

DEPARTMENT OF LABOR AND ECONOMIC OPPORTUNITY

DIRECTOR'S OFFICE

GENERAL INDUSTRY SAFETY AND HEALTH STANDARD

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These rules become effective immediately after filing with the secretary of state unless adopted under section 33, 44, or 45a(9) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

(By authority conferred on the director of the department of labor and economic opportunity by sections 16 and 21 of the Michigan occupational safety and health act, 1974 PA 154, MCL 408.1016 and 408.1021, and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, 2011-4, and 2019-3, MCL 445.2001, 445.2011, 445.2025, 445.2030, and 125.1998)

R 408.12306, R 408.12310, R 408.12331, R 408.12341, R 408.12363, and R 408.12373 of the Michigan Administrative Code are amended, as follows:

PART 23. HYDRAULIC POWER PRESSES

GENERAL PROVISIONS

R 408.12306 Definitions; E.

Rule 2306. (1) "Ejector" means a device for removing work or material from between dies.

(2) "Electronic-control device" means a device so designed and controlled that when the operator's hand or another part of the body is within the point of operation, the press cannot be tripped, and if the hand or another part of the operator's body is inserted into the point of operation area while the slide is descending, the device shall automatically stop the slide. The device may employ active circuit elements such as vacuum tubes, gas tubes, or semiconductor amplifiers, but not magnetic amplifiers, in conjunction with passive circuit elements, such as transformers, inductors, capacitors, resistors or magnetic device operating coils.

R 408.12310 Definitions; P.

Rule 2310. (1) "Pinch point" means any point, other than the point of operation, at which it is possible for a part of the body to be injured by being caught between the moving parts of the press or auxiliary equipment, between moving and stationary parts of the press or auxiliary equipment, or between the material and moving parts of the press or auxiliary equipment.

(2) "Point of operation" means the area of the press where material is actually positioned, and where work is being performed, during any process such as shearing, punching, or forming.

(3) "Point of operation device" means a press control or attachment that does any of the following:

(a) Restrains the operator from inadvertently reaching into the point of operation.

(b) Prevents normal press operation if the operator's hands are inadvertently within the point of operation.

(c) Automatically withdraws the operator's hands if they are inadvertently within the point of operation as the dies close.

(4) "Presence sensing device" means a device designed, constructed, and arranged to create a sensing field or area, and to deactivate the control of the press when an operator's hand or other part of the body is within the field or area.

(5) "Press," as referred to in this part, means a powered machine, having a liquid energy transfer media that actuates the slide motion toward and away from the bed surface, where the slide is guided in a definite path by a frame or cylinder.

(6) "Primary operation" means a preliminary press operation applied to material to be subsequently processed. Examples of primary operation include blanking, piercing, and corner cutting.

(7) "Pull-out device" means a mechanism attached to the operator's hands or arms and connected to the slide or upper die, and designed to withdraw the operator's hands from the point of operation as the slide or upper die descends.

#### R 408.12331 Two-hand controls.

Rule 2331. (1) A 2-hand control shall require the application of both hands to operate the press and shall require concurrent pressure on both controls until a point is reached in the downward stroke where the die opening is such that the operator cannot remove their hands and place them within the point of operation. Removal of 1 or both hands, before the closing portion of the cycle, shall either stop the slide or return the slide to its starting position.

(2) Two-hand controls for single-stroke operation, manufactured and installed on or after August 31, 1971, shall be designed to require release of all operator's hand controls before a second stroke can be initiated.

(3) Controls for more than 1 operating station shall be designed to be activated and deactivated in complete sets of 2-hand controls per operating station, by means capable of being supervised by the employer.

(4) If foot control is provided, the selection method between hand and foot control shall be separated from the stroking selector and shall be designed so that the selection may be supervised by the employer.

(5) A 2-hand control is a mechanically, pneumatically, or electrically controlled system.

(6) A 2-hand control shall be installed to prevent "bridging" controls, so that it can be operated by 2 hands only.

(7) In a press operation requiring more than 1 operator, a set of 2-hand controls shall be provided for each operator. However, a foot control may be used with 2-hand controls if arranged to operate concurrently (otherwise, no cycle) and if the operator is not exposed to the point of operation.

(8) If each of the operating stations is provided with a lockout arrangement, provisions shall be made to prevent an unintentional press cycle when all of the operating controls are locked out.

R 408.12341 Presence sensing devices.

Rule 2341. (1) A presence sensing device shall be designed and installed so that when the operator's hands or another part of the body disturbs the sensing field, the downward travel of the slide is prevented or stopped. This device shall not be used as a tripping means.

(2) Equipment shall be installed so that failure of light or photoelectric relay or other energy source makes the press inoperative.

(3) These devices shall not, in themselves, create a physical or organic hazard to the operator.

(4) The safety distance (Ds) from the sensing field to the point of operation shall be greater than the distance determined by the following formula:

$Ds = 63 \text{ inches/second} \times TS$  where:

$Ds = \text{minimum safety distance (inches); } 63 \text{ inches/second} = \text{hand speed constant;}$   
and

$TS = \text{stopping time of press measured when slide has completed approximately half of the downward stroke.}$

(5) To protect all areas of entry to the point of operation not protected by the presence sensing device, the partial enclosure shall be used and shall not create a pinch point or shear hazard.

R 408.12363 Ejecting stock and scrap.

Rule 2363. (1) Spring pads or rubber strippers, or equivalent means, shall be provided where required on punching or piercing dies to ensure that parts are stripped or knocked out.

(2) Automatic ejection of stock and scrap should be considered during die design.

(3) The employer shall provide means for safely handling scrap from roll feed or random length stock operations. Scrap cutters used in conjunction with scrap handling systems shall be safeguarded pursuant to table 2. Scrap recoil devices may be used instead of scrap cutters.

R 408.12373 Inspection and maintenance records.

Rule 2373. The employer shall establish and follow a program of periodic and regular inspections of presses to ensure that all their parts, auxiliary equipment, and safeguards are in a safe operating condition and adjustment. The employer shall maintain records of these inspections and of the maintenance work performed.