



**VOSH PROGRAM DIRECTIVE: 02-228**

**ISSUED: September 15, 1998**

**SUBJECT: Guidelines for Point of Operation Guarding of Power Press Brakes**

**A. Purpose.**

This directive transmits to field personnel requirements for power press brakes.

*This Program Directive is an internal guideline, not a statutory or regulatory rule, and is intended to provide instructions to VOSH personnel regarding internal operation of the Virginia Occupational Safety and Health Program and is solely for the benefit of the program. This document is not subject to the Virginia Register Act or the Administrative Process Act; it does not have general application and is not being enforced as having the force of law.*

**B. Scope.**

This directive applies to all VOSH personnel.

**C. Reference.**

OSHA Instruction CPL 2-1.25 (February 14, 1997)

**D. Cancellation.**

Not Applicable.

**E. Action.**

The Deputy Commissioner, Directors and Managers shall assure that Compliance Officers performing inspections at workplaces where power press brakes are used are aware of these guidelines and follow them when appropriate.

**F. Effective Date.**

September 15, 1998

**G. Expiration Date.**

Not Applicable.

## **H. Guidelines.**

When guarding by barriers or physical devices is infeasible, guarding by “safe distance,” as defined in paragraph 6 of this section, is permitted if the employer meets the following conditions.

VOSH’s machinery and machine guarding standards in Subpart O require one or more guarding methods to protect (operating, minor servicing and other nearby) employees from exposure to hazardous machine energy. These methods include: guarding 1) by physical barriers(s); 2) by physical device(s), and 3) by maintaining safe distance(s).

1. To protect employees who are not operating or performing minor servicing from exposure to hazardous machine energy, an employer must provide power press brake guarding by physical barrier(s) or by restricting access to power press brakes.
2. A power press brake must not be “energized” (as defined under paragraph 1910.147(b)) when the point of operation is not guarded by one or more physical barriers or physical devices unless:
  - a. Under the operating control of a trained operator (see paragraph J),
  - b. The operating control of an employee authorized to perform minor servicing which complies with the note following paragraph 1910.147(a)(2)(ii)(B), or as provided under the servicing and maintenance testing and positioning requirements of paragraph 1910.147(f).
3. Employees performing minor servicing on machine(s) or equipment during normal production operations must be protected from exposure to hazardous energy by physical barrier guards and when such guarding is not feasible, by alternative measures which otherwise provide effective protection. When machine(s) or equipment are not in normal production operations, servicing and maintenance must be performed under the control of hazardous energy (lockout/tagout) requirements of § 1910.147 or paragraph 1910.333(b).
4. During normal production operations, the power press brake operator(s) must be protected to the extent feasible by physical barrier(s) or physical device(s) from exposure to hazardous energy sources not at the point of operation and elsewhere on the power press brake.
5. Because of constraints imposed by certain manufacturing or fabricating processes, safeguarding by maintaining a safe distance from the point of operation may be acceptable but only when safeguarding by physical barrier or physical devices is not feasible.

“Safe distance” means the clearance between an employee (typically his or her fingers holding and supporting a piece part) and the power press brake point of operation.
6. Safeguarding by maintaining a “safe distance” is acceptable if:
  - a. The employer demonstrates that physical barriers and physical devices are not feasible to guard the power press brake point of operation. Physical devices typically include: two hand controls, holdouts or restraints and presence sensors.

- b. The employer demonstrates that power press brake point of operation guarding by maintaining a safe distance is limited to one-time only fabrication of made-to-order or custom-made piece parts. Small quantity runs, typically performed in job shop or model shop establishments may be affected by this provision; high volume piece part rates of production will not. A “small quantity run” means fabrication of more than one of the same piece parts over a continuous timeframe of no more than four hours per month.

*NOTE: Special feasibility guidelines for small quantity runs: When physical guards and physical devices are not feasible for small quantity runs as defined above, safeguarding by maintaining a safe distance as described in this directive is an alternative to power press brake replacement or major renovation which otherwise could provide employee protection.*

- c. The employer has a safety program which includes safe work procedures, training, and supervision to ensure that work is performed using “safe distance” alternative measures.
  - d. The employer has a workplace history of operating power press brakes safely by maintaining a safe distance from the point of operation. Such a history is characterized by absence of injuries related to failure to maintain a safe distance. Workplace history will be evaluated by compliance officer review of employer records and interviews or observations of employees.
7. Safeguarding of power press brakes is covered by American National Standards Institute standard ANSI B11.3-1982. VOSH recognizes this ANSI standard as the national consensus standard covering power press brakes guarding. Paragraph 6.1.4.3 of the ANSI B11.3-1982 standard specifically addresses safeguarding by maintaining employee(s) at a safe distance when a power press brake is being operated. By specific notation in paragraph 6.1.4.3, “[a] dimension value has not been assigned to the minimum safe distance” as discussed in this directive, the operating employee and helping employee(s) must not approach closer than necessary and, in no case, closer than 4 inches (10.16 centimeters) to the power press brake point of operation. The minimum safe distance of 4 inches (10.16 cm) shall be measured from the exterior point of contact of the power press brake die closest to an employee.

- I. **“Safe Distance” Safeguarding Program.** An employer who adopts “safe distance” protection must have (and be prepared to demonstrate to VOSH) an effective program. An employer can meet this obligation by establishing and having employees follow an effective program which includes exposure prevention procedures and training and enforcement of these procedures as delineated in paragraphs J through N, below.
- J. **Exposure Prevention Procedures.** A “safe distance” exposure prevention procedure must be developed and documented by the employer and utilized by employee(s). The exposure prevention procedure must include provisions for maintaining a minimum safe distance as discussed in paragraph H.7. above.
- K. **Training.** Employees must be trained to follow the above-mentioned exposure prevention procedure(s) before operating a power press brake covered under the procedures.
  1. **Training Content.** Employee training must include at least the following:

- a. The need for a safety-oriented working relationship between the power press brake operator and when required, his or her helper.
- b. The function and purpose of operating controls: operating mode controls; die space height adjustment positions: and other brake controls.
- c. The hazards of placing any parts of the body within the point of operation.
- d. The hazards and potential exposure related to each specific piece part bending operation particularly with respect to the piece part itself (for example, whipping) and to tooling (including loading and unloading).
- e. The function and purpose of hand-feeding tools.
- f. The dangers of unsafe work practices, inattention, horseplay, and misuse of equipment.
- g. The necessity and importance of reporting immediately to the supervisor any condition concerning the power press brake and its operation that may affect the safety of an employee.

2. Effectiveness of Training. The employer must ensure that after training, employees perform applicable exposure prevention procedures proficiently. Power press brake operators and helpers must also comply with the safe operating instructions and recommendations of the power press brake manufacturer or industry-recognized safe working practices for power press brakes. [Successful completion of apprenticeship training may be referenced to demonstrate this latter element of employee proficiency.]

**L. Retraining.** Retraining must be conducted whenever a periodic inspection (see paragraph N below) reveals, or whenever the employer has reason to believe, that there are deviations from or inadequacies in an employee’s knowledge or use of exposure prevention procedure(s) or other work practices required to operate a power press brake safely. This retraining must introduce new or revised control methods and procedures, as necessary, and must reestablish employee proficiency to operate the power press brake safely.

**M. Supervision.** The employer must ensure, through effective supervision, that power press brakes are operated only by trained employees and must enforce the work practices on which power press brake operator training is based. This supervision must include periodic inspections as delineated in paragraph N below. Any deviations or inadequacies in the exposure prevention procedures or work practices must be corrected promptly. Employer measures must include retraining and other appropriate corrective action.

**N. Periodic Inspection.** An employer must conduct a periodic inspection of the “safe distance” exposure prevention procedure at least annually to ensure that this procedure and other provisions in this directive are being followed. This periodic inspection must be performed by a trained person, that is, an inspector, other than the person(s) using the “safe distance” exposure prevention procedure. The periodic inspection must be designed to identify any deviations or inadequacies. The periodic inspection must include a joint review by an inspector and each trained employee of that employee’s responsibility under the exposure prevention procedure. The employer must ensure that the periodic inspections have been

performed. Normally, the employer must be able to identify the power press brake on which the exposure prevention procedure was being utilized, the date of the inspection, the employee(s) included in the inspection, and the person performing the inspection.

- O. Enforcement.** Whether or not safeguarding is provided by maintaining a safe distance, an employer shall be cited for violation of paragraph 1910.212(a)(3)(ii) when a physical barrier or a physical device is feasible (except as otherwise allowed under paragraph H.6.b above) but not used to protect employees from the point of operation of a power press brake. When physical guards and physical devices are not feasible and safeguarding by maintaining a safe distance is not provided as discussed in paragraph H.7. of this directive, an employer shall be cited for violation of section 40.1-51.1(a), “The General Duty Clause,” of the VOSH standards.

John Mills Barr  
Commissioner

Attachment: None.

Distribution: Commissioner of Labor and Industry  
Chief Deputy Commissioner  
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