citations, penalties, abatement dates or any other information pertinent to the inspection. The agency and the employer may work out a settlement agreement to resolve the matter and to eliminate the hazard. OSHA's primary goal is correcting hazards and maintaining compliance rather than issuing citations or collecting penalties.

Alternatively, employers have 15 working days after receipt of citations and proposed penalties to formally contest the alleged violations and/or penalties by sending a written notice to the Area Director. OSHA forwards the contest to the Occupational Safety and Health Review Commission for independent review.

Citations, penalties and abatement dates that are not challenged by the employer or settled become a final order of the Occupational Safety and Health Review Commission.

States with State OSHA plans may have more stringent regulation regarding appeals of OSHA citations. It is recommended that if an informal conference is requested, an appeal should be filed to record it. Failure to do so may result in the citation and penalty becoming final order.

CHAPTER 3
OCCUPATIONAL
SAFETY
PROGRAMS



OUTLINE OF REQUIRED WRITTEN PROGRAMS

The OSHA standards have several requirements for written safety programs. The purpose of these is to implement an effective, consistent safety training and communication process.

States with State OSHA plans may have additional requirements for developing and implementing overall written safety programs. As an example, California has the Injury & Illness Prevention Program (IIPP) standard, requiring all business entities in the state to have a safety program that meets eight elements; Washington has the Accident Prevention Program (APP) standard, which requires businesses with 11 or more employees on the same shift to have an employee-employer safety committee. Check with your state's OSHA plan to find out if there are any written safety program requirements.

Here is a list of OSHA required written safety programs:

- Safety Program
- Emergency Action Plan
- Fire Prevention Plan
- Hazard Communication (Working with Chemicals Safely)
- Lockout / Tagout / Blockout
- Workplace Violence

Regardless of any OSHA requirement, it is still a good idea to develop and implement a safety program for your center. Many times such safety programs qualify the center for insurance rate discounts, so there is a benefit beyond compliance. Besides, safety programs are good business by minimizing business interruption and maintaining a standard of quality.

In this chapter you will find details regarding the elements of each type of program, along with an example policy statement specific to a bowling center. In Appendix D, you will find supporting safety activity documents. When put together, the bowling center will have a written safety process that meets or exceeds the OSHA standards.



SAFETY PROGRAM

The following elements are provided as part of developing an overall well-rounded safety program.

MANAGEMENT COMMITMENT / ASSIGNMENT OF RESPONSIBILITIES

Management and supervision should accept the responsibility to implement and support the elements of an ideal safety program, and follow up with correction of reported hazardous exposures.

For this element, identify the person(s) who will be responsible for carrying out the details of the bowling center's safety program.

Assignment of the responsibility depends on how authority is delegated and the managerial structure for your operation.

It is important that responsibility is assigned so the safety program becomes a part of the daily operation of the bowling center. Just as someone would be held accountable for accomplishing daily tasks, they would be held accountable for getting the job done correctly the first time, safely.

Identify who is responsible for:

- Communication
- Inspections
- Accidents Investigations
- Training

Developing a policy statement can be a good method of assigning responsibility. A policy statement communicates management's commitment to employee safety and health. It also defines what is expected of all employees in carrying out this policy. The policy statement is an easy, non-threatening way of describing safety expectations.

Remember, for a safety program to be effective, management's commitment must be visible and sincere. Commitment may include establishment of safety objectives, accountability for safety and health responsibilities, allocation of company resources, and setting a good example.

Management should be involved in the long-term "visioning" of the work system as a whole. Quality is part of bowling experience provided to customers; safety brings efficiency to the quality work system.



The following is an example management commitment statement.

(Example Management Commitment / Assignment of Responsibility Statement)

MANAGEMENT COMMITMENT TO SAFETY AND HEALTH:

It is our policy to provide and maintain standards of safety and health for all personnel. Management has accepted the responsibility to ensure that all employees perform their assigned duties in a safe and correct manner. Through cooperation, communication, and training, together we will be able to obtain a safe working environment for all concerned. Safety and health of our employees and patrons continues to be the first consideration in operating our center.

ASSIGNMENT OF RESPONSIBILITY

The responsibility for the coordination and implementation of our safety program is outlined in the table below:

Name & Title	Area Covered

Safety program coordination and implementation responsibilities include compliance with our safety program, employee training, communication, inspections, and occupational injury/illness investigation. Other personnel may be assigned safety tasks to assist in completing these activities.



COMPLIANCE WITH SAFETY POLICY

Most businesses with employees usually have some form of this element in place. There are several measures that can be taken to ensure compliance with safe work practices;

- Recognition of safe workplace maintenance,
- Incentives for safe work practices,
- Evaluation of employee safety performance,
- Retraining employees whose safety performance is deficient,
- Disciplinary system.

In order to ensure compliance, define what safe work practices are, and they should be in place. This may be as simple as developing a code of safe work practices, or as complex as a safety operations manual for a piece of equipment or running a job. Whatever the case may be, consider including retraining in your method of ensuring compliance.

An example statement would be: *(Example Compliance with Safety Policy Statement)*

SAFETY POLICY COMPLIANCE

Managers, supervisors and leads are responsible for ensuring that safety and health policies and procedures are clearly communicated and understood by all employees. Managers, supervisors and leads are expected to set the example and follow safety policies, use safe work practices, and to enforce any rules fairly and uniformly. The following safety compliance policy is used in our center:

- Retraining:
All employees are responsible for using and following safe work practices, policies and procedures. Employees who are unaware or demonstrate they are unaware of correct safe work practices, policies, and procedures will be trained or retrained.
- Disciplinary Policy:
Employees who jeopardize or violate health and safety measures, rules, and standard precautions, who cause hazardous situations, or who fail to report or, where appropriate, fail to remedy such actions, may be subject to disciplinary action, up to and including termination. Although we do not want to terminate anyone, we cannot allow those who continually place their own



safety, as well as the safety of others, in jeopardy to continue to work in our bowling center.

SAFETY COMMUNICATION

There are several effective options that can be used for this element of a safety program. These options include:

- Safety suggestion boxes,
- Regularly scheduled safety meetings,
- Safety committees with published minutes,
- Company newsletters,
- Posters, memos, check stuffers, etc.

These are just some of the ways to communicate safety effectively to your employees. Whatever method you choose, be sure to encourage employees to inform the employer of hazards without fear of reprisal. **To be effective**, communication must happen both ways;

- From employer to employee, *and*
- From employee to employer.

State this in writing, and adhere to it. Doing so could save money and tragedy by preventing a possible accident. The following is a sample of communication systems:

(Example Safety Communication Policy Statement)

The objective of safety communication is to provide a means of establishing a safe and healthy work environment for all of us. We will use the following methods to communicate safety in our center (*check all that applies*):

- Safety Meetings – scheduled periodically to discuss safety. These meetings will be attended by all, and last approximately 5 – 10 minutes.
- Postings and Printed Safety Material – from time to time, printed safety material, memos and posters will be posted or distributed. Everyone should check the bulletin board(s) regularly, and read safety related memos and documents promptly.
- Safety Suggestions – Employees who wish to report workplace hazards anonymously may do so using the Safety Suggestion Form. All safety suggestions or concerns will be given consideration, and each will receive



a response.

Everyone's participation in the safety program is encouraged. Feel free to express any of your safety concerns or suggestions at any time. Everyone has a right to report safety hazards to their lead, supervisor or manager without fear of reprisal.

TIPS FOR PREPARING AND RUNNING SAFETY MEETINGS

The purpose of having safety meetings is to improve the work system. The idea is to eliminate unsafe system "traps" that lead to accidents. Let employees know that their input is the driving force in eliminating unsafe system "traps". Evaluate ideas brought about in the safety meeting, act on them, and review follow-up with all.

Here are some additional tips that can make your meetings effective:

- Keep the meetings short. About 5-10 minutes should do.
- Cover only ONE subject.
- Outline your subject prior to the meeting (what safety points do you want to make?). Know what you want to talk about.
- Relax. If you're relaxed while presenting the subject, your audience will relax also.
- Show real interest in your subject.
- Plan audience participation points into your meeting. Ask questions, plan a demonstration, and reward participation with positive feedback.
- Vary your presentation methods. Use photos, slides, videos, and objects, or go to a location to make your point.
- Use relevant examples.
- Don't talk down to your audience or criticize individuals in front of others.
- Have a translator available for non-English speaking employees.
- Document the meeting. Documentation lets you know which employees were absent and need to be updated, what issues need to be addressed and require follow up, and provides a record for compliance.
- Stick to your schedule of meetings, otherwise they are likely to be postponed or forgotten. Plan more frequent meetings during busy times to remind employees the importance of taking safety precautions.

SAFETY INSPECTIONS

Safety inspections are a visible way to demonstrate concern for the safety of everyone. Because this is a very visible step, correcting found hazards should be done promptly and in front of everyone to emphasize commitment to safety.



Safety inspections/evaluations should be specific to the center. An effective way of developing a safety checklist is to evaluate the workplace. Walk around identifying potential unsafe conditions and practices, and encourage employees to help in this process. Accident records can also be a good source of identifying specific hazards. The results can be made into a checklist.

Remember to establish a set schedule for conducting safety inspections and who is responsible for conducting them. Safety inspections should be conducted *at least* once quarterly, with corrections being made promptly and documented.

The following is a sample policy statement for conducting safety inspections:

(Example Safety Inspections Policy Statement)

SAFETY INSPECTIONS POLICY

Safety inspections are an important management tool in locating and correcting hazards. Safety inspections will be conducted as follows:

- Monthly of the entire center.
- Whenever new substances, processes, procedures and/or equipment are introduced into the workplace and present a new hazard.
- Whenever this center is made aware of any new or previously unrecognized hazard(s).

TIPS FOR CONDUCTING A SAFETY INSPECTION

The purpose of conducting safety inspections is to identify and rectify unsafe hazards, work practices, and procedures that lead to unsafe work systems. Here are some ideas to help you.

How to Prepare:

- *Review* accident/injury records. Note trends and areas of occupational injury/illness activity.
- *Determine scope* of inspection;
Broad - concentrate on entire operation, including prevention policies in place (formal scheduled inspection)
Specific - concentrate on area of noted trends or activity (new processes, procedures, substances, equipment, and previously unrecognized hazard)



What to Use:

- *Checklist or reminder card*
- *Your senses;*
 - *Eyes* - see what is hazardous, note watering of eyes for possible unseen exposure
 - *Nose* - smell what is hazardous (do so by sniffing, never inhale deeply) could be foul or sweet
 - *Ears* - hear what is hazardous, note how loud you have to speak to be heard (if you have to shout and stand close to be heard, investigate for a noise damage exposure)
 - *Taste* - taste what is hazardous (many times you can "taste" something foul in the air, or feel grittiness of dust in your mouth that may indicate an unhealthy exposure)
 - *Feel* - vibration, heat, or cold
 - *Ask* - what is the danger potential?

What to do:

- *Research* unanswered questions
- *Document* the good and the bad
- *Discuss* potential solutions with interested people
- *Correct* exposures, and document the correction.
- Make corrections *visible*

ACCIDENT INVESTIGATION

Accident investigations are a valuable element of a safety program. The purpose is to determine the factors (unsafe conditions and/or practices) that contributed to the injury or illness. Proper action can then be taken to prevent a recurrence.

Many times this element is diminished to assigning blame. To fully learn from an occupational injury or illness, investigations should be conducted **without bias** for obtaining objective findings.

Remember to identify who is responsible for conducting these investigations, and how they are to be conducted.

The following is a sample accident investigation policy statement:

(Example Accident Investigation Policy Statement)



OCCUPATIONAL INJURY / ILLNESS INVESTIGATION

The purpose of an injury / illness investigation is to find root causes and correct them to prevent a recurrence. This process is **fact-finding, not fault finding**. All occupational injuries and illnesses will be promptly investigated. Managers and / or supervisors will carry out a thorough injury and illness investigation to prevent future possible occurrences.

- When an Injury Occurs – go to the scene. Administer first aid; call 911 if needed.
- Gather Facts – review the scene; discuss the series of events that led up to the accident.
- Determine Causes – note hazards and unsafe practices that contributed to the accident.
- Solutions – outline specific solutions to correct the hazards and change unsafe practices (i.e., fix the interlock on the guard so the machine will stop if removed; retrain employees on how to recognize this hazard and what to do to prevent it).

NOTE: Notify the General Manager in the event of any serious injury resulting in overnight hospitalization or fatality. The General Manager shall notify OSHA immediately (within 8 hours) should any of these conditions apply.

TIPS FOR CONDUCTING AN INJURY / ILLNESS INVESTIGATION

- The **purpose** of an investigation is to find the root cause of the injury or illness so the hazard or practice can be rectified to **prevent further occurrences**. It is **not to fix blame**.
- Visit the scene as soon as possible following an injury or illness. You will be able to obtain facts while they are fresh, interview witnesses before they forget important details, and provide calm and order following the situation.
- Interview the injured worker, if possible. "Walk" the injured through a mock re-enactment. This will give you the injured person's perspective of the factors that lead to the injury or illness.
- Talk with everyone who has knowledge of the injury or illness, even if they didn't witness it. Interview everyone privately, one at a time.
- Document details graphically. Take photos, diagram or sketch the scene, and take measurements when appropriate.
- Focus on the root causes. Don't jump to conclusions. Try to answer the following questions:
 - What happened?
 - What was the employee doing?



- Why did the incident happen?
- What unsafe system "traps" lead to this injury or illness?
- What should be done?
 - Discuss ideas for prevention with management and interested persons.
 - Follow up with corrective action. Make it visible so everyone is aware of the outcome.

This demonstrates your commitment and enhances morale when corrective action is done to improve safety for everyone.

Additional Tips

Whenever facts seem unclear, or there is an element of controversy surrounding the accident, consider taking signed statements. When a third party appears to be involved, retain evidence. Get the name(s) of involved individuals / company(ies), addresses, phone numbers, license and insurance information. If a piece of equipment may have contributed, get equipment serial numbers, manufacturer name(s), copies of maintenance records, name(s) of individuals/company(ies) conducting maintenance or repairs, dates of maintenance or repair, date of build, etc.

HAZARD ABATEMENT

Hazard correction (Abatement) is often the most forgotten element of a safety program. Hazard correction means "follow-through". A system outlining your procedure for correcting discovered hazards needs to be written and implemented to make the ideal safety program effective.

Remember, identify when corrective actions will occur, in what order, how imminent hazards will be handled, and how to document corrections.

The following is a sample hazard correction statement:

(Example Hazard Abatement Policy Statement)



HAZARD CORRECTION

Whenever a potential safety and/or health concern is recognized, the hazard will be promptly corrected. For those hazards that cannot be corrected immediately, employees will be instructed (verbally or in writing) on safe practices to use until it can be corrected.

If an imminent hazard (one which can lead to serious injury or death) is discovered or exists, all exposed personnel will be removed from the area of potential exposure except those necessary to correct the hazardous condition. All employees involved in correcting the hazardous condition will receive appropriate training in how to do so, and will be provided with the necessary safeguards and personal protective equipment.

TIPS FOR HAZARD ABATEMENT / CORRECTION

- *Corrective Action Priority* – All hazards and unsafe practices will be corrected immediately and upon discovery. Some corrective actions may require more time to abate. Priority will be given to severe and imminent hazards (those which pose an immediate danger causing serious bodily harm).
- *Informing Affected Employees* – All affected employees will be informed of the hazard. While corrective action is being made, precautions will be taken to protect or remove employees from exposure to the hazard. If the hazard is determined to be of imminent danger, employees may not enter the imminent hazard area.
- *Hazard Control* – Hazard control means reducing or eliminating employee exposure to occupational injury or illness. Methods of hazard control include and are to be implemented in the following manner:
 - *Substitution* – The replacement of hazardous substances, equipment or processes by relatively harmless ones to reduce or eliminate worker exposure.
 - *Engineering Controls* – When substitution is not feasible, modify the workplace or equipment hazard through re-design, or alter the process to reduce or eliminate worker exposure.
 - *Administrative Controls* – When engineering controls are not feasible, remove the worker from the hazardous area or task to reduce or eliminate exposure. Administrative control methods include:
 - Rescheduling or relocating workers
 - Increasing frequency of rest periods
 - Rotating workers through various tasks



- Safe Work Practices – If a safe work practice is identified as needing modification to make it better, notify management for input on proposed modifications.

SAFETY & HEALTH TRAINING

Training is one of the most important elements of the ideal safety program. It allows employees to learn their job properly, brings new ideas into the workplace, reinforces existing ideas and work practices, and puts your program into action. Through training you "set the rules of the game."

Who do you train and when?:

- New employees (orientation), when hired
- All employees, when the ideal safety program is first established
- All employees, when given new job assignments
- Affected employees, when introducing new substances, processes, procedures or equipment into the workplace
- Affected employees, when you are made aware of new or previously unrecognized hazards.
- Supervisors.

Supervisors are key figures responsible for the establishment and success of the safety program. It is especially important to train them to be familiar with safety and health hazards to which employees under their control will be exposed. They need to be able to:

- Recognize hazards,
- Know the safety rules, procedures and work practices for controlling exposure, and take corrective and preventative action,
- Know the potential effects of hazards on employees,
- How to convey this information to employees,
- How to investigate accidents. The following is a sample training policy statement:

The following is a sample training policy statement:

(Example Safety Training Policy Statement)



SAFETY TRAINING

Awareness of potential safety and health hazards, as well as knowledge of how to control such hazards, is critical to maintaining a safe and healthful workplace. Safety training will include the Safety Program, safe work practices, and specific instructions regarding hazards unique to any job assignment. No one can be expected to undertake a job until they have received instructions on how to perform the job properly and safely. Safety training will be provided as follows:

- To all new employees when hired;
- Whenever the employee is given a new job assignment for which safety training has not been previously provided;
- Whenever new substances, processes, procedures or equipment which represent a new hazard are introduced into the workplace;
- Whenever the center is made aware of a new or previously unrecognized hazard;
- Whenever additional safety training is necessary;
- Whenever retraining is deemed necessary.

TRAINING TIPS

Preparation is an important, usually overlooked step in successful training. Here are some ideas to help prepare your training so the employee can get the most from it:

- Have an Objective – what is the expected behavioral outcome of teaching this skill?
- Have a Timetable – how long will it take for the individual to develop? What are the points of progress?
- Break down the Job – what are the important steps? Pick out the key points and explain WHY they are key
- Properly Set Up the Instruction Area in Advance
- Instructing

When you are ready to instruct, use the following tips:

- Prepare – Put the employee at ease. Define and explain the job, and the objective of the training. Outline the steps of the training, and the timeframes in which each step will be completed.
- Present – Tell, show, and illustrate each important step one at a time. Stress the key points. Discuss the expected outcomes and explain why (“how does it fit into the big picture?”).



- Perform – Have the employee perform each step. Correct the errors, and have the employee explain the key points to you as they complete each step. Make sure they understand WHY. Continue until YOU are sure the employee knows how to properly perform the job safely.
- Follow Up – Put the employee on their own. Let the employee know who to go to for help. Encourage questions. Check progress frequently, and taper off as the task is mastered.

Remember:

- Adults learn best in an organized, friendly atmosphere.
- Adults do not like to waste time.
- Adults respond quickly to positive feedback (give praise and attention).
- Adults remain sharp and committed when given regular refresher training.

RECORDKEEPING / DOCUMENTATION

Documentation and record keeping provide a measure of evaluating the success of the program. Periodic review of these records can assist you in identifying where the injuries and illnesses are occurring, and how many. They can reveal trends and patterns, and identify activity concentration. The value of these records is in assisting you to identify hazardous conditions, practices and procedures so immediate corrective action can be taken.

Other advantages to record keeping and documentation:

- It can be the only way to prove the program is being implemented,
- It can provide clarity to obscure situations,
- It can provide documentation to litigated issues.

The following is an example recordkeeping policy statement that delineates how record keeping and documentation should be maintained:

(Example Recordkeeping Policy Statement)

RECORDKEEPING

Records documenting safety activities will be retained as follows:

- Safety Program Activities: The following records will be maintained as follows:



- Inspections (1 year),
 - Safety and health training (1 year),
 - Injury/illness investigation (5 years),
 - Safety meetings and safety suggestions (1 year),
 - Hazard correction verification documents (1 year).
- Hazardous Waste: The following records will be maintained for three (3) years:
 - Manifests of disposed hazardous waste.
 - Hazard Communication: The following records will be maintained for duration of use, plus thirty (30) years:
 - Safety Data Sheets (SDS).



EMERGENCY ACTION PLAN

Having an emergency action plan means being prepared in case something goes wrong. The purpose of an emergency action plan is to facilitate and organize employer and employee actions during workplace emergencies. Well-developed emergency plans and proper employee training, such that employees understand their roles and responsibilities within the plan, will result in fewer and less severe employee injuries and less structural damage to the center during emergencies. A poorly prepared plan will likely lead to a disorganized evacuation or emergency response, resulting in confusion, injury, and property damage.

The following elements are provided as part of developing an emergency action plan.

(Example Evacuation Policy Statement)

Evacuation

In the event an evacuation from the center is necessary, the following procedures have been developed to ensure safe egress of personnel. Possible evacuation emergencies include:

- Fire
- After an Earthquake
- Flood
- Bomb Threat
- Hostile Person / Workplace Violence
- Active Shooter

SOUND THE ALARM

- Pull the “pull box.”
- If needed, staff and customers can be alerted using the public address (PA) system. The following notice will be announced over the PA:

Evacuation Script:

“Attention Please: This is an emergency announcement. Please evacuate the premises. Employees please report to your supervisor in the meeting area.”



EMERGENCY COORDINATOR

In the event an emergency occurs that requires evacuation, the highest-ranking center official shall assume the role of Emergency Coordinator. The Emergency Coordinator is responsible for:

- Ordering an evacuation,
- Coordinating information regarding the emergency,
- Collecting the head count, and reporting to arriving emergency personnel.

ACCOUNTING FOR STAFF

Managers / Supervisors are responsible for collecting the head count, and reporting it to the highest-ranking official on site.

EXITS – see posted evacuation maps

MEETING AREA

All Personnel will meet (Designated meeting place), and check in with their manager / supervisor. No one should leave this meeting place without notifying their manager / supervisor.

NO ONE IS ALLOWED BACK INTO THE BUILDING.

Managers / Supervisors will report the information to Emergency Coordinator. The Emergency Coordinator will let responding authorities know who is present, who may need to be rescued, and where they were last seen in the building

Types of Emergencies & Responses:

Managers shall ensure they and all employees are prepared for and know their duties for an emergency event.

- *Medical Emergencies* – responding to medical emergencies:
 - **NOTIFICATION:** grab the cordless / cell phone and dial 911 as you go to the scene.
 - First Aid / CPR certified person obtains supplies (First Aid Kit) and goes to scene.
 - **ASSESS THE SITUATION:** what happened; is the person unconscious, convulsing or bleeding. If bleeding, then from where.
 - First Aid / CPR certified person initiates aid.



- **COMMUNICATE WITH 911:** tell the operator the address and the situation. Remain on the line; communicate and follow instructions.
- **REMAIN AT THE SCENE:** Keep the situation calm and controlled. Offer comfort, keep spectators away.
- First Aid / CPR certified person allows emergency response personnel to take over or direct actions upon their arrival.

- *Fire* – report all fires and smoke:
 - **SOUND THE FIRE ALARM:** pull boxes (alarm) on wall.
 - **CALL 911:** tell the operator the nature of the emergency.
 - **IF YOU HAVE BEEN TRAINED, USE FIRE EXTINGUISH:** Keep the exit behind you.
 - **SAFELY EXIT THE CENTER / BURNING AREA OF THE CENTER:** Do not re-enter a burning building or structure.

- *Weather* – prepare for severe weather: secure the windows and doors, and move people to the center of the building.
- *Earthquake* –
 - **STAY INDOORS:** Get next to a sturdy table or desk. Pick a location that will give you air (one that does not face file cabinets or book shelves). Move only to get away from windows, walls, stacked bins, or any item that may fall.
 - **ONCE THE SHAKING STOPS:** Quietly and quickly exit the center.
 - **ONCE OUTSIDE:** move to an open area away from power lines, trees, and buildings.
 - **AFTER THE QUAKE:**
 - **CHECK FOR INJURIES:** Notify a First-Aid/CPR qualified person.
 - **CHECK FOR FIRES OR FIRE HAZARDS:** Turn off gas if you smell a leak; shut off the electricity if there is a short.
 - **TURN ON THE RADIO:** listen for advisories.
 - **USE AVAILABLE PHONES ONLY FOR GENUINE EMERGENCIES**

- *Hostile Person / Workplace Violence* –
 - **Threats of Violence:** all threats of violence should be taken seriously. Report any threats to the manager / supervisor.
 - **Suspicious Behavior:** report all suspicious behavior to the manager / supervisor.
 - **Hostile Person:** If the person is irate, allow them to vent; offer a solution



- to correct the problem. Don't intervene between people who are fighting. DO NOT provoke a hostile individual by panic, laughter, or anger.
- **Weapon:** if faced by a person with a weapon, don't resist; provide them with what they want.
- **Hostage:** If held hostage, remain calm; when possible, safely exit the area.
- *Active Shooter*
 - We will follow the Run – Hide – Fight method for active shooter response. Below are the responses if there is ever an active shooter in your vicinity.
 - **Run**
 - Have an escape route and plan in mind
 - Leave all belongings behind
 - Keep your hands visible at all times
 - **Hide**
 - Hide in an area out of the shooter's view
 - Block entry to your hiding place and lock the doors
 - Silence your cell phone and/or pager
 - **Fight**
 - As a last resort and only when your life is in imminent danger
 - Attempt to incapacitate the shooter
 - Act with physical aggression and throw items at the active shooter
- *Bomb Threat* – report the situation. If reported by phone:
 - Try to have another person monitor the call.
 - Stay on the phone as long as possible to find out as much information about the bomb as possible.
 - If you spot the suspicious device, do not touch, handle, or move it! Do not use a cell phone or pager!
 - If the situation dictates, an evacuation will be ordered and will occur only through areas previously searched. Do not use fire alarms as notification.
 - If a search team comes to the center, the search team should notify people as they clear areas, and direct their egress through the cleared areas.



- *Disruption of Services* –
 - **Loss of Electricity:** shut off power to any operating equipment using the steps to properly and safely power-down equipment.
 - **Loss of Water:** shut off valves for water supply.
 - **Loss of Sewage:** alternative possibilities include:
 - Water cans with plastic liners.
 - Outside agency rental portable latrines.
 - Trenches to be dug.

- *Hazardous Material Spill* –
 - **Notify Manager / Supervisor of Spill:** identify what and where.
 - If the spill is large, notify authorities.
 - **If Trained & Have Appropriate Protection:** contain the spill using provided absorbent material by surrounding the spill.
 - **Emergency Response:** the Fire Department will take all reasonable measures necessary to ensure that fires, explosions and releases do not occur, recur or spread to other hazardous materials.

FIRE PREVENTION PLAN

The purpose of the fire prevention plan is to prevent a fire from occurring in the center. The fire prevention plan should describe the fuel sources (hazardous or other materials) that could initiate and/or contribute to the spread of a fire, as well as the fire annunciation and suppression systems, such as fixed fire sprinkler and alarm systems, in place to control the ignition or spread of a fire.

The following elements are provided as part of developing a fire prevention plan.

(Example Identification of Potential Fire Sources Policy Statements)

Fire Hazards

The following are common fire hazards at the center, with controlling methods:

- *Smoking* – Smoking areas are designated for a reason.
 - SMOKING is allowed in designated areas only.
 - Always be sure lit cigarettes and matches are disposed of in the proper receptacles BEFORE entering non-smoking areas.



- Cigarette containers should be emptied frequently into metal containers with lids. Never dispose of lit cigarettes, cigarette butts, and lit matches in trashcans, debris collection points, or with flammable (chemical) waste.
- *Electrical Hazards* – This source of ignition exists in areas where overloaded outlets are observed, and electrical equipment is improperly maintained.
 - Never overload the outlets in your area by using a multiple outlet adapter.
 - Check equipment prior to each use, for frayed cords, spliced wiring, and broken or missing pieces. Report damaged equipment to Managers / Supervisors. Don't use the equipment until repairs are made.
 - When installing or removing electrical equipment, be sure the energy source is de-energized (locked-out, blocked-out) until the job is complete.
- *Accumulation of Waste* – Trash should never be "stockpiled", especially in front of outlets, open wiring, in front of equipment and heating vents, electrical equipment and hot elements. Refuse shall be placed where it belongs: in marked areas.
 - Place refuse where it belongs ... in trashcans.
 - Empty trashcans into a designated bigger container if they become full, or obtain a second trash can for as long as it's needed.
 - Flammable liquid waste shall be stored in proper containers in a covered, bermed area and bonded / grounded until picked up for disposal.
 - Oily cloths should be placed in metal containers with self-closing lids.
- *Flammable Liquids* – Flammable liquids include, but are not limited to, cleaning fluids, paint, paint thinners, machine, and some floor strippers.
 - Chemical cleaning supplies must be properly labeled, and only used as directed by the manufacturer.
 - Storing these items in enclosed, metal lockers.
 - Never store these items on open shelves, next to open wiring or equipment vents, and in warm areas such as the electrical service or computer room. The vapors flammable liquids emit can ignite.
- *Welding & Hot Work* – Welding and hot work can ignite fires when sparks and hot elements come in contact with flammable / combustible material



(i.e., wood, oil, etc.).

- Identifying the area where welding / hot work is to commence, and clearing it of flammable / combustible materials (should be at least 30 feet from where hot work will be performed). Complete a hot work permit to ensure the site is safe.
- Have a fire extinguisher available just in case a fire is ignited.
- Remain on fire watch for a minimum of 30-minutes after the welding / hot work is completed (i.e., soldering pipe, refrigerator lines, pinsetter components, etc.)
- **Storage** – Like the accumulation of waste, storage items such as paper and equipment should be stored properly.
 - Storing items so they don't obstruct access to fire extinguishers and alarms, and low enough so they don't inhibit the proper functioning of the sprinkler system (keep at least eighteen inches of clearance).
 - Never store items near or against open computer wires, equipment and heater vents, outlets, circuit panels, and hot elements.
- **Unattended Cooking** – Cooking offers several potential sources for fire, including oil fires. The issues are the many sources of ignition: flame, electrical spark, over cooked food, etc.
 - Never leave cooking food unattended. The food can become overcooked / overheated, and burn.
 - Cook food within the proper time period needed. Use timers and respond to them by turning / removing food when they alarm.
 - Do not store flammable chemicals or combustibles (paper towels, napkins, etc.) by heat sources: open flames, next to grill, etc.

(Example Fire Suppression Equipment & Maintenance Policy Statement)

Fire Suppression Equipment & Maintenance:

The center uses fire extinguishers and a building sprinkler system to suppress and control fires. _____ is responsible for ensuring the annual maintenance of fire suppression equipment or fire prevention/ignition control systems. Records documenting maintenance are retained.



- *Fire Extinguishers*

Fire extinguishers are multiple use and rated as follows:

A = paper/wood,

B = liquid,

C = electrical.

All of our fire extinguishers are rated ABC.

Fire extinguishers are inspected monthly by _____, and serviced **annually**.

- *Cooking Hood Fire Suppression System*

The fire suppression system for cooking is inspected monthly by _____, and serviced **annually**.

- *Sprinkler System*

The center's building sprinkler system is flow tested and serviced **annually**.

(Example Flammable / Combustible Waste Handling Policy Statement)

Accumulation of Flammable or Combustible Waste Materials:

Flammable or combustible materials will be placed in proper containers in accordance with the product label, Safety Data Sheet (SDS) or regulatory requirements until such time the waste can be disposed of properly.

Flammable "waste" includes cloths used for wiping oil and solvent drips off of the pinsetters and other equipment. These cloths are to be placed in the marked self-closing containers located _____ of the center to ensure spontaneous combustion is prevented.

All spray cans will be disposed of in appropriate trash receptacles, when empty. At no time will disposed of spray cans be placed next to any heat source.



HAZARD COMMUNICATION

Chemicals and hazardous substances are part of our lives. In a workplace, however, we are more likely to be exposed to potential harmful affects because the exposure is greater (we work with chemicals throughout the day), concentrations are higher (it is cost effective to buy chemicals in concentrations that require mixing with water for safe use), and the exposure time is longer (we use chemicals for longer periods of time in the workplace).

Hazard communication is a system designed to reduce occupational injuries and illnesses caused by the misuse of chemicals and hazardous substances. This OSHA standard is intended to ensure that both employers and employees are aware of the dangers associated with hazardous substances in their workplaces through a mandated communication system that uses labeling, Safety Data Sheets, and training. The thought is by knowing what you are working with, you can be safer by taking the appropriate precautions.

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) is a system for standardizing and harmonizing the classification and labeling of chemicals. It is a logical and comprehensive approach to:

- Defining health, physical and environmental hazards of chemicals;
- Creating classification processes that use available data on chemicals for comparison with the defined hazard criteria; and
- Communicating hazard information, as well as protective measures, on labels and Safety Data Sheets (SDS).

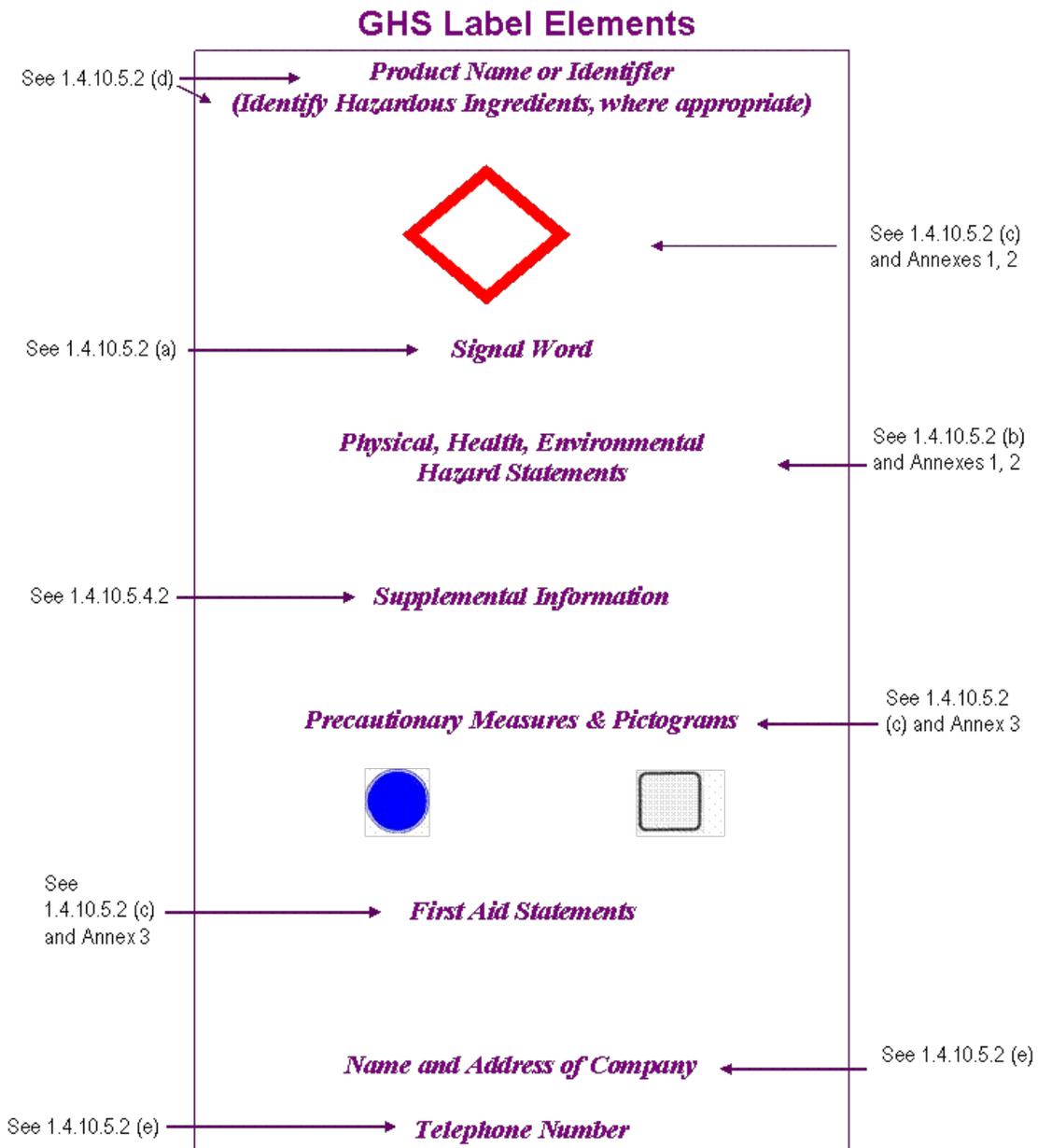
SDS Format- Information in the SDS should be presented using the following 16 headings in the order given below:

- Identification
- Hazard(s) identification
- Composition/information on ingredients
- First-aid measures
- Fire-fighting measures
- Accidental release measures
- Handling and Storage
- Exposure controls/personal protection
- Physical and chemical properties
- Stability and reactivity
- Toxicological information
- Ecological information
- Disposal considerations

- Transport information
- Regulatory information
- Other information

(Example GHS Chemical Label)

Figure 4.8



(Example GHS Pictograms and Hazard Classes)

Figure 4.9

GHS Pictograms and Hazard Classes		
<ul style="list-style-type: none"> ▪ Oxidizers 	<ul style="list-style-type: none"> ▪ Flammables ▪ Self Reactives ▪ Pyrophorics ▪ Self-Heating ▪ Emits Flammable Gas ▪ Organic Peroxides 	<ul style="list-style-type: none"> ▪ Explosives ▪ Self Reactives ▪ Organic Peroxides
<ul style="list-style-type: none"> ▪ Acute toxicity (severe) 	<ul style="list-style-type: none"> ▪ Corrosives 	<ul style="list-style-type: none"> ▪ Gases Under Pressure
<ul style="list-style-type: none"> ▪ Carcinogen ▪ Respiratory Sensitizer ▪ Reproductive Toxicity ▪ Target Organ Toxicity ▪ Mutagenicity ▪ Aspiration Toxicity 	<ul style="list-style-type: none"> ▪ Environmental Toxicity 	<ul style="list-style-type: none"> ▪ Irritant ▪ Dermal Sensitizer ▪ Acute toxicity (harmful) ▪ Narcotic Effects ▪ Respiratory Tract ▪ Irritation



The following elements are provided as part of developing a hazard communication program.

(Example Organization Chart)

Activity Organization & Responsibility Table:

Activity	Responsibility	Actions
Purchasing		
Inventory of Hazardous Substances		
Labeling		
SDS		
Hazardous Non-Routine Tasks		
Contractors		

(Example Purchasing Policy Statement)

Purchasing

All Managers have the ability to order chemicals and hazardous materials for their needs, through our approved supply company. With this ability comes the responsibility to ensure chemicals are approved for use; and that they are labeled and have Safety Data Sheets (SDS) in accordance with this program. Managers must also ensure that the proper protective equipment is obtained and provided for employees who will use the chemical or hazardous material, and that employees are trained in its safe use.

(Example Inventory Policy Statement)

Inventory of Hazardous Substances

An inventory of all known hazardous substances in the center is required by this program. This inventory will be kept with the Department safety data sheet (SDS). _____ is responsible for keeping the inventory updated. A master copy will be kept in the General Manager's office. For each chemical listed on the inventory, the Manager will ensure an updated SDS is available.



(Example Labeling Policy Statement)

Labeling

All containers of hazardous substances used in the center will contain labels following the GHS. Primary labels on containers provided by the manufacturer will have the following information at a minimum:

- Identity of the hazardous substance(s),
- Hazard warning statements,
- Name and address of the chemical manufacturer or importer.

To further ensure that Employees are aware of the hazards of materials used in their work areas, it is this center's policy to label all secondary containers (containers for portable use in the workplace such as spray bottles) as follows:

- Identity of the hazardous substance(s),
- Hazard warning statement.

All Managers / Supervisors are responsible to ensure that containers are properly labeled before they are used.

(Example Safety Data Sheet Policy Statement)

Safety Data Sheets (SDS):

Copies of SDS for all hazardous substances used in the center will be obtained with all chemical purchases and maintained in each Department.

_____ is responsible for maintaining a Master for the center. Managers are responsible for obtaining SDS, retaining a copy in their Department, and providing the original SDS to _____. Managers will review incoming data sheets for new and significant health/safety information, and ensure any new information is passed on to the affected employees and that they are trained.

SDS will be reviewed for completeness. If an SDS is missing or obviously incomplete, a new SDS will be requested from the distributor or manufacturer.

SDS will be made available to all employees at all times for review. If an employee is exposed to a hazardous substance, a copy of the SDS will be taken to the treating licensed healthcare provider.



If a chemical or hazardous substance becomes obsolete or is replaced, _____ will remove the SDS from the Master, write the date of last use on and highlight it, and retain it for 30 years. The Department will be instructed to remove and properly dispose of their copy.

(Example Hazardous Non-Routine Tasks Policy Statement)

Hazardous Non-Routine Tasks

Employees required to perform hazardous non-routine tasks will be provided information about the hazards to which they may be exposed during the activity prior to starting work on such projects. Information will include:

- Specific hazards,
- Protective/safety measures that must be utilized,
- Measures the center has taken to lessen hazards including ventilation, respirators, presence of another employee, and emergency procedures.

(Example Contractor Information Policy Statement)

Informing Contractors:

To ensure that contractors work safely in our center, and to ensure the safety of our customers and employees, they will be provided with and provide the center with the following information:

- Hazardous substances to which they may be exposed while working at the center,
- Hazardous substances which they may be using to complete their tasks while working in the center, and
- Precautions employees may take to lessen the possibility of exposure by usage of appropriate protective measures.



LOCKOUT / TAGOUT / BLOCKOUT

Lockout, blockout and tagout are a critical part of a strong all-around safety program. In Lock-out, blockout and tag-out, maintenance employees work with other employees to positively prevent all forms of hazardous energy from causing harm.

Hazardous energy comes in many forms. Electrical energy can cause electrocution and burns, provide ignition to flammable atmospheres, and activate mechanical equipment. Chemical flow and pressure from hydraulic systems can cause uncontrolled reaction and injury. Springs can release without warning, resulting in catastrophic harm, and pin setter decks can fall from their hooks, trapping mechanics under them. There are many sources of energy found in a bowling center that if not controlled can result in serious injury or death.

Fatalities have occurred to workers in bowling centers due to the lack of following a lockout / tagout / blockout process: just check the OSHA website (www.osha.gov). This is a guaranteed way of getting OSHA's attention and fines.

When a piece of equipment is being worked on (i.e., repaired, maintained, cleaned, clearing jams, setting up), all sources of hazardous energy must be securely and positively locked out until the equipment is operational.

The following elements are provided as part of developing a lockout / blockout / tagout program.

NOTE: OSHA REQUIRES THAT EACH PIECE OF EQUIPMENT HAVE SPECIFIC LOCKOUT / BLOCKOUT / TAGOUT PROCEDURES THAT ARE REVIEWED AT LEAST ANNUALLY AND UPDATED AS NEEDED. THE FOLLOWING EXAMPLE DOES NOT MEET THE EQUIPMENT SPECIFIC OSHA REQUIREMENTS.

(Example Lockout / Tagout / Blockout Responsibility Policy Statement)

Responsibilities

To be an effective injury prevention procedure, this program assigns responsibility **to all trained employees**. *The most important part of the Lockout / Blockout Program is that only the person that installs the lock has the key and maintains it in his / her possession.* Duplicate, or master keys, are not allowed and must be destroyed before any lock can be used in this program.



(Example Lockout / Tagout / Blockout Instruction Policy Statement)

Instruction

Employees responsible for the service, maintenance, removal and installation of machinery or equipment shall be instructed in this procedure before being assigned to work on it. It will be based upon a survey of the equipment by responsible employees who are thoroughly familiar with its operation and associated hazards.

All affected employees shall be trained on the safety significance of the lockout / tagout / blockout program. Instruction in the purpose and use of the lockout / tagout / blockout program shall also be provided to each new or transferred affected employee. Anytime equipment is changed, or new equipment put in use, a lockout / tagout / blockout procedure will be developed for that equipment, and instruction on the procedure will be provided to all affected employees.

(Example General Lockout / Tagout / Blockout Procedure Statement)

NOTE: This is a general procedure; each machine needs its own specific lockout/blockout procedure in writing as well.

General Procedure

- Identifying Lockout / Blockout –
 - Lockout/Blockout Survey-

The initial phase of the Lockout/Blockout Program is to complete a survey of all equipment in the company to identify the equipment that will require Lockout/Blockout Procedures. Once completed, the individual Lockout / Blockout procedure for each required machine / equipment will be generated and the proper Lockout / Blockout devices provided.
 - Tagout Procedures –

A Tagout Procedure is one which the tag identifies who is working on what and when. A tag will be used with a lock, and not be used as a substitute for a lockout device.
- De-Energization
 - Before working on, repairing, adjusting, clearing jams or replacing machinery and equipment, the following procedures will be utilized to place the machinery and equipment in a neutral or zero mechanical state:



- Preparation
 - All employees authorized to perform lockout shall review the Lockout / Blockout procedure for that piece of equipment and make an inspection to locate and identify all energy sources and the switches, valves or other energy isolating devices that apply to the equipment to be locked out. More than one energy source (electrical, mechanical, or others) may be involved. Any questionable energy source problems shall be resolved before job authorization is obtained and lockout commences.
- Notification
 - Notify all affected employees that the machinery, equipment or process will be out of service.
- Shutdown
 - The machine or equipment will be turned or shut down using the specific procedures for that specific machine.
 - If the machinery, equipment or process is in operation, follow normal stopping procedures (depress stop button, open toggle switch, etc.).
 - Move switch or panel arms to "Off" or "Open" positions and close all valves or other energy isolating devices so that the energy source(s) is disconnected or isolated from the machinery or equipment.
- Isolation
 - All lockout or blockout devices that are needed to control the energy to the machine or equipment will be physically located and operated in such a manner as to isolate the machine or equipment from the energy source.
 - Lock, blockout all energy devices with an assigned individual lock.
 - A tag will be attached to the same point a lock is attached.
 - At no time will a tagout device be used without a lock.
 - Multiple locks will be applied by all employees working on a piece of equipment.
- Stored Energy
 - Following the application of the lockout/blockout devices to the energy isolating devices, all potential or residual energy will be relieved,



disconnected, restrained, and otherwise rendered safe by:

- Grounding capacitors
 - Releasing springs
 - Supporting gravity fed deck on the pinsetter
 - Disconnecting hydraulic systems
 - Bleeding air systems
- Verification
 - Verify that isolation or de-energization of the machine or equipment has been accomplished. After assuring that no employee will be placed in danger, test all lockout / blockouts by following the normal start up procedures (activate start button, etc.).

***Caution:** *After Verification, place controls in neutral position.*
 - Extended Lockout / Blockout
 - Should the shift change before the machinery or equipment can be restored to service, the lockout / blockout must remain. If the task is reassigned to the next shift, the new employees must install their own lockout / blockout devices before the previous shift may remove their lock and tag.
 - More Than One Employee Lockout / Blockout
 - If more than one employee is assigned to a task requiring a lockout / blockout, each employee must also place his or her own lock and tag on the energy isolating device(s). This can be accomplished using a multiple lockout hasp.
 - Contractors
 - Contractors working on the company's property and equipment must adhere to this lockout / blockout procedure at a minimum while servicing or maintaining equipment, machinery or processes.
_____ , will ensure contractors follow this procedure.

(Example Release Policy Statement)



Release from Lockout / Blockout

Before lockout / blockout devices are removed and the energy restored to the machine or equipment, the following actions will be taken.

- The work area will be thoroughly inspected to ensure that nonessential tools have been removed.
- The work area will be checked to ensure that all employees have been safely positioned or removed.
- Each lockout / blockout device will be removed from each energy-isolating device by the employee who applied the device.

(Example Emergency Lock Removal Policy Statement)

Emergency Lock Removal

Only the employee that locks and tags out machinery, equipment or processes may remove his/her lock and tag. However, should the employee leave the facility before removing his/her lock and tag, _____ may remove the lock and tag using the Emergency Lock Removal Form. _____ will assure all tools have been removed, all guards have been replaced, and all employees are free from any hazard. The employee who placed the lock shall be physically accounted for prior to lock removal.

CHAPTER 4
ADDITIONAL
SAFETY
STANDARDS



MACHINE SAFEGUARDING

OSHA addresses machine safeguarding in bowling centers, particularly for pinsetters, in a letter of interpretation. Letters of interpretation are OSHA's way of clarifying how a standard applies to a particular industry. What follows is an excerpt from that letter:

"The Occupational Safety and Health Administration (OSHA) has no regulations specific to bowling pin setting machinery and enforcement of the law against employers whose employees were exposed to risk of harm because of defective or ill-guarded bowling pin setting machinery would probably come under the provision of 29 CFR 1910.212(a)(1)(2), or 29 CFR 1910.147, OSHA's Lockout-Tagout standard."

The object of machine safeguarding is to prevent inadvertent contact with machine points of operation, power transmission, hazardous energy and moving parts. All openings to machines or equipment where employees can accidentally or intentionally reach OVER, UNDER, AROUND or THROUGH shall be guarded to prevent injuries to employee.

The objective of including machine safeguarding in your program is to provide a safe process for employees to use in ensuring the equipment they operate has functional machine safeguards in place.

A wide variety of mechanical motions and actions may present hazards to the worker. These can include the movement of:

- Rotating members
- Reciprocating arms
- Moving belts
- Meshing gears

Recognizing them is the first step toward protection from the danger they present.

The primary concern for safeguarding in a bowling center is the pin setter, although there are other machines such as slicers used in food preparation and motors on equipment that also need to be safeguarded. Most equipment built today is designed with guards in place, however, in some work areas there are older machines that were installed prior to guards being required.

What must a safeguard do to protect workers against mechanical hazards? Safeguards must meet these *minimum* general requirements:



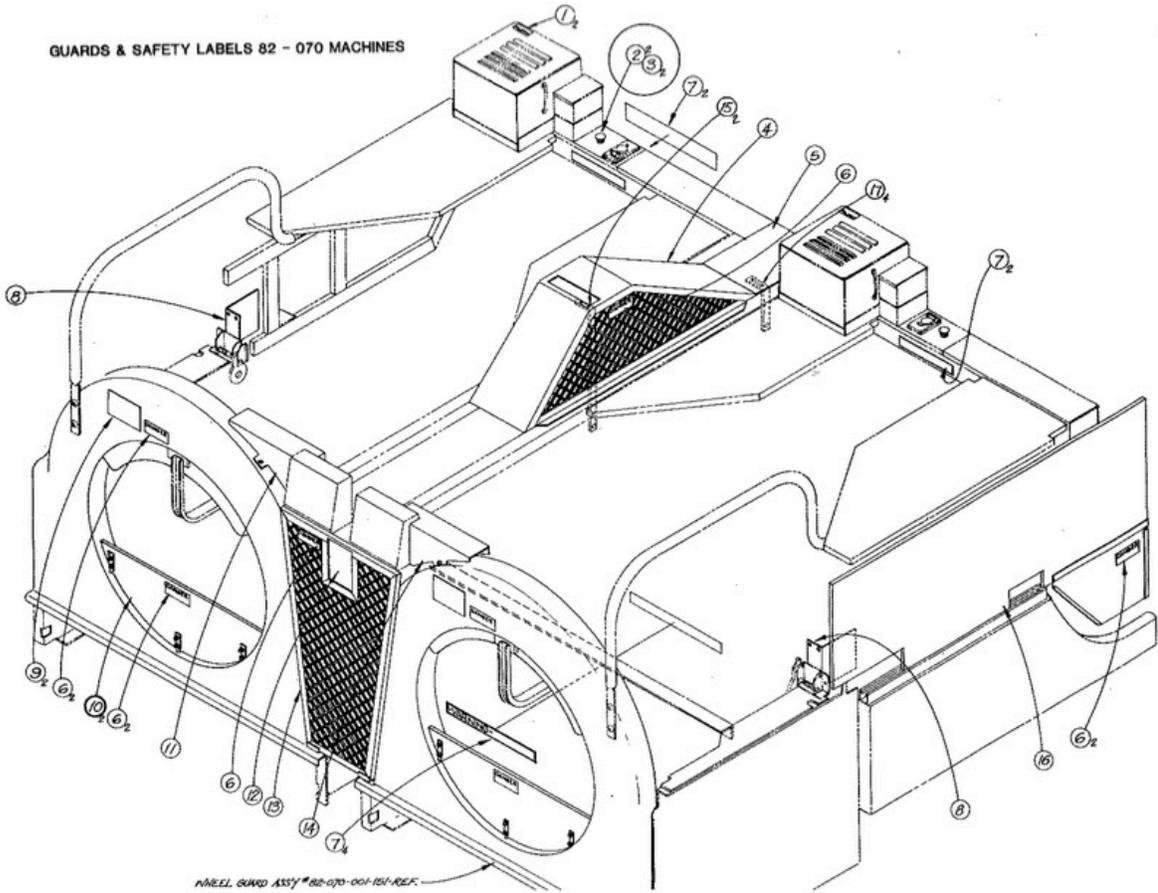
- **Prevent contact:** The safeguard must prevent arms, hands, or any part of a worker's body or clothing from making contact with dangerous moving parts. A good safeguarding system eliminates the possibility of workers placing parts of their bodies near hazardous moving parts.
- **Secure:** Workers should not be able to easily remove or tamper with the safeguard. A safeguard that can easily be made ineffective is no safeguard at all.

Guards and safety devices should be made of durable material that will withstand the conditions of normal use. They must be firmly secured to the machine.

- **Protect from falling objects:** The safeguard should ensure that no objects can fall into moving parts. A small tool that is dropped into a machine could easily become a projectile that could strike and injure someone.
- **Create no new hazards:** A safeguard defeats its own purpose if it creates a hazard of its own such as a jagged edge or an unfinished surface which can cause a laceration. The edges of guards, for instance, should be rolled or bolted in such a way that they eliminate sharp edges.
- **Create no interference:** Any safeguard that impedes a worker from performing the job quickly and comfortably might soon be overridden or disregarded. Proper safeguarding can actually enhance efficiency since it can relieve workers' apprehension about injury.
- **Allow safe lubrication:** If possible, one should be able to lubricate the machine without removing the safeguards. Lubricating oil reserves outside the guard, with a line leading to the lubrication point, will reduce the need for the operator or maintenance worker to enter the hazardous area.

The following pages show some photographic examples of the proper guards that are needed for the different types of pin setting machines. If your center's pin setting machines are not equipped with the guards pictured below, obtain the correct guards from the machine manufacturer.

GUARDS & SAFETY LABELS 82 - 070 MACHINES



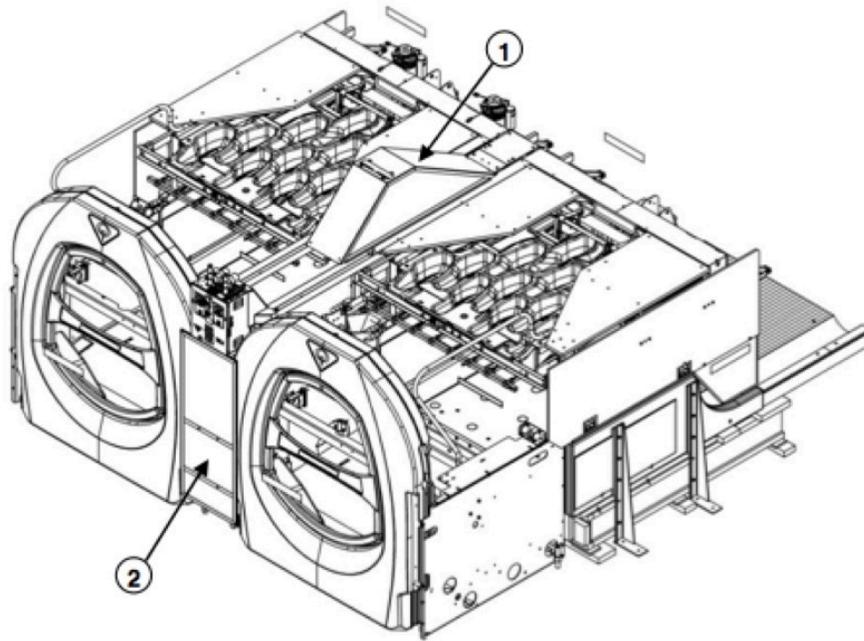


GUARDS & SAFETY LABELS 82-070 MACHINES

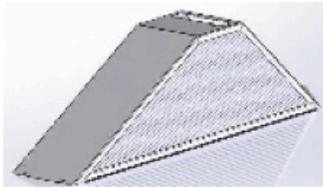
	ITEM	PART NUMBER	DESCRIPTION
	1	070-007-646	Caution Decal (Chassis Lid)
(Not on all machines)	2	746-605-011	Contact Block
	3	759-517-051	Palm Button Safely Switch Operator Housing
	4	070-011-401	Ball Lift Guard WLD.
	5	070-004-713	Cover Guard Assembly
	6	070-011-211	Danger Decal
	7	070-005-614	Warning Decal
	8	070-004-738	(Toe) Guard

	ITEM	PART NUMBER	DESCRIPTION
	9	070-011-409	Safely Guard Plate
	10	000-022-219	Pin Elevator Guard Assembly
	11	070-011-393	L.H. Belt Guard
	12	000-024-694	Filler Plate
	13	070-004-690	B.E. Guard
	14	070-011-392	R.H. Belt Guard
	15	070-010-238	Bracket Front
	16	070-005-585	Guard Assembly End Machine
	17	070-004-691	Bracket Rear

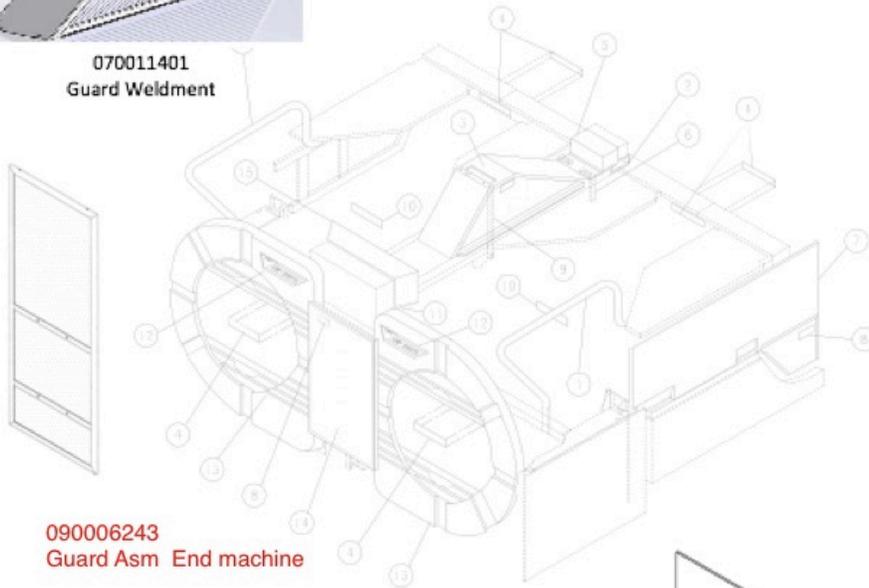
XLi Edge



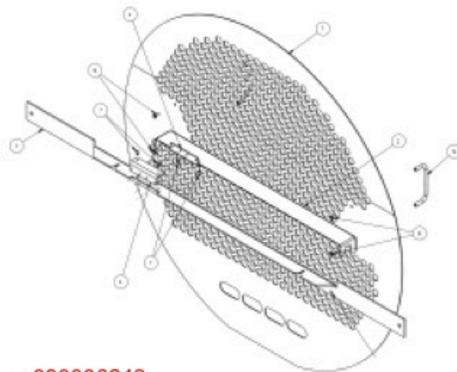
82-90, 90 XL, 90Xli GUARDS



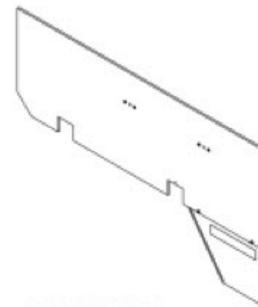
070011401
Guard Weldment



090006243
Guard Asm End machine

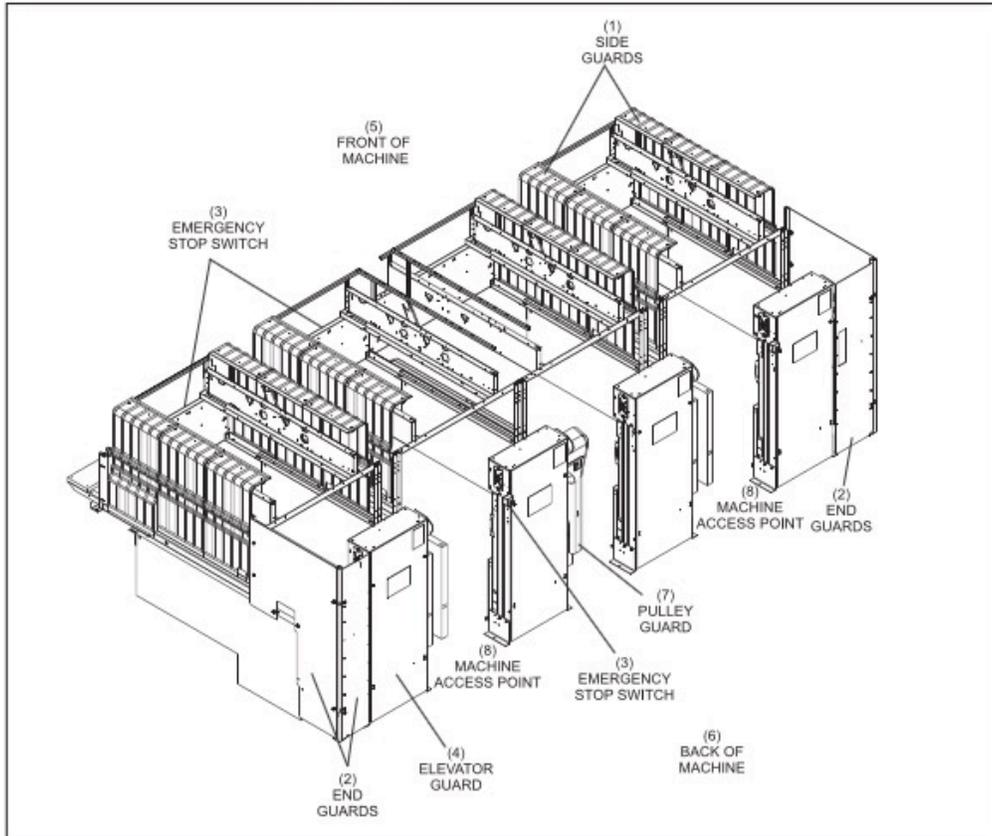


090006243
Guard Asm End machine



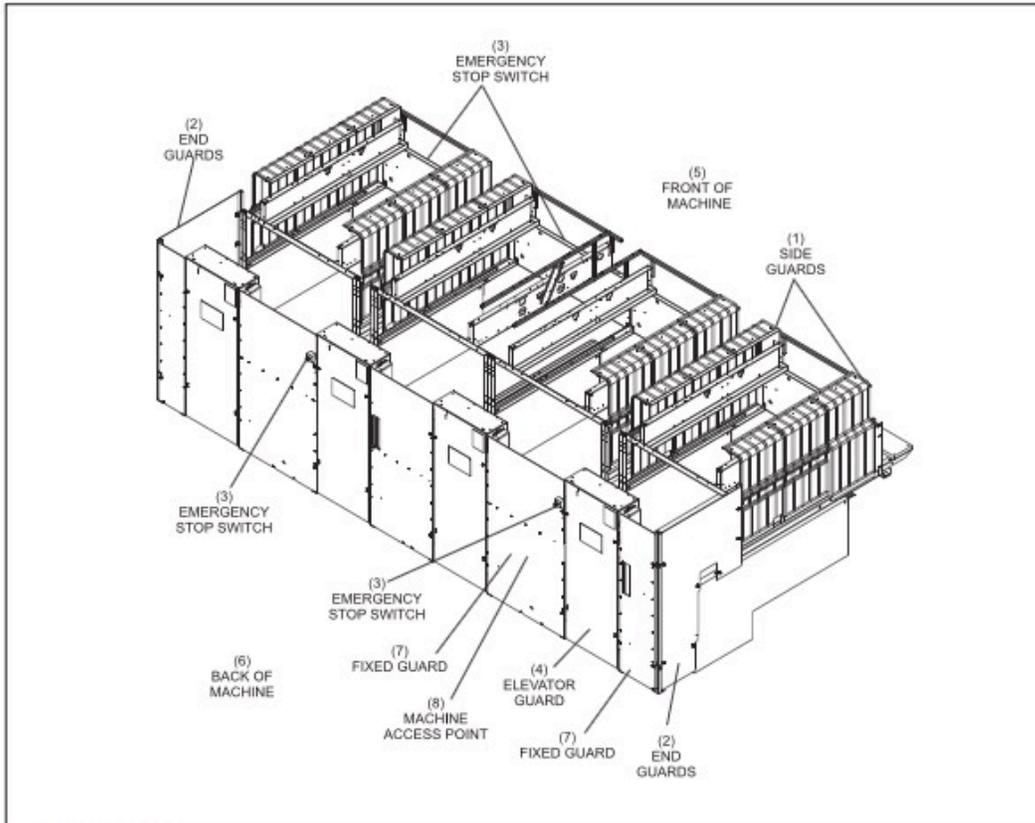
090006243
Guard Asm End machine

The Brunswick GS Pinsetter is equipped with guards to prevent injury and to limit access to moving parts of the pinsetter. Two types of guard packages are available; base and fixed. Both are pictured below.



Base Guard Package

- | | | |
|--------------------|--------------------------|---------------------------|
| (1) SIDE GUARDS | (2) END GUARDS | (3) EMERGENCY STOP SWITCH |
| (4) ELEVATOR GUARD | (5) FRONT OF MACHINE | (6) BACK OF MACHINE |
| (7) PULLEY GUARD | (8) MACHINE ACCESS POINT | |

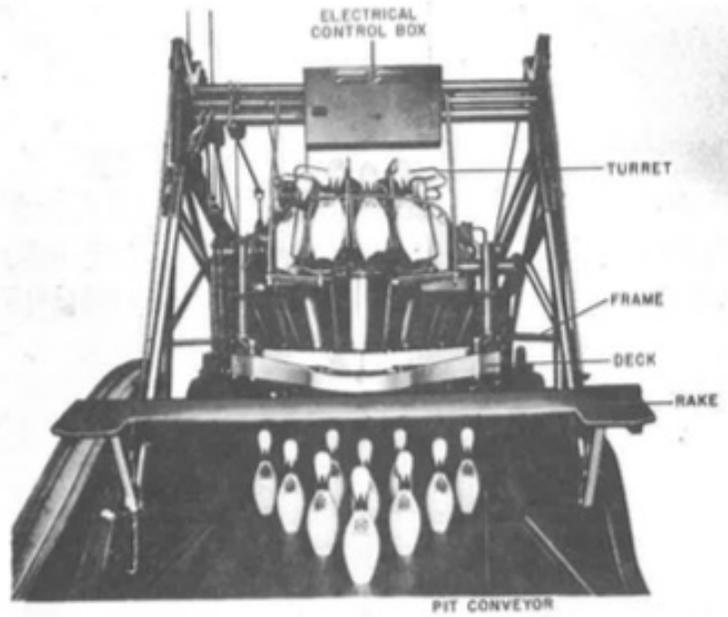


Fixed Guard Package

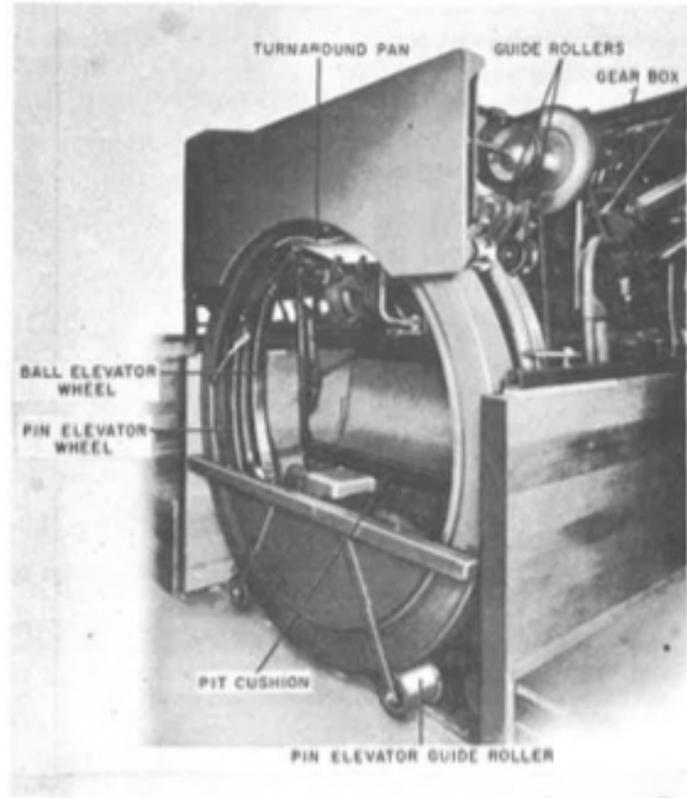
- (1) SIDE GUARDS
- (4) ELEVATOR GUARD
- (7) FIXED GUARD

- (2) END GUARDS
- (5) FRONT OF MACHINE
- (8) MACHINE ACCESS POINT

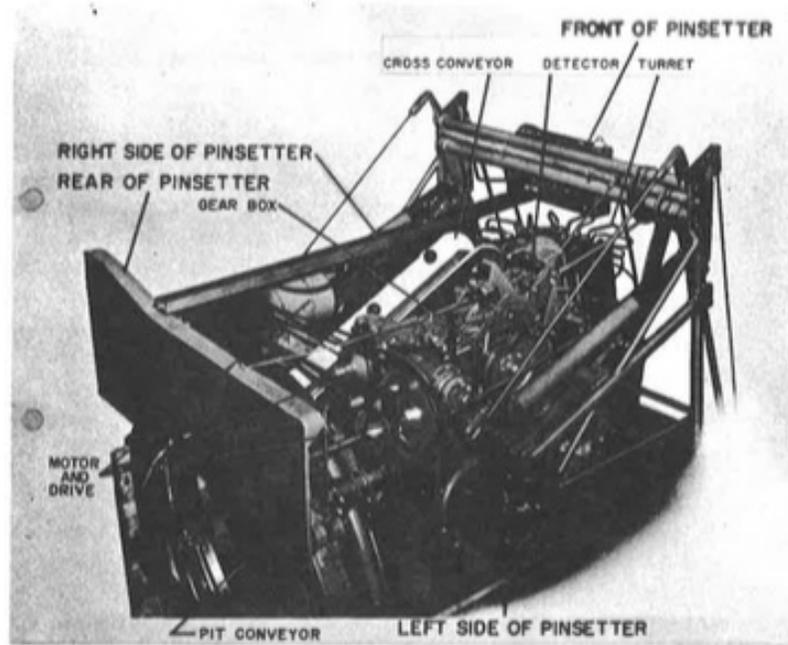
- (3) EMERGENCY STOP SWITCH
- (6) BACK OF MACHINE



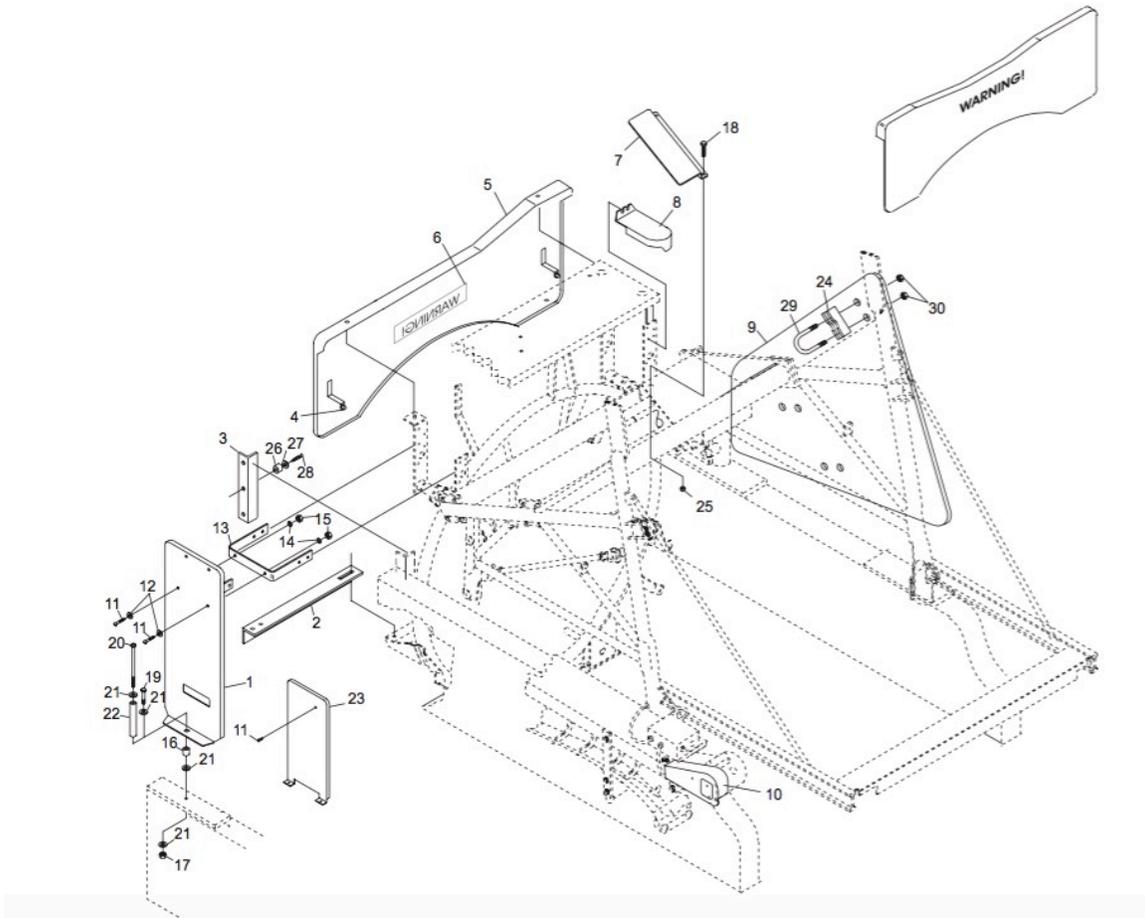
Brunswick Pinsetter- Front View



Brunswick Pinsetter- Rear View



Brunswick Pinsetter- Top View

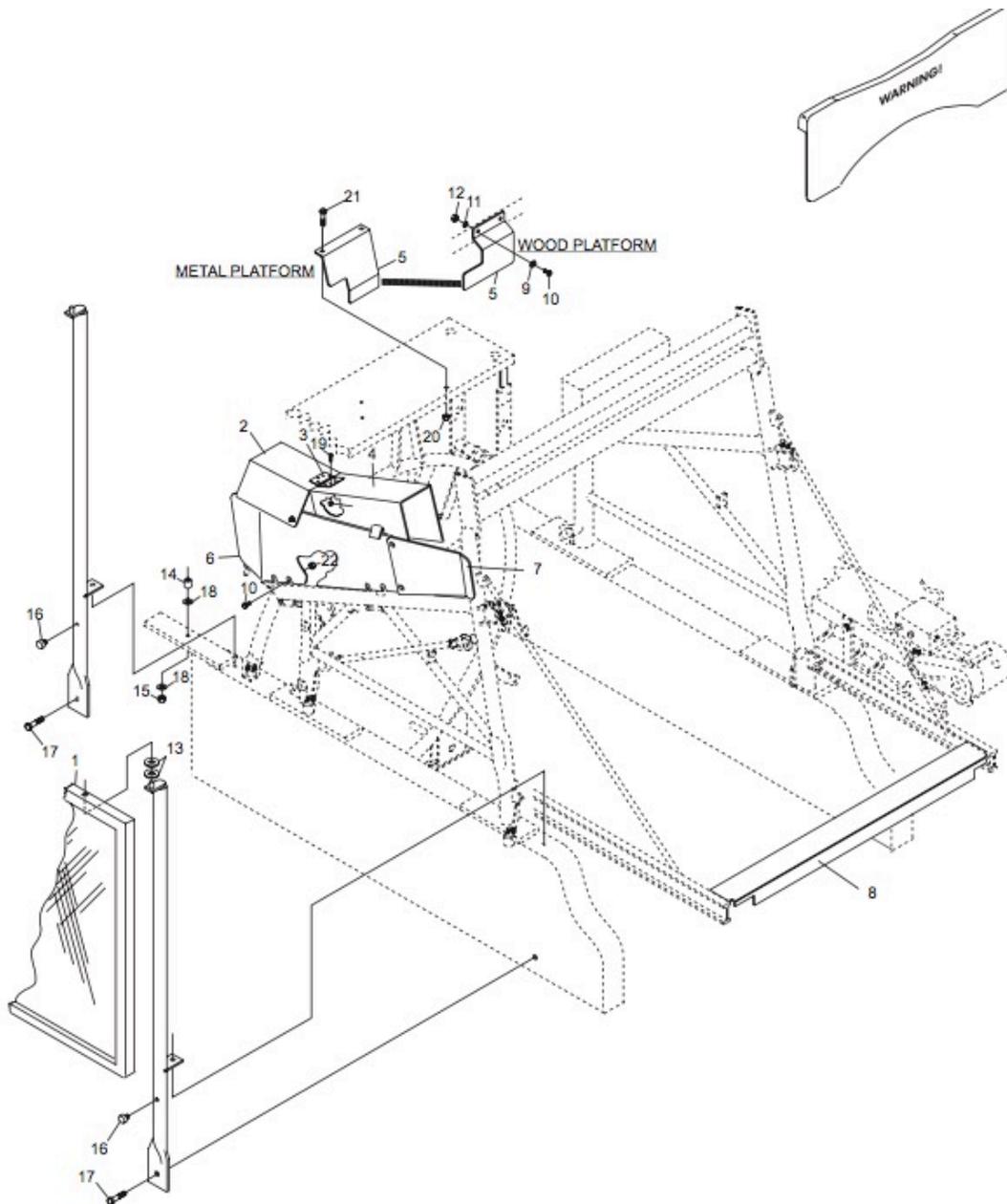


Brunswick Pinsetter Machine with guards. Index showing what each number indicates is on following page.

**Index**

No.	Part No.		Description
1.	12-752523-000		Small - Guard
2.	12-402039-000		Step Bar
	12-862155-000	N.A.	Step Bar & Hardware
3.	12-400249-000	N.A.	Pinch Guard
4.	12-400136-000		Plug
5.	12-400046-000		Rear Guard Assembly
6.	12-700206-000		Warning Label
7.	12-750567-000	N.A.	Foot Guard
8.	12-400324-000	N.A.	Shield Assembly
9.	12-750997-000	N.A.	Foot Guard Extrusion
	12-860200-000	N.A.	Foot Guard Pkg.
10.	12-502338-000		Belt Shield
11.	11-017287-001		Round Head Cap Screw w/Washer
12.	11-190010-001		Flat Washer (1/4)
13.	12-700804-000		U-Bracket
14.	11-195014-001		Lockwasher (1/4)
15.	N.A.		Hex Nut
16.	12-400018-006		Spacer
17.	11-125108-001		Hex Nut (1/2-13)
18.	11-001344-001		Hex Head Cap Screw (3/8-16 x 1")
19.	11-001517-001		Hex Head Socket Cap Screw (1/2-13 x 3-1/4")
20.	11-001531-001		Hex Head Socket Cap Screw (1/2-13 x 10-1/2")
21.	11-190521-001		Flat Washer
22.	12-400018-024		Spacer
23.	12-750523-000		Small Guard Assembly
24.	12-750999-000		Bracket
25.	11-170011-001		Hex Nut Nylock (3/8-16)
26.	N.A.		Spacer
27.	11-190006-001		Flat Washer - SAE (#10)
28.	11-042095-001	N.A.	Round Head Slotted Wood Screw (#10 x 1")
29.	12-750998-000		U-Bolt
30.	11-170009-001		Hex Nut Nylock (5/16-18)

N.A. = No Longer Available



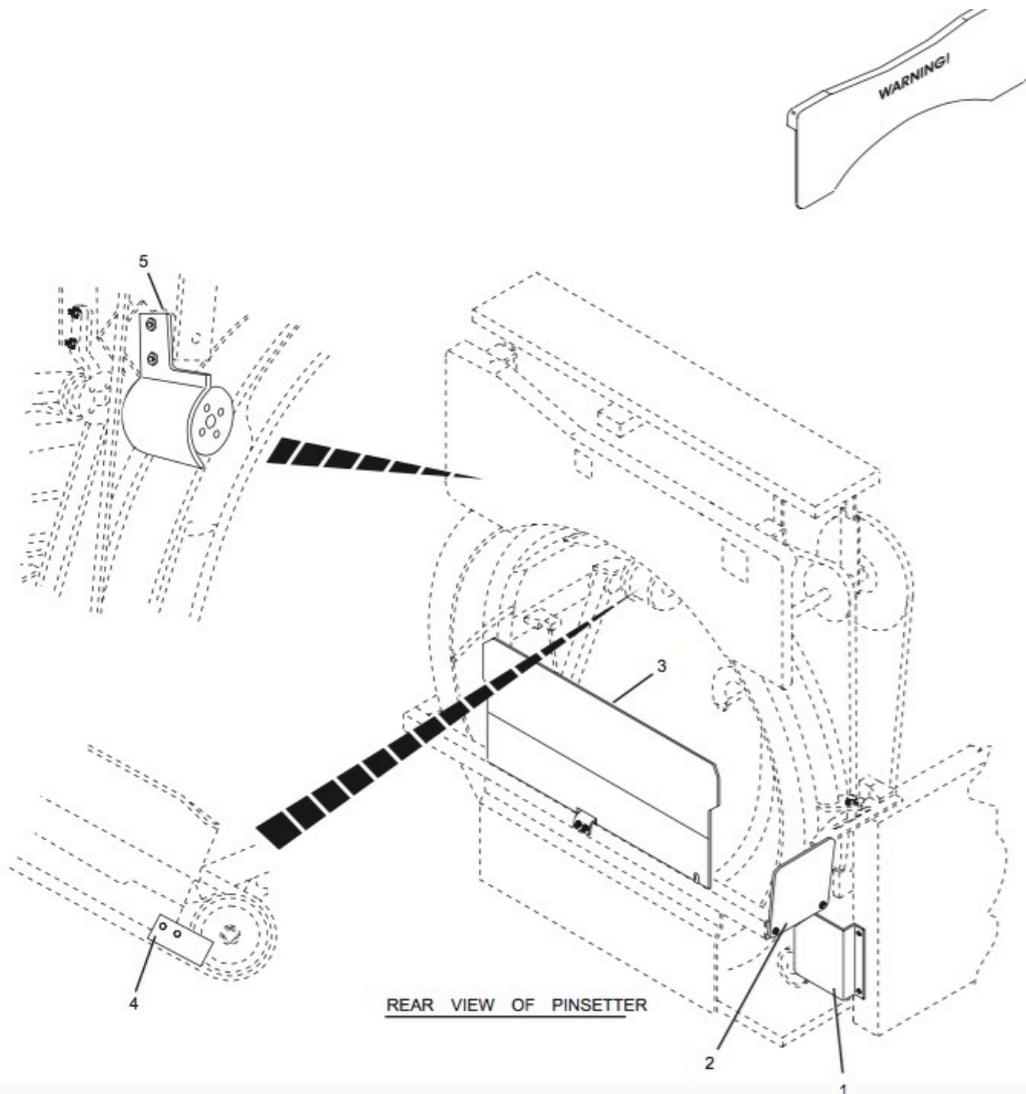
Brunswick Pinsetter Machine with guards. Index showing what each number indicates is on following page.



Index No.	Part No.		Description
1.	12-700822-000		Large Guard Assembly
2.	*12-750570-000	N.A.	Rear Rake Crank Guard
3.	*12-750575-000	N.A.	Hinge
4.	*12-750571-000	N.A.	Rake Crank Guard
5.	*12-402074-000	N.A.	Motor Pulley Guard
	*12-752574-000	N.A.	Motor Pulley Guard
6.	12-350116-000		R.H. Foot Guard
	12-350517-000		L.H. Foot Guard
7.	*12-750579-000	N.A.	Foot Guard Extension
8.	12-750799-000	N.A.	Pin Light support
9.	11-190010-001		Flat Washer (1/4)
10.	11-001180-001		Hex Head Cap Screw (1/4 x 5/8")
11.	11-195014-001		Lockwasher (1/4)
12.	11-125100-001		Hex Nut (1/4-20)
13.	12-750526-000	N.A.	Support
14.	12-400018-006		Spacer (for factory built A-2 pinsetters)
	N.A.		Spacer (for field converted pinsetters)
15.	11-125108-001		Hex Nut (1/2-13)
16.	11-650002-000		Bumper
17.	11-070062-001	N.A.	Lag Screw (3/8-7 x 1-1/2"
18.	11-190521-001		Flat Washer
19.	11-007180-001		Flat Head Socket Cap Screw (1/4-20 x 5/8")
20.	11-170007-001		Hex Nut Nylock (1/4-20)
21.	11-072021-001	N.A.	Step Bolt

N.A. = No Longer Available

* Part not available individually. May order Guard Pkg. (12-802013-000) as a replacement option (Includes all asterisked parts).



Brunswick Pinsetter Machine with guards. Index showing what each number indicates is on following page.



Index

No.	Part No.		Description
1.	12-302003-000	N.A.	Pit Conveyor Drive Guard
2.	12-402155-000	S.O.	Pin Wheel Guard
3.	12-402405-000		Rear Pin Deflector
4.	12-450081-000		Cross Conveyor Belt Guard
5.	12-402156-000	S.O.	Pin Wheel Guide Guard

N.A. = No Longer Available
S.O. = Special Order

The important thing is to know hazards that require guarding, ensure the correct guard is in place to eliminate the hazard, and train employees on machine safeguarding hazard recognition and safeguarding. Before any work on a pinsetter can be done the following safety procedures need to be followed (note: this procedure is specifically for the Brunswick GS Pinsetter, but similar procedures should be followed for any pinsetter machine):



1. **ONLY PROPERLY TRAINED PEOPLE ARE QUALIFIED TO WORK ON OR OPERATE THE PINSETTER**
2. Never operate the pinsetter without ALL factory supplied guarding in place.
3. Never operate the pinsetter if a guard or safety device is damaged or improperly fitted to the machine.
4. Never bypass, disable, or tamper with the safety interlocks or pinsetter function switches.
5. Never attempt to climb over or around any mechanical barrier or machine guard.
6. Reinstall all the machine guards and the ladder after any troubleshooting or maintenance work has been done on the pinsetter(s) or ball accelerator.
7. Always face toward the machine when using the ladder to climb onto or off the machine. Only one person should be on the ladder at any time.
8. Suitable clothing must be worn (for example: rubber-soled shoes). Do not wear loose clothing such as neckties or smocks that could get caught in moving parts. Remove rings, watches, earrings, bracelets and other jewelry to avoid injury.
9. Care should be taken while near the front of the machine. Accidentally blocking the photocell beam will cause the pinsetter to cycle.
10. Always turn the Pinsetter off before working on the machine. Use the rear mechanic's switch mounted on the pin elevator or toggle the stop/run switch on the Nexgen box to the stop position.
11. If more than one person is working on a machine or if a stop/run switch will be out of reach while working on the machine, turn off both stop/run switches to prevent a person from turning on the pinsetter before the other person says he/she is clear of the pinsetter.
12. When working on both machines of a lane pair or components that are common to both machines (for example - an electronic control box or ball accelerator) power must be turned off at the Nexgen box and the input power cable must be removed from the box. In addition the main power switch on the Nexgen box must be locked into the off position using a suitable locking mechanism.
13. The sweep boards for the lane pair must be dropped to the guarding position when working on the pinsetter or the ball accelerator to prevent a bowling ball from entering the pinsetter.



14. Prior to performing service work underneath the setting table, place a jack stand or other suitable support under the center of the table.
15. Fire extinguishers must be on hand and maintained properly. Keep oily rags and other combustibles in approved fire proof containers.
16. If more than one person is working on a machine, be sure the other person is **CLEAR** before restarting the machine.
17. When working in the pinsetter area while machines are in operation, ear protection should be worn. Sound levels greater than 83db can be experienced within 1.6 meters of operating machines.
18. Never remove the V-belt from the setting table motor without first lowering the table to the new pin setting position (pindeck).
19. Never work on or around the pinsetter while under the influence of alcohol, drugs, or any other substance that can impair your physical abilities or mental judgment.
20. Always use the correct tools for the job.
21. The GS-Series pinsetter is designed for use as a 10 pin bowling machine. Do not use the machine or any of its subassemblies for any other purpose.
22. Poisonous or toxic cleaners must not be used. Always check the material safety data sheets before using new cleaners.
23. Always use factory approved parts when repairing the pinsetter. Using substandard parts may pose a safety risk.



ELECTRICAL SAFETY

OSHA electrical safety requirements that apply to bowling centers primarily focus on maintaining the safety of electrical systems. These focus on wiring, electrical box covers, and electrical cords and plugs.

The object of electrical safety is to prevent inadvertent contact with exposed conductors by identifying, isolating and reporting the hazard before it can result in injuries and property damage.

The objective of including electrical safety in your program is to provide information on potential hazards and secure a safe process that will ensure the safety of employees engaged in the operation and maintenance of electrical systems.

Basics of Electricity

To work safely with electricity, it is important to understand how it works. Electricity is the flow of energy from one place to another. It travels in a closed circuit. Basically, a circuit consists of three essential elements:

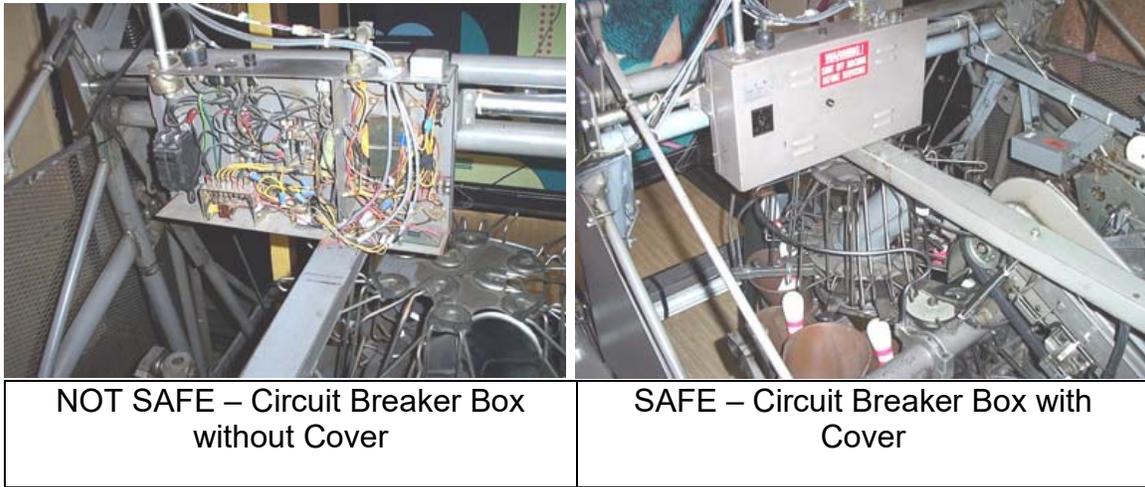
- Source of Energy – supplies the driving force or voltage to make the current flow. The generating station is usually the source of power, although an emergency generator can temporarily supply the energy.
- User of Electricity – Equipment that runs on electricity is a user.
- Wires / Cords – These are used to deliver or conduct the electricity.

For current to flow, there must be a complete or closed circuit. If the wire is cut or disconnected somewhere, this forms an open circuit and stops the current from flowing. If the electrical equipment has a capacitor, charges will accumulate and safe discharge is needed before beginning work.

Affects of Electricity on the Body

Severity of electrical shock depends on:

- Path of current through the body
 - Amount of current flowing through the body (amps)
 - Duration of the shocking current through the body
- It is important to know that LOW VOLTAGE DOES NOT MEAN LOW HAZARD!



The following table illustrates the affects of current:

Current Range	Physiological Phenomena	Effect on Human Body
< 1mA	None	Imperceptible
1mA	Perception threshold	None
10 mA	No-let-go threshold	Cannot release grip
30 mA	Respiratory failure	Breathing stop
75 mA	Fibrillation threshold – 0.5%	Interrupted heart action
250 mA	Fibrillation threshold – 99.5%	Interrupted heart action
4 Amps	Heart paralysis threshold	Heart stops
5 – 20 Amps	Tissue burning	Heart stops
> 20 Amps	Tissue and organ damage	Heart stops



Causes of Electrical Accidents

Electrical accidents are caused by a combination of three factors:

- Unsafe equipment and/or installation.
- Exposed electrical parts (i.e., open electrical panels, cabinets, boxes, and fittings).
- The metal parts of electric tools and machines may become energized if there is a break in the insulation of the tool or machine wiring.
- Damaged cords (i.e., broken insulation).
- Improper grounding (i.e., broken grounding plug or equipment is plugged into improperly grounded circuits).
- Workplaces made unsafe by the environment.
- Wet condition due to leaks or liquid spill.
- Use of non-compliant electrical equipment in areas with flammable materials (i.e., lane oil, solvents, oxygen).
- Excessive use of extension cords in place of permanent wiring, including the extension cords being placed where physical damage can occur.
- Unsafe work practices.
 - Overloaded circuits (i.e., too many devices plugged into one circuit, lack of over-current protection).
 - Improper splices / connection of wiring (wires) (i.e., combining wires of different capacities and of different gage sizes, using tape for insulation). Also included is the proper connecting of wires being made outside of an appropriate electrical junction box.

Basic Hazard Controls

Proper electrical grounding can help prevent electrical injury. Most electrical equipment is grounded with either a three-prong plug or a two-prong plug and insulation. Never remove the grounding plug from any electrical cord! This creates a potentially dangerous situation. A Ground Fault Circuit Interrupter (GFCI) is required to ensure electrical safety in moist or potentially damp environments, such as by a sink.

Here are some hazard controls to be aware of and look for:

- All electrical distribution panels, breakers, disconnects, switches, junction boxes, motor controllers, machine/equipment power connections and control panels, and outlets shall be completely enclosed.



- Watertight enclosures shall be used where there is possibility of moisture entry either from operations or weather exposure.
- Electrical distribution areas will be guarded against accidental damage by locating in specifically designed rooms, use of substantial guard posts and rails and other structural means. These areas will NOT be used for storage.
- A clear approach and a minimum 3-foot clearance shall be maintained for all distribution and breaker panels.
- All conduits shall be fully supported throughout its length. Non-electrical attachments to conduit are prohibited.
- All non-rigid cords, such as drops, shall be provided strain relief where necessary.
- Only trained and authorized employees may conduct repairs to electrical equipment. In some cases, only licensed electricians are permitted to work on power lines and equipment.
- Contractors performing electrical work must hold a license for the rated work.
- Areas under new installation or repair should be sufficiently guarded with physical barriers and warning signs to prevent unauthorized entry.
- Access to electrical distribution rooms is limited to those employees who have a need to enter.
- All electrical control devices shall be properly labeled.
- Work on energized circuits is prohibited unless specifically authorized by management, it can be proven no alternate de-energized method can be used, and a safety-approved procedure is implemented.



NOISE & HEARING CONSERVATION

Exposure to high noise levels for extended periods of time can cause hearing loss and other associated problems. Such damage happens often before the employee realizes a hearing loss. The bowling center should be committed to reducing employee exposures to excessive noise in the workplace.

The first part of any safety effort with regard to noise is to identify the noise sources and determine the loudness of the noise through sound level meter or noise dosimeter measurement.

If elevated noise levels are determined, OSHA states that protection from noise sources is to be as follows:

- Reduce the noise from the source through engineering. Such methods include:
 - Guarding equipment with barrier guards,
 - Placing dampening material on equipment such as the barrel on the pinsetter, and
 - Sound absorbing walls to lower the ambient noise level.
- Through work practices, reduce exposure to the noise by limiting the time employees can spend in the noisy area.
- The LAST method OSHA expects employers to take in reducing exposure to noise is to use hearing protection.

When the results of noise dosimeter surveys indicate that employees are exposed to an 8-hour time-weighted average (TWA) of 85 decibels (dB) or higher, OSHA standards require these employees to be identified and included in a Hearing Conservation Program. The hearing conservation program includes conducting baseline and annual audiometric testing, employee training on the effects of noise, use of hearing protectors and the purpose of audiometric exams.

Hearing protection must be sufficient to reduce the noise level at the ear to 85 dB or below. Each type of hearing protection comes with a noise reduction rating, noted as a number next to the 'NRR' labeled on the hearing protection box or the hearing protection itself. To determine if the hearing protection provided is sufficient to accomplish this task, use the following calculation:

- Decibels (as measured by the noise dosimeter survey) – (the NRR – 7)
Subtracting 7 from the NRR provides a safety factor to ensure the hearing protection is adequate to protect the wearer from the noise exposure.



Here are examples of the calculation being used:

- $109 \text{ dB} - (25 - 7) = 91$ In this example the hearing protection is NOT sufficient to reduce the noise level in the ear to 85 dB or below. This hearing protection cannot be used.
- $109 \text{ dB} - (33 - 7) = 83$ In this example the hearing protection is sufficient and can be used.



RESPIRATORY PROTECTION

Employees who are required to wear a respirator as a part of their job duties need to be a part of a company's Respiratory Protection Program. Implementing a Respiratory Protection Program requires several steps and employers must ensure that each step is completed in order to meet the requirements of OSHA's Respiratory Protection standard.

Types of respirators include:

- N95 respirators (dust mask, particulate respirator)
- Half mask, cartridge respirator
- Full Face Respirator
- Air-Purifying Respirator
- Self-Contained Breathing Apparatus

Here are the required steps for each respirator type

If you suspect that employees are exposed to potential airborne contaminants, Have air monitoring conducted in suspected work areas to determine if employees are exposed to airborne contaminants and at what concentration.

N95 Respirators

N95 respirators are the only type of respirator that employees can wear voluntarily, if the employer has determined that they are not exposed to concentrated levels of airborne contaminants as a result of their employment. If N95 respirators are worn by employees on a non-mandatory (comfort only) basis, those employees must be provided and understand [Appendix D](#) of OSHA's Respiratory Protection standard. It is recommended that affected employees sign Appendix D and a copy is put into their employee file.

If employees are required to wear an N95 respirator as a part of their job duties, due to determined airborne contaminant exposure, employers should follow the requirements for "All Other Respirators" below.

All Other Respirators

For any other type of respirator, employee use must be required as a part of their job duties – voluntary use is prohibited.

- 1.) **Medical Evaluation** – Affected employees must undergo a medical evaluation for respirator use, conducted by a licensed healthcare provider. This evaluation is in the form of a questionnaire that affected employees complete and is provided to the healthcare professional. The purpose of this evaluation is to determine if the affected employee is capable of breathing through a respirator and still maintain adequate oxygen saturation within their body.



- If an affected employee is cleared to use a respirator, through the medical evaluation, move to step 2. Otherwise, the affected employee cannot wear a respirator and their job tasks must change to reduce or eliminate the airborne contaminant exposure.
- 2.) **Fit Testing** – After an affected employee has been cleared to use a respirator, they must be fitted to the respirator they will be using. This is done through a test where affected employees are exposed to an airborne irritant, such as Bitrex or smoke, to determine if the seal of the respirator is appropriately fit and compatible with their facial features to prevent airborne contaminants from traveling between the respirator seal and their skin.
 - 3.) **Care & Use Training** – Lastly, affected employees must be trained on how to properly wear, care for and store a respirator



HAND & PORTABLE POWER TOOLS

Hand Tools

Hand tools are rarely, if ever, thought of as dangerous, but accidents continue to happen from their misuse. Hand tools include hammers, screwdrivers, saws, wrenches, cutters, tape measures, sledge hammers, pipe wrenches, and pliers just to name a few. Each tool is designed to do a specific task. The greatest hazards posed by a hand tool are from their misuse or improper maintenance.

OSHA standards regarding hand tools focus on the following safe practices:

- Select the right tool for the task and use it for what it was designed. An unsafe example of this is using a screwdriver as a chisel or the handle of the screwdriver as a hammer.
- Inspect the tool for defects before using it. Check to be sure that the handle fits tightly and that it is not loose.
- Replace cracked, splintered or broken handles (don't just tape over them). Replace or repair broken tools.

Safe practices for using hand tools include:

- Pull on wrenches or pliers don't push on them and avoid applying excessive force
- When using a cutting tool, hold its handle firmly in the palm of your hand and cut away from your body never towards it carry sharp tools away from your body, never in your pocket. Keep pointed or sharp tools away from walkways where they could injure someone passing by tossed to another worker, surface or height; they should be handed securely to another worker or placed directly on another surface or level
- If working on a ladder or scaffold, tools should be raised or lowered using a bucket and hand line
- Wear personal protective equipment when using tools that generate flying debris or dust (eye / face protection).

Power Tools

Portable power tools are just that: power tools. OSHA standards on power tools focus on the type of power they use (electrical, pneumatic), their hazardous action (rotation, reciprocating), and the resulting hazards from their use (debris, dust, exposure to blades, etc.). As a result, the standards strive to protect employees by the following methods:



- Guarding – guarding is provided over cutting and rotating surfaces such as portable saws and surface grinders.
- Insulation – insulation should be in place and intact over electrical cords and pneumatic hoses, and include the casing of the tool itself. None of these should be cracked, split or open in any way as they lead to exposures that can result in serious injury.
- Encasing – the motor and moving parts are encased in a cover for good reason: safety of the power tool user, protection of the equipment itself from foreign material, and can act as one level of double insulation for protection from electricity.
- Grounding – for electrically powered portable tools, grounding is ensured through an intact third prong at the plug. Removal of this third prong eliminates safety designed into the power tool, exposing the employee to electric shock.

General safety precautions include:

- Never carrying a tool by the power cord or hose.
- Never yanking the power cord to disconnect from the receptacle.
- Keeping cords and hoses away from heat, oil, and sharp edges.
- Disconnecting tools when not in use, before servicing, and when changing accessories such as blades, bits, and cutters.
- Securing the work properly so as to permit both hands to operate the tool.



LADDERS

Portable ladders are one of the handiest, simplest tools we use. Because of their effectiveness, ladders are used to perform many different tasks. Although ladders are not uncomplicated, planning and care are still required to use them safely. Each year in the U.S., accidents involving ladders cause an estimated 300 deaths and 130,000 injuries requiring emergency medical attention.

OSHA regulations regarding the safe care and use of ladders center on three areas: portable wood ladders, portable metal ladders, and fixed ladders (these are ladders that may be secured to the building and used to access the roof through a hatch in the bowling center, or on the outside of the bowling center).

The safe use of ladders helps to prevent falls that could cause serious injury or even death, and should be incorporated within the safety program.

The basic steps to take before using a ladder are:

- Consider the type of work to be performed before selecting a ladder.
- Check the condition of the ladder.
- Ensure that the ladder is capable of carrying the weight that will be applied.
- Ensure that the ladder is placed on a firm surface.

Ladder inspection ensures the ladder is safe to use:

Inspection Checklist for Potential Hazards

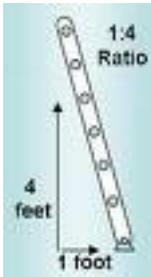
Metal Ladders	Wood Ladders	Fiberglass Ladders
Sharp edges	Splits	Loose components
Dents	Cracks	Missing components
Bent steps	Chips	Cracks
Bent rungs or rails	Loose rungs or steps	Chips
No slip-resistant rubber or plastic feet		

Use a ladder capable of the weight anticipated; ladders are classified as follows:

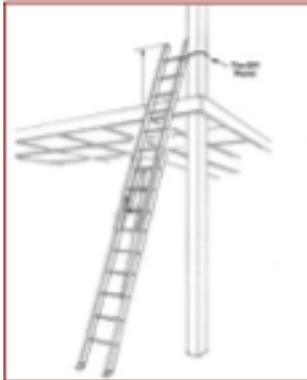
- Type I: Heavy duty, 250-lbs capacity
- Type II: Medium duty, 225-lbs capacity
- Type III: Light duty, 200-lbs capacity

Safe ladder use includes the following:

- All ladders are to be maintained in good overall condition. This includes the joints between steps and side rails are tight, all hardware and fittings are securely attached, and all moveable parts operate freely without binding or having too much play.
- When placing a ladder remember the 4 to 1 rule; for every 4 feet of elevation the base must be 1 foot from the wall.



- Also, if you are going to use the portable ladder to access another level such as a platform or mezzanine, ensure it extends 3 feet (3 rungs +) above the surface on which it is leaning.



- Safety feet are to be in place on all ladders.



- Do not place ladders in front of doors except when the door is blocked open, locked, or guarded.
- Do not place ladders on boxes or unstable bases to obtain additional height.



- Always face the ladder when ascending or descending. Use the 3-point contact rule: three points of body contact (two hands, one foot, or two-feet, one hand) are to remain in contact with the ladder at all times while you ascend or descend the ladder.
- Do not use ladders that are damaged, such as broken or missing steps or rungs, broken or bent side rails, damaged or defective locking devices, or any other faulty equipment.



- Do not use the top two rungs or steps of a step ladder.



Fixed ladders are ladders that cannot be readily moved or carried because it is an integral part of a building or structure. A fixed ladder must be able to support at least 2 loads of 250 pounds each, concentrated between any two consecutive attachments. It must also support added anticipated loads caused by ice buildup, winds, rigging and impact loads resulting from using ladder safety devices.

OSHA requires that such ladders 24 feet long or longer be equipped with one of the following safety devices:

- Cage or Well – In using a cage or well, ladder sections must be offset from adjacent sections, and landing platforms must be provided at maximum intervals of 50 feet.
- Safety Device – these are separate from the ladder, and provide a point at which an employee worn safety harness attaches to a rail that slides with him or her as they ascend or descend the ladder. If they should lose their footing or fall, the safety device will stop and hold them by the safety harness, thus preventing injury or death from the fall.



ELEVATED WORKING SURFACES

Falls from elevations can seriously injure or kill a worker. OSHA regulations that apply state that every open-sided floor or platform 4 feet or more above adjacent floor or ground level shall be guarded by a standard railing on all open sides except where there is entrance to a ramp, stairway, or fixed ladder.

Elevated work locations include roof openings, open sides of buildings, platforms, mezzanines, runways, and ramps.

It should be noted that some State OSHA plans require guardrails on elevated surfaces 30 inches or more above the floor, ground, or other working areas. Check with your State OSHA plan to be sure.

Where might this apply in a bowling center? Think of the top of the pin setter and any other open level or platform.

Guardrails used as protection from falls from elevated work surfaces must have the following characteristics:

- Top rail is to should be 42 to 45 inches above the surface.
- A mid-rail needs to be halfway between the top rail and the surface.

The ends of the rails must not overhang the terminal posts so much that people or equipment would run into them.

- Performance – guardrails and their connections and anchorages must be capable of withstanding a live load of at least 20 pounds per linear foot applied outward or downward on the top rail. For heavy stresses from crowds and handling materials, additional strength is required by use of heavier stock, closer spacing of posts, bracing, or other methods.

Falls are the second leading cause of fatality in the workplace. Protecting workers from falls should be taken seriously and be included within the center's safety program.



PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE) is any personally used equipment that protects the head, eyes, ears, respiration, body, hands, and feet by means of safety devices and safeguards of the proper type for the exposure to hazards, and is of such design, strength and quality to eliminate, preclude or mitigate any hazard.

PPE is provided wherever it is necessary by reason of hazards of environment, chemical, or mechanical irritants are encountered and cannot be safeguarded to prevent injury in any other manner.

Personal protective equipment is not the “save-all” for safety. There are times when wearing personal protective equipment creates more of a danger (i.e., wearing gloves while using a drill) and other methods of protection must be used.

Here is a brief recap of the various types of PPE and the protections they provide:

- **Head Protection** – Head protection is to protect the head from being struck by falling or flying objects and/or electric shock and burns that could occur in the work area. Hard hats are the primary head protector. Where there is a risk of hair entanglements in moving parts of machinery, combustibles or toxic contaminants, employees shall confine their hair to eliminate the hazard by the use of head protection. Head protection shall comply and be labeled with American National Standards Institute (ANSI) Z89.1.
- **Eye & Face Protection** – Eye and face protection is to protect the eyes and face from injury such as punctures, abrasions, contusions or burns as a result of contact with flying particles, hazardous substances, projections or injurious light rays which are inherent in the work or environment. Eye and face protection shall comply and be labeled with American National Standards Institute (ANSI) Z87.1.
- **Body Protection** – Body protection may be required for employees whose work exposes parts of their body to hazardous or flying substances. Loose sleeves, tails, ties, lapels, cuffs or other loose clothing, which can be entangled in moving machinery, shall not be worn. Body protection is accomplished by using coveralls and aprons.
- **Hand Protection** – Hand protection shall be required for employees whose work involves potentially unusual and excessive exposure of the hands or fingers to cuts, burns, and hazardous physical or chemical substances which are capable of causing injury or impairment. Examples of this include material handling operations (i.e., moving boxes) and working with chemicals (i.e., cleaning).
- **Foot Protection** – Foot protection shall be required for employees who are



exposed to foot injuries from electrical hazards, hot or corrosive substances, falling objects and crushing or penetrating actions. Foot protection requiring steel toes and / or shanks shall comply and be labeled with American National Standards Institute (ANSI) Z41.1.

CHAPTER 5
GETTING THE
MOST FROM
YOUR
PROGRAM



WHY HAVE A SAFETY PROGRAM & HOW DOES IT FIT INTO THE BOWLING CENTER

A safety program can save the bowling center money and help it run more efficiently. Frequently, an effective program can help management discover inefficiencies they were not aware of previously. By lowering the costs of operation injuries can bring, a center can compete for benefits privy to well run businesses (i.e., lower insurance rates). Here are some of the goals a safety program should seek to reduce:

- Loss of productive time by an injured employee,
- Clean up and start up of operations interrupted by the accident,
- Cost of repair or replacement of any damaged equipment or material,
- Time to complete paperwork generated by the accident,
- Cost of continuing all or part of the employee's wages, in addition to compensation,
- Increased workers' compensation rates (if not ALL insurance rates).

If you would like to reduce the costs and risks associated with workplace injuries and illnesses, you need to address safety and health. A safety program should be managed like any other organizational function. Just as you plan, organize and control your center's bowling experience for the customer, you should plan, organize and control your safety program.

ORGANIZING YOUR SAFETY PROGRAM

Your safety program should be designed as an integral part of your center's operation. The program should be **active**. Having an active program can;

- Increase safety awareness in your organization (*i.e., are accidents caused by carelessness?*)
- Affect behavior (*i.e., want to create safe, efficient working habits?*)
- Create positive attitudes (*i.e., by showing management concern*). These are the basic components that make a safety program **effective (live)**.

Safety Programs / Manuals - when developing the written safety program, we are trying to tell a story. In short, the story tells us why, what we are trying to achieve, how we achieve it, when specific actions are to take place and how often, who is responsible for completing these actions, and the program provides the resources needed. Below is how that translates into an organizing outline:



Story Line

- Why?
- What are we trying to achieve?
- How we achieve it?
- When action takes place?
- Who?
- Resources

Written Program Structure

- Purpose (law, morality)
- Objective (prevention of)
- Procedures
- Tools to be used and at the key points in the operation
- Is responsible for getting it done
- Appendices (definitions, forms, etc.)

The final key is "measures = actions." In other words, if your goal is to obtain certain desired actions, then measure the completion rate and quality of the desired actions. "What gets measured gets done."

GETTING THE MOST FROM YOUR PROGRAM

To continue to run a profitable bowling center in today's competitive environment, the work system requires continuous investment. Center owners are constantly looking for ways to become more efficient and create a desirable customer experience of choice to gain a competitive edge. Competitiveness requires continual evaluation of the work process and service delivered, and time/cost factors. The investment made into a center should consider time as well as the cost of new equipment or salaries. Making safety part of your work system is a method of making the time invested into your center efficient.

Here is a scenario to illustrate the point:

- By not conducting preventative maintenance on a piece of equipment due to maintenance costs, what amount of money is lost down the road in;
 - Replacing the equipment sooner than planned,
 - Not realizing full tax depreciation for it due to early replacement,
 - Increasing the risk of operating a defective piece of machinery that will breakdown more frequently causing costly down time and loss of production,
 - More time spent on the phone calling repair shops and getting repair



- estimates,
 - More time spent paying bills and another item to be reconciled in the books, etc.
- In contrast, making the small investment of preventative maintenance could have solved these problems:
 - Taking 15 minutes to set up a maintenance schedule when the equipment was first obtained,
 - Taking 5 minutes to be sure the maintenance is being done accordingly, and
 - Scheduling maintenance down time during low or non-productive periods.

The question is, **can you afford NOT to have safety integrated into your work system?**

Developing an effective safety program requires an investment of your time and using it for continuous evaluation of the work system. Here are some key elements to consider when developing your program:

- Make people responsible and accountable for safety;
- Communicate and reinforce the importance of doing the job right, safely the first time;
- Continuously evaluate your work system for inefficient, hazardous situations;
- Take action with your safety program, make it an integral part of the operation;
- Monitor the program for trends and activities that need to be addressed.

Last Thought - To "operationalize" your program, ask employees, supervisors and managers the easiest way to implement safety activities into their process. Their input is invaluable and the program is more likely to be followed if they have input into what and how it is implemented.



GETTING HELP

Bowling centers that are members of the BPAA have several resources from which to choose for assistance with their environmental, safety and health needs.

The following is a list of contacts:

Bowling Proprietors Association of America:
615 Six Flags Dr
Arlington, TX 76011
Phone: 800.343.1329
Fax: 817.633.2940
www.bpaa.com

Boretti, Inc. – Safety Professional Firm
2414 N. Leila Street
Visalia, CA 93291
Phone: 559.372.7545
Fax: 866.423.6089
www.borettiinc.com

Occupational Safety & Health Administration
www.osha.gov

APPENDICES



APPENDIX A: LINKS TO STATE OSHA WEBSITES

Alaska- <http://www.labor.state.ak.us/lss/lss.htm>

Arizona- <http://www.ica.state.az.us/>

California- http://www.dir.ca.gov/occupational_safety.html

Connecticut- <http://www.ctdol.state.ct.us/osha/osha.htm>

Hawaii- <http://hawaii.gov/labor/hiosh/index.shtml>

Indiana- <http://www.in.gov/labor/iosha/index.html>

Iowa- <http://www.iowaworkforce.org/labor/iosh/index.html>

Kentucky- <http://www.labor.ky.gov/osh/>

Maryland- <http://www.dllr.state.md.us/labor/mosh.html>

Minnesota- <http://www.doli.state.mn.us/mnosha.html>

Nevada- <http://dirweb.state.nv.us>

New Jersey- <http://www.state.nj.us/labor/lisse/lspeosh.html>

New Mexico- http://www.nmenv.state.nm.us/OHSB_website/ohsb_home.htm

New York

http://www.labor.state.ny.us/workerprotection/safetyhealth/DOSH_PESH.shtml

North Carolina- <http://www.nclabor.com/osha/osh.htm>

Oregon- <http://www.orosha.org/>

Puerto Rico- <http://www.dtrh.gobierno.pr/osho.asp>

Puerto Rico Standards are in Spanish – English translations can be purchased.

South Carolina- <http://www.llr.state.sc.us/>

Tennessee- <http://www.state.tn.us/labor-wfd>



Utah- <http://www.uosh.utah.gov>

Vermont- <http://www.labor.vermont.gov/>

Virgin Islands- No Link

Virginia- <http://www.doli.virginia.gov/index.html>

Washington- <http://www.lni.wa.gov/wisha/default.htm>

Wisconsin- <https://www.osha.gov/oshdir/wi.html>

Wyoming- <http://wydoe.state.wy.us/doe.asp?ID=7>



APPENDIX B: REPORTING REQUIREMENTS & BOWLING CENTER IMPACT BY STATE PLAN

Unless your State OSHA plan is listed, reporting of occupational injuries follows the Federal OSHA requirements as outlined in this document.

http://www.dir.ca.gov/occupational_safety.html

California:

Every employer is required to **immediately** report any serious injury or illness, or death of an employee which occurs in a place of employment or in connection with any employment to the nearest Cal/OSHA office. Reportable serious injuries or illnesses include:

- Overnight hospitalization (other than for observation),
- Amputation,
- Serious permanent disfigurement, or
- Fatality.

<http://hawaii.gov/labor/hiosh/index.shtml>

Hawaii:

All employers, including those partially exempted by reason of company size or industry classification, must report to HIOSH any workplace incident that results in a fatality, the hospitalization of three or more employees, or property damage exceeding \$25,000.

<http://www.in.gov/labor/iosha/index.html>

Indiana:

All employers covered by the Indiana Occupational Safety and Health Act must report to IOSHA any workplace incident that results in a fatality or hospitalization of employees.

<http://www.dlir.state.md.us/labor/mosh.html>

Maryland:

Within eight hours after the occurrence of an employment accident resulting in the death of an employee or the in-patient hospitalization of at least three employees, the employer must report the accident to the Commissioner.

<http://www.state.nj.us/labor/lsse/lspeosh.html>

New Jersey requires all public employers regardless of size or SIC code to report all Occupational injuries and illnesses

http://www.nmenv.state.nm.us/OHSB_website/ohsb_home.htm

New Mexico requires all public employers regardless of size or SIC code to report all Occupational injuries and illnesses. Exception: Fatalities and multiple hospitalization accidents shall be reported, by telephone, telegraph, or facsimile machine, to the Occupational Safety & Health bureau New Mexico environment



department, P.O. Box 26110, Santa Fe, NM 87502, Tel: (505) 827-4230, Fax: (505) 827-4422.

<http://www.orosha.org/>

Oregon states:

All employers covered by the Oregon Safe Employment Act must report to OR-OSHA any workplace fatality, the hospitalization of three or more employees, or overnight hospitalizations.

<http://www.llr.state.sc.us/>

South Carolina states as follows:

All employers covered by S.C. OSHA need to comply with safety and health standards and must report verbally within eight hours to S.C. OSHA all accidents that result in one or more fatalities or in the hospitalization of three or more employees.

<http://www.lni.wa.gov/wisha/default.htm>

Washington State is as follows:

As required by WAC 296-27-031, all employers covered by the WISH Act must report any workplace incident that results in a fatality or the hospitalization of two or more employees.



APPENDIX C: BOWLING CENTER SAFETY RULES

1. Report unsafe conditions to your immediate supervisor.
2. Promptly report all injuries to your immediate supervisor.
3. The use of, or being under the influence of, intoxicating beverages or illegal drugs while on the job is prohibited.
4. Dress properly. Wear appropriate work clothes and shoes.
5. Properly care for and be responsible for all personal protective equipment.

HOUSEKEEPING

6. Maintain adequate, neat and safe accessible storage space for inventory, equipment, and materials.
7. Store all flammable liquids away from ignition sources and in approved containers.
8. Keep vacuum cleaners, floor polishers and other equipment maintained in good repair.
9. Handle and dispose of broken glass with care. Use a broom and dustpan, and wear gloves.
10. Mark off and wipe up spills immediately.
11. Mark off all wet areas being mopped, waxed, etc.
12. Follow instructions on the proper use of all chemical or hazardous substances prior to use. Read the SDS for further safety precautions.
13. Wear personal protective equipment when needed.
14. Ladders and stools should be equipped with safety treads.

OFFICE

15. File cabinets and storage shelving should have the heaviest material stored at the bottom.
16. All file cabinet drawers should open with ease.
17. Furniture and fixtures should be free of sharp edges or rough spots that may splinter.
18. Aisles and passageways should be clear and provide easy movement.
19. Cords and phone cables should be secured and routed out of the way to prevent tripping hazards.
20. Electrical equipment should be properly grounded and in good repair.
21. Adequate lighting should be maintained, without casting shadows or glare onto work.

FOOD SERVICE

22. All equipment must be kept clean.
23. Place long hair in a hairnet or some other confining device.
24. Keep clothes, hair and hands clean.
25. Store cups upside down on clean surfaces.
26. Keep fingers out of food and drinks when serving.



27. Keep hands off eating and drinking surfaces, and do not sit on food preparation surfaces.
28. Use the ice scoop-to-scoop ice, do not use cups or glasses.
29. Keep walking areas clean and dry. Wipe up spills as they occur.
30. Wear proper, comfortable walking shoes.
31. Do not overload the serving and bussing trays. Load only what you can safely carry.
32. Use equipment properly and receive instructions or demonstrations before using equipment.
33. Do not attempt to repair faulty equipment, report it to your supervisor.
34. Use hand trucks or get help when moving heavy stock (i.e. kegs, etc.).
35. Store all cleaning compounds (bleaches, ammonia, etc.) separately and well away from food preparation and storage areas.

MECHANICS

36. Wear protective clothing when working on all equipment. Do not wear jewelry or loose clothing that may be caught in the machine. Wear trousers without cuffs to prevent tripping. Wear shoes with non-slip soles. Tie back long hair so it will not get caught.
37. Keep all tools in safe working condition. Remove all tools from the machine before turning it back on. Never use defective tools or equipment. Report any deficiencies to your supervisor promptly.
38. Use eye and face protection when there is a danger of flying objects or particles, such as when grinding, welding, etc.
39. Never operate a machine unless all the guards and safety devices are in place and in proper working order.
40. Never work on a machine until the circuit breaker or energy supply has been locked out and the machines in a zero mechanical state.
41. Clean and use all equipment and machinery according to procedures recommended in the manufacturer's manuals. Follow all company safety guidelines.
42. Immediately wipe up any oil or liquid spills to prevent slipping.
43. Store oily rags and any other combustibles in a fireproof container.
44. When safety guards are removed for cleaning, replace the guards immediately.
45. Always turn off the circuit breaker on the electrical box of the pinsetter or other like machinery before working on the machine.
46. When more than one person is working on a machine, NEVER turn on the machine without checking to see if everyone is clear of the machine.
47. Under no circumstances allow an unqualified person to work on the machinery.
48. Put the rake in its down position when working on the front of the pinsetter, to prevent being hit by a bowling ball.



49. Use the rods provided to securely lock the rake compression spring guide tube before removing or disassembling the rake of deck assemblies.
50. If something you are doing seems unsafe in any way, ASK your supervisor before attempting to complete the task.



APPENDIX D: BOWLING CENTER SAFETY INSPECTION FORM

ITEMS	OBSERVED		NOTES
	OK	Needs Correction	
Postings			
Safety & Health Protection on the Job prominently posted?			
Emergency telephone numbers and location for nearby medical facility prominently posted?			
Notice of Workers' Compensation carrier and contact numbers posted?			
Employee access and location to SDSs posted?			
Emergencies			
Is an emergency action and evacuation plan in effect; exit maps posted?			
All exits marked, accessible and free of obstructions?			
First aid kits available, easily accessible and inspected / replenished at least once monthly?			
Contents of first aid kit approved by a licensed physician?			
At least one employee per shift certified in first aid / CPR?			
Sprinkler system inspected and maintained at least annually?			
Clearance of at least 18" maintained below the sprinkler heads?			
Fire extinguishers mounted, marked and accessible; no obstructions?			
Fire extinguishers checked on a monthly basis?			
Food & Beverage			
Ventilation and illumination adequate in kitchen and storage areas?			
Electrical appliances in good working order and properly grounded?			
Knives kept sharp, handled with care and safely stored?			
Aisles and passageways clear and unobstructed?			
Floors free of grease, wet spots, debris, cracks, holes or other irregularities?			
All cooking equipment units equipped with adequate exhaust hoods and proper filters; clean?			
Is food stored adequately to prevent contamination?			
Cleaning supplies stored separately from food preparation and storage areas?			
Hairnet or hair coverings and comfortable, non-slip shoes worn?			
Waste receptacles emptied before overflowing and grease traps cleaned regularly?			
Broken glass and china properly handled and discarded?			
Safety latch on freezer door operates easily from the inside and overrides padlock?			
Compressed gas cylinders placed in upright positions and secured from tipping?			



ITEMS	OBSERVED		NOTES
	OK	Needs Correction	
Housekeeping			
Inventory and supply storage easily accessible, neat and orderly?			
Waste material containers emptied on a regular basis?			
Carpeting free of rips and bunching to prevent tripping?			
All walking surfaces free of cracks, holes, and protrusions to prevent trips and falls?			
Floor areas marked or roped off when being mopped, waxed, etc.?			
Spills marked and immediately wiped up to prevent slips and falls?			
Vacuum cleaners, floor polishers and other like equipment in good repair?			
Employees regularly warned of hazards in certain areas?			
All lighting and ventilation working and adequate?			
All chemicals properly stored?			
Mechanic / Pinsetter			
Protective clothing (non-slip shoes, no loose clothing or jewelry) worn when working on equipment?			
Circuit breaker turned off on electrical box prior to working on pinsetter and other like machinery?			
Is there a written "Lockout / Tagout" procedure for servicing / maintaining machinery?			
Is the machine checked to see if everyone is clear before being turned back on?			
Right tool used for the job to prevent injury to mechanic / damage to the machine?			
All machinery cleaned and used according to manufacturer's manuals / company safety rules?			
Schedules for inspections and maintenance for all work operations followed, documented?			
Rake positioned down when working on the front of the pinsetter?			
Are rods used to securely lock the rake compression spring guide before removing or disassembling rake or deck assemblies?			
Avoidance of using the elevator platform for moving from one machine to another?			
Hand tools in good condition and properly stored?			
Oil or liquid spills immediately wiped up to prevent slipping?			
Oily rags and any other flammables and combustibles stored in approved containers?			
Shop area clean and orderly?			
Office			
File cabinets and shelving anchored to prevent tipping?			
Heaviest material stored in bottom drawers of file cabinets and on bottom shelves?			



ITEMS	OBSERVED		NOTES
	OK	Needs Correction	
File and desk drawers open and close easily?			
Furniture and fixtures free of sharp and rough edges?			
Aisles and passageways clear and provide easy movement?			
Floors provided with non-slip surfaces?			
Stairways equipped with standard handrails and non-slip tread on steps?			
Adequate illumination in all areas?			
Safety treads provided on all step stools and step ladders?			
All electrical machinery in good condition and properly grounded?			
Electrical cords and phone cables properly routed and secured to prevent tripping?			
Electrical wiring free of insulation breaks, and use of outlet trees prohibited?			
Storage areas easily accessible, clean and orderly?			
Hot plates, coffee makers, portable heaters properly wired and turned off when not in use?			
Ladders			
Ladders inspected for tears, cracking, signs of corrosion and maintained in good condition?			
All joints between steps-side rails tight, hardware / fittings securely attached, and movable parts operating freely without binding or undue play?			
Are non-slip safety feet provided on each ladder?			
Are ladders steps and rungs free of grease and oil?			
Are ladders prohibited to be placed in front of doors opening toward the ladder except when the door is blocked open, locked or guarded?			
Employees face the ladder when ascending or descending?			
Ladders that are broken, missing steps, rungs, cleats, broken side rails or other faulty equipment prohibited from use?			
Do employees not use the top 2 steps of the stepladder?			
Straight or extension ladders extend at least 3 feet above the elevated surface?			
Straight or extension ladders placed in a 4-to-1 height to base ratio, lashed or otherwise held in place to prevent slipping?			
Portable metal ladders legibly marked "CAUTION - Do Not Use Around Electrical Equipment" or similar wording?			
Ladders prohibited from use as guys, braces, skids, gin poles, or other like purposes?			
Extension ladders adjusted while standing at a base (not on or above the ladder)?			

Inspector Name _____

Date _____



APPENDIX E: BOWLING CENTER SAFETY TRAINING FORM

Part I: Employee Information			
Employee Name _____			
Position _____		Start Date _____	
Part II: Orientation			
	Employee	Reviewer	
1. <u>Review of Safety Program</u>	<input type="checkbox"/>	<input type="checkbox"/>	
2. <u>Responsibilities</u>	<input type="checkbox"/>	<input type="checkbox"/>	
3. <u>Compliance with Safety Program</u>	<input type="checkbox"/>	<input type="checkbox"/>	
4. <u>Safety Communication, Reporting Hazards</u>	<input type="checkbox"/>	<input type="checkbox"/>	
5. <u>Safety Inspections</u>	<input type="checkbox"/>	<input type="checkbox"/>	
6. <u>Occupational Accident Investigations</u>	<input type="checkbox"/>	<input type="checkbox"/>	
7. <u>Correction of Hazards</u>	<input type="checkbox"/>	<input type="checkbox"/>	
8. <u>Training</u>	<input type="checkbox"/>	<input type="checkbox"/>	
9. <u>Record Keeping</u>	<input type="checkbox"/>	<input type="checkbox"/>	
10. <u>Workplace Violence</u>	<input type="checkbox"/>	<input type="checkbox"/>	
11. <u>Review of Emergency Procedures</u> (i.e. types of emergencies, who and how to notify of situation, location of exits, first aid kits)	<input type="checkbox"/>	<input type="checkbox"/>	
12. <u>Review Hazard Communication Program</u> (i.e. chemicals, precautions to take, how to handle, labeling, SDS)	<input type="checkbox"/>	<input type="checkbox"/>	
Employee Signature _____		Date _____	
Trainer Signature _____		Date _____	
Part III: Specific Safety Training			
Training / Instruction Topic	Date	Employee Initials	Instructor Initials
<u>Kitchen: Use of Knives, Handling Hot Items</u>	_____	_____	_____
<u>Counter: Slips / Falls, Handling Money</u>	_____	_____	_____
<u>Mechanic: Lockout / Blockout</u>	_____	_____	_____
<u>Mechanic: Welding</u>	_____	_____	_____
<u>Mechanic: Machine Safeguarding</u>	_____	_____	_____
<u>Mechanic: Electrical Safety</u>	_____	_____	_____