

Subject: Guidelines for Point of Operation Guarding of Power Press Brakes

- A. **Purpose and Summary.** This instruction provides guidelines for compliance officers who determine compliance with the guarding requirements for power press brakes. When guarding by barriers or physical devices is infeasible, guarding by "safe distance" is permitted if the employer meets conditions outlined below.
- B. **Scope.** This instruction applies OSHA-wide.
- C. **Action.** Regional Administrators and Area Director shall ensure that CSHOs performing inspections at workplaces where power press brakes are used are aware of these guidelines and that they follow them when appropriate.
- D. **Discussion.** OSHA's machinery and machine guarding regulations (29 CFR 1910 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 by physical barrier(s), by physical device(s), and 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: (1) under the operating control of a trained operator (see paragraph F), (2) 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 (lockout/tagout) of hazardous energy requirements of paragraph 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 Safety and Health 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. OSHA recognizes this ANSI standard as the national consensus standard covering power press brakes guarding. Paragraph 6.1.4.3 or 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." For the purpose of maintaining a "safe distance" as discussed in this instruction, 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 (10.6 cm) shall be measured from the exterior point of contact of the power press brake die closest to an employee.

- E. **"Safe Distance" Safeguarding Program.** An employer who adopts "safe distance" protection must have (and be prepared to demonstrate to OSHA) 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 F through J below.

- F. **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 D.7. above.
- G. **Training.** Employees must be trained to follow the aforementioned 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.]
- H. **Retraining.** Retraining must be conducted whenever a periodic inspection (see paragraph J 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.
- I. **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 J 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.
- J. **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 instruction 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.
- K. **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 D.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 D.7. of this instruction, an employer shall be cited for violation of Section 5(a)(1), "The General Duty Clause," of the Occupational Safety and Health (OSH) Act.
- L. **Contact for further information.** Questions regarding this instruction shall be directed to the Directorate of Compliance Programs and to the attention of Mr. Ronald J. Davies, (202) 219-8031, extension 110, in the Office of Safety Compliance Assistance.
- M. **Power Press Brake Injuries.** Compliance Safety and Health Officers who discover instances in which power press brake-related injuries have occurred, are requested to find out the circumstances of the incident and report briefly to the Office of Safety Compliance Assistance, attention Mr. Ronald J. Davies. Please provide (to the extent feasible) the following incident information: the name and type of establishment, address and type of accident site, date of the incident, type of work being performed, make and model of the power press brake and a description of the safeguarding being used in the workplace at the time of the incident.
- N. **References.**
1. OSHA Instruction STD 1-12.12, October 30, 1978, 29 CFR 1910.212, General Requirements For All Machines, As Applied to Power Press Brakes.
 2. OSHA Memorandum, March 25, 1983, Point of Operation Guarding on Job Shop Operations Utilizing Power Press Brakes.
 3. American National Standards Institute Standard ANSI B11.3-1982, Safety Requirements for Construction, Care, and Use of Power Press Brakes.
 4. 29 CFR 1910.212, General Requirements for Machine Guarding.
- O. **Cancellations.** This instruction cancels OSHA Instruction STD 1-12.12: 29 CFR 1910.212, General Requirements For All Machines, As Applied to Power Press Brakes. Also, OSHA's March 25, 1983, memorandum on "Point of Operation Guarding on Job Shop Operations Utilizing Power Press Brakes" is rescinded effective the date of this instruction.
- P. **Federal Program Change.** This instruction describes a Federal program change which affects State Programs. Each Regional Administrator shall:
1. Ensure that this change is promptly forwarded to each State designee using a format consistent with the Plan Change Two-way Memorandum in Appendix P,

OSHA Instruction STP 2.22A, State Plans Policies and Procedures Manual (SPM).

2. Explain to each State designee upon request the content of the change and the guidelines detailed in this instruction and provide technical assistance as necessary.
3. Ensure that the State designees acknowledge receipt of this Federal program change in writing to the Regional Administrator when the State's intention is known, but not later than 70 calendar days after issuance (10 days of mailing and 60 days for response). This acknowledgement must include a statement indicating whether the State will follow the guidelines in this instruction or develop alternative guidelines.
4. Ensure that State designees submit a plan supplement in accordance with OSHA Instruction STP 2.22A, CH-3, as appropriate, following the established schedule that is agreed upon by the State and Regional Administrator to submit non-Field Operations Manual/OSHA Technical Manual Federal program changes.
 - a. The State plan supplement should be in the form of a State directive or policy/procedure document, which details procedures for implementing the safety guidelines in the State.
 - b. The State's acknowledgement of the Plan Change Two-way Memorandum may fulfill the plan supplement requirement if the appropriate documentation is provided.
5. The RA shall review policies, instructions, and guidelines issued by the State to determine that this change has been communicated to State personnel.

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