

SAFETY AUDIT CHECKLIST

Mechanical Power Presses

Location: _____

Audited by: _____ **Date:** _____

Check the box under Y for "yes" or N for "no" to determine if each item is within compliance.

Y N

- 1. Are machine components designed, secured, or covered to minimize hazards caused by breakage, or loosening and falling or release of mechanical energy? 1910.217(b)(1)
- 2. Are friction brakes provided for stopping or holding a slide movement inherently self-engaging by requiring power or force from an external source to cause disengagement? 1910.217(b)(2)

Full revolution positive clutches

- 3. Do machines using full revolution clutches have a single-stroke mechanism? 1910.217(b)(3)(i)
- 4. If the single-stroke mechanism is dependent upon spring action, are the spring(s) the compression type, operating on a rod or guided within a hole or tube, and designed to prevent interleaving of the spring coils in event of breakage? 1910.217(b)(3)(ii)

Foot pedal

- 5. Is the pedal mechanism protected to prevent unintended operation from falling or moving objects or by accidental stepping onto the pedal? 1910.217(b)(4)(i)
- 6. Is a pad with a nonslip contact area firmly attached to the pedal? 1910.217(b)(4)(ii)
- 7. Is the pedal return spring(s) of the compression type, operating on a rod or guided within a hole or tube, or designed to prevent interleaving of spring coils in event of breakage? 1910.217(b)(4)(iii)
- 8. If pedal counterweights are provided, is the path of the travel of the weight enclosed? 1910.217(b)(4)(iv)

Hand operated levers

- 9. Are hand-lever-operated power presses equipped with a spring latch on the operating lever to prevent premature or accidental tripping? 1910.217(b)(5)(i)

Y N

- 10. Are operating levers on hand-tripped presses having more than one operating station interlocked to prevent the tripping of the press except by the "concurrent" use of all levers? 1910.217(b)(5)(ii)

Two hand trip

- 11. Does a two-hand trip have the individual operator's hand controls protected against unintentional operation and arranged by design, construction and/or separation to require the use of both hands to trip the press concurrently? 1910.217(b)(6)(i)
- 12. Do two-hand trip systems on full revolution clutch machines incorporate an antirepeat feature? 1910.217(b)(6)(ii)
- 13. If two-hand trip systems are used on multiple operator presses, does each operator have a separate set of controls? 1910.217(b)(6)(iii)

Part revolution clutches

- 14. Does the clutch release and is the brake applied when the external clutch engaging means is removed, deactivated, or deenergized? 1910.217(b)(7)(i)
- 15. Is a red color stop control provided with the clutch/brake control system to immediately deactivated the clutch and apply the brake? 1910.217(b)(7)(ii)
- 16. Is a means of selecting Off, "Inch," Single Stroke, and Continuous (when the continuous function is furnished) supplied with the clutch/brake control to select type of operation of the press? 1910.217(b)(7)(iii)
- 17. Is the "Inch" operating means designed to prevent exposure of the workers hands within the point of operation by requiring the concurrent use of both hands to actuate the clutch or being a single control protected against accidental actuation and so located that the worker cannot reach into the point of operation while operating the single control? 1910.217(b)(7)(iv), (b)(7)(iv)(a) & (b)(7)(iv)(b)

Item # Repair Date

Item #	Repair Date

Notes: _____

SAFETY AUDIT CHECKLIST

Mechanical Power Presses

Location: _____

Audited by: _____

Date: _____

Check the box under Y for "yes" or N for "no" to determine if each item is within compliance.

Y N

- 34. Do electrical clutch/brake control circuits incorporate features to minimize the possibility of an unintended stroke in the event of the failure of a control component to function properly, including relays, limit switches, and static output circuits? 1910.217(b)(8)(vi)
- 35. Do spring counterbalance systems when used incorporate means to retain system parts in event of breakage? 1910.217(b)(9)(i)
- 36. Do spring counterbalances when used have the capability to hold the slide and its attachments at midstroke, without brake applied? 1910.217(b)(9)(ii)
- 37. Do air counterbalance cylinders incorporate means to retain the piston and rod in case of breakage or loosening? 1910.217(b)(9)(iii)
- 38. Do air counterbalance cylinders have adequate capability to hold the slide and its attachments at any point in stroke, without brake applied? 1910.217(b)(9)(iv)
- 39. Do air counterbalance cylinders incorporate means to prevent failure of capability (sudden loss of pressure) in event of air supply failure? 1910.217(b)(9)(v)
- 40. Is air controlling equipment protected against foreign material and water entering the pneumatic system of the press? 1910.217(b)(10)
- 41. Is the maximum anticipated working pressures in any hydraulic system on a mechanical power press below the safe working pressure rating of any component used in that system? 1910.217(b)(11)
- 42. Do all pressure vessels used in conjunction with power presses conform to the American Society of Mechanical Engineers Code for Pressure Vessels, 1968 Edition, which is incorporated by reference as specified in Sec. 1910.6? 1910.217(b)(12)

Y N

- 43. Is the control system constructed so that a failure within the system does not prevent the normal stopping action from being applied to the press when required, but does prevent initiation of a successive stroke until the failure is corrected? 1910.217(b)(13)
- 44. Do brake monitors automatically prevent the activation of a successive stroke if the stopping time or braking distance deteriorates to a point where the safety distance being utilized does not meet the requirements? 1910.217(b)(14)(i)
- 45. Has the employer provided and insured the usage of "point of operation guards" or properly applied and adjusted point of operation devices on every operation performed on a mechanical power press as specified in Table O-10, except where the point of operation opening is 1/4 inch or less? 1910.217(c)(1)(i) & (c)(1)(ii)

Point of operation guards

- 46. Do point of operation guards prevent entry of hands or fingers into the point of operation by reaching through, over, under or around the guard? 1910.217(c)(2)(i)(a)
- 47. Do point of operation guards conform to the maximum permissible openings of Table O-10? 1910.217(c)(2)(i)(b)
- 48. Do point of operation guards create no pinch point between the guard and moving machine parts? 1910.217(c)(2)(i)(c)
- 49. Do point of operation guards utilize fasteners not readily removable by operator, so as to minimize the possibility of misuse or removal of essential parts? 1910.217(c)(2)(i)(d)
- 50. Do point of operation guards facilitate its inspection? 1910.217(c)(2)(i)(e)
- 51. Do point of operation guards offer maximum visibility of the point of operation? 1910.217(c)(2)(i)(f)

Item #	Repair Date

Notes: _____

SAFETY AUDIT CHECKLIST

Mechanical Power Presses

Location: _____

Audited by: _____ **Date:** _____

Check the box under Y for "yes" or N for "no" to determine if each item is within compliance.

Y N

- 52. Is a die enclosure guard attached to the die shoe or stripper in a fixed position?
1910.217(c)(2)(ii)
- 53. Is a fixed barrier guard attached securely to the frame of the press or to the bolster plate? 1910.217(c)(2)(iii)
- 54. Is an interlocked press barrier guard attached to the press frame or bolster and interlocked with the press clutch control so that the clutch cannot be activated unless the guard itself, or the hinged or movable sections of the guard are in position to conform to the requirements of Table O-10? 1910.217(c)(2)(iv)
- 55. Are the hinged or movable sections of an interlocked press barrier guard prohibited from being used for manual feeding?
1910.217(c)(2)(v)
- 56. Is the adjustable barrier guard securely attached to the press bed, bolster plate, or die shoe, and adjusted and operated in conformity with Table O-10?
1910.217(c)(2)(vi)

Point of operation devices

- 57. Do point of operation devices protect the operator by preventing and/or stopping normal stroking of the press if the operator's hands are inadvertently placed in the point of operation? 1910.217(c)(3)(i)(a), or
- 58. Do point of operation devices protect the operator by preventing the operator from inadvertently reaching into the point of operation, or withdrawing his hands if they are inadvertently located in the point of operation, as the dies close?
1910.217(c)(3)(i)(b), or
- 59. Do point of operation devices protect the operator by preventing the operator from inadvertently reaching into the point of operation at all times?
1910.217(c)(3)(i)(c), or

Y N

- 60. Do point of operation devices protect the operator by requiring application of both of the operator's hands to machine operating controls and locating such controls at such a safety distance from the point of operation that the slide completes the downward travel or stops before the operator can reach into the point of operation with his hands? 1910.217(c)(3)(i)(e), or
- 61. Do point operation devices protect the operator by enclosing the point of operation before a press stroke can be initiated, and maintaining this closed condition until the motion of the slide had ceased?
1910.217(c)(3)(i)(f)
- 62. Do point operation devices protect the operator by enclosing the point of operation before a press stroke can be initiated, so as to prevent an operator from reaching into the point of operation prior to die closure or prior to cessation of slide motion during the downward stroke?
1910.217(c)(3)(i)(g)
- 63. Does a Type A gate or movable barrier device protect the operator by enclosing the point of operation before a press stroke can be initiated, and maintaining this closed condition until the motion of the slide had ceased? 1910.217(c)(3)(ii)(a)
- 64. Does a Type B gate or movable barrier device protect the operator by enclosing the point of operation before a press stroke can be initiated, so as to prevent an operator from reaching into the point of operation prior to die closure or prior to cessation of slide motion during the downward stroke? 1910.217(c)(3)(ii)(b)
- 65. Does a presence sensing point of operation device protect the operator and is it interlocked into the control circuit to prevent or stop slide motion if the operator's hand or other part of his body is within the sensing field of the device during the downstroke of the press slide? 1910.217(c)(3)(iii)

Item #	Repair Date

Notes:

SAFETY AUDIT CHECKLIST

Mechanical Power Presses

Location: _____

Audited by: _____ **Date:** _____

Check the box under Y for “yes” or N for “no” to determine if each item is within compliance.

Y N

- 66. Is a presence sensing point of operation device prohibited from being used on machines using full revolution clutches? 1910.217(c)(3)(iii)(a)
- 67. Is the presence setting point of operation device prohibited from being used as a tripping means to initiate slide motion? 1910.217(c)(3)(iii)(b)
- 68. Is the presence setting point of operation device constructed so that a failure within the system does not prevent the normal stopping action from being applied to the press when required, but does prevent the initiation of a successive stroke until the failure is corrected? 1910.217(c)(3)(iii)(c)
- 69. Is the muting (bypassing of the protective function) of such device, during the upstroke of the press slide, only permitted for the purpose of parts ejection, circuit checking, and feeding? 1910.217(c)(3)(iii)(d)
- 70. Is the safety distance (D(s)) from the sensing field to the point of operation greater than the distance determined by the formula $D(s) = 63 \text{ inches/second} \times T(s)$? 1910.217(c)(3)(iii)(e)
- 71. Are guards used to protect all areas of entry to the point of operation not protected by the presence sensing device? 1910.217(c)(3)(iii)(f)
- 72. Does the pull-out device protect the operator and include attachments for each of the operator's hands? 1910.217(c)(3)(iv)
- 73. Are attachments connected to and operated only by the press slide or upper die? 1910.217(c)(3)(iv)(a)
- 74. Are attachments adjusted to prevent the operator from reaching into the point of operation or to withdraw the operator's hands from the point of operation before the dies close? 1910.217(c)(3)(iv)(b)
- 75. Are separate pull-out device provided for each operator if more than one operator is used on a press? 1910.217(c)(3)(iv)(c)

Y N

- 76. Is each pull-out device in use visually inspected and checked for proper adjustment at the start of each operator shift, following a new die set-up, and when operators are changed? 1910.217(c)(3)(iv)(d)
- 77. Is the sweep device prohibited from being used for point of operation safeguarding? 1910.217(c)(3)(v)
- 78. Do holdout or restraint devices protect the operator and include attachments for each of the operator's hands? 1910.217(c)(3)(vi)
- 79. Are attachments securely anchored and adjusted in such a way that the operator is restrained from reaching into the point of operation? 1910.217(c)(3)(vi)
- 80. Is a separate set of restraints provided for each operator if more than one operator is required on a press? 1910.217(c)(3)(vi)
- 81. When used in press operations requiring more than one operator, are separate two hand controls provided for each operator, and designed to require concurrent application of all operators' controls to activate the slide? 1910.217(c)(3)(vii)(a)
- 82. Does the removal of a hand from any control button cause the slide to stop? 1910.217(c)(3)(vii)(a)
- 83. Is the safety distance (D(s)) between each two hand control devices and the point of operation greater than the distance determined by the following formula $D(s) = 63 \text{ inches/second} \times T(s)$? 1910.217(c)(3)(vii)(c)
- 84. Are two hand controls in a fixed position so that only a supervisor or safety engineer is capable of relocating the controls? 1910.217(c)(3)(vii)(d)
- 85. When used in press operations requiring more than one operator, are separate two hand trips provided for each operator, and designed to require concurrent application of all operators' to activate the slide? 1910.217(c)(3)(viii)(a)

Item #	Repair Date

Notes: _____

SAFETY AUDIT CHECKLIST

Mechanical Power Presses

Location: _____

Audited by: _____ **Date:** _____

Check the box under Y for "yes" or N for "no" to determine if each item is within compliance.

Y N

- 86. Is the safety distance (D(m)) between the two hand trip and the point of operation greater than the distance determined by the following formula $D(m) = 63 \text{ inches/second} \times T(m)$? 1910.217(c)(3)(viii)(c)
- 87. Are two hand trips fixed in position so that only a supervisor or safety engineer is capable of relocating the controls? 1910.217(c)(3)(viii)(d)
- 88. Are two hand feeding tools intended for placing and removing materials in and from the press? 1910.217(c)(4)
- 89. Where the operator feeds or removes parts by placing one or both hands in the point of operation, and a two hand control, presence sensing device, Type B gate or movable barrier (on a part revolution clutch) is used for safeguarding, does the employer use a control system, a brake monitor and is the control of air clutch machines designed to prevent a significant increase in the normal stopping time due to a failure within the operating valve mechanism and to inhibit further operation if such failure does occur, where a part revolution clutch is employed? 1910.217(c)(5)(iii)
- 90. Does the employer use dies and operating methods designed to control or eliminate hazards to operating personnel? 1910.217(d)(1)(i)
- 91. Does the the employer furnish and enforce the use of hand tools for freeing and removing stuck work or scrap pieces from the die, so that no employee need reach into the point of operation for such purposes? 1910.217(d)(1)(ii)
- 92. Does the employer provide means for handling scrap from roll feed or random length stock operations? 1910.217(d)(3)
- 93. Are guide posts (when located in the immediate vicinity of the operator) and when separated from its bushing by more than 1/4 inch considered as a point of operation hazard and guarded? 1910.217(d)(4)

Y N

- 94. If unitized tooling is used, is the opening between the top of the punch holder and the face of the slide, or striking pad, be safeguarded? 1910.217(d)(5)
- 95. Are all dies stamped with the tonnage and stroke requirements, or have these characteristics recorded if these records are readily available to the die setter? 1910.217(d)(6)(i)
- 96. Are all dies stamped to indicate upper die weight when necessary for air counterbalance pressure adjustment? 1910.217(d)(6)(ii)
- 97. Are all dies stamped to indicate complete die weight when handling equipment may become overloaded? 1910.217(d)(6)(iii)
- 98. Are provisions made in both the upper and lower shoes for securely mounting the die to the bolster and slide? 1910.217(d)(7)
- 99. Are handling equipment attach points provided on all dies requiring mechanical handling? 1910.217(d)(8)
- 100. Has the employer provided spring loaded turnover bars, for presses designed to accept such turnover bars? 1910.217(d)(9)(ii)
- 101. Has employer provided die stops or other means to prevent losing control of the die while setting or removing dies in presses which are inclined? 1910.217(d)(9)(iii)
- 102. Does the employer provide and enforce the use of safety blocks for use whenever dies are being adjusted or repaired in the press? 1910.217(d)(9)(iv)
- 103. Does the employer provide brushes, swabs, lubricating rolls, and automatic or manual pressure guns so that operators and diesetters are not required to reach into the point of operation or other hazard areas to lubricate material, punches or dies? 1910.217(d)(9)(v)

Item #	Repair Date

Notes: _____

SAFETY AUDIT CHECKLIST

Mechanical Power Presses

Location: _____

Audited by: _____ **Date:** _____

Check the box under Y for "yes" or N for "no" to determine if each item is within compliance.

Item #	Repair Date

Y N Inspection & maintenance

- 104. Has the employer established and followed a program of periodic and regular inspections of power presses to ensure that all their parts, auxiliary equipment, and safeguards are in a safe operating condition and adjustment?
1910.217(e)(1)(i)
- 105. Has the employer maintained a certification record of inspections which includes the date of inspection, the signature of the person who performed the inspection and the serial number, or other identifier, of the power press that was inspected?
1910.217(e)(1)(i)
- 106. Is each press inspected and tested no less than weekly to determine the condition of the clutch/brake mechanism, antirepeat feature and single stroke mechanism?
1910.217(e)(1)(ii)
- 107. Is necessary maintenance or repair or both performed and completed before the press is operated?
1910.217(e)(1)(ii)
- 108. Does the employer maintain a certification record of inspections, tests and maintenance work which includes the date of the inspection, test or maintenance, the signature of the person who performed the inspection, test, or maintenance and the serial number or other identifier of the press that was inspected, tested or maintained?
1910.217(e)(1)(ii)
- 109. If a power press is modified, are instructions with the modification to establish new or changed guidelines for use and care of the power press modified as well?
1910.217(e)(2)
- 110. Does the employer ensure the original and continuing competence of personnel caring for, inspecting, and maintaining power presses?
1910.217(e)(3)

Operation of power presses

- 111. Does the employer train and instruct the operator in the safe method of work before starting work on power presses?
1910.217(f)(2)

Notes: _____

Y N

- 112. Does the employer ensure by adequate supervision that correct operating procedures are being followed?
1910.217(f)(2)
- 113. Does the employer provide clearance between machines so that movement of one operator will not interfere with the work of another?
1910.217(f)(3)
- 114. Is ample room for cleaning machines, handling material, work pieces, and scrap also be provided?
1910.217(f)(3)
- 115. Are all surrounding floors kept in good condition and free from obstructions, grease, oil, and water?
1910.217(f)(3)
- 116. Are all presses operated within the tonnage and attachment weight ratings specified by the manufacturer?
1910.217(f)(4)
- 117. Are the distances that guards are positioned from the danger line in accordance with the required openings as specified in Table O-10?

Report of injuries

- 118. Does the employer, within 30 days of the occurrence, report to either the Director of the Directorate of Safety Standards Programs, OSHA, U.S. Department of Labor, Washington, D.C. 20210, or the State agency administering a plan approved by the Assistant Secretary of Labor for Occupational Safety and Health, all point of operation injuries to operators or other employees?
1910.217(g)(1)

Comments:

