

WAC 296-24-69003 Spot and seam welding machines (nonportable).

(1) **Voltage.** All external weld initiating control circuits must operate on low voltage, not over 120 volts.

(2) **Capacitor welding.** You must suitably insulate or protect stored energy or capacitor discharge type of resistance welding equipment and control panels involving high voltage (over 550 volts) by complete enclosures, all doors of which you must provide with suitable interlocks and contacts wired into the control circuit (similar to elevator interlocks). Such interlocks or contacts must be so designed as to effectively interrupt power and short circuit all capacitors when the door or panel is open. You must install a manually operated switch or suitable positive device, in addition to the mechanical interlocks or contacts, as an added safety measure assuring absolute discharge of all capacitors.

(3) **Interlocks.** You must keep all doors and access panels of all resistance welding machines and control panels locked and interlocked to prevent access, by unauthorized persons, to live portions of the equipment.

(4) **Guarding.** You must effectively safeguard all press welding machine operations, where there is a possibility of the operator's fingers being under the point of operation, according to the machine safety requirements in WAC 296-806-20044 through 296-806-20054. You must protect all chains, gears, operating bus linkage, and belts by adequate guards, in accordance with the machine safety requirements in WAC 296-806-20042.

(5) **Shields.** The hazard of flying sparks must be, wherever practical, eliminated by installing a shield guard of safety glass or suitable fire-resistant plastic at the point of operation. You must install additional shields or curtains as necessary to protect passing persons from flying sparks. (See WAC 296-24-70003 (1)(c).)

(6) **Foot switches.** You must guard all foot switches to prevent accidental operation of the machine.

(7) **Stop buttons.** You must provide two or more safety emergency stop buttons on all special multispot welding machines, including 2-post and 4-post weld presses.

(8) **Safety pins.** On large machines, you must provide four safety pins with plugs and receptacles (one in each corner) so that when safety pins are removed and inserted in the ram or platen, the press becomes inoperative.

(9) **Grounding.** Where technically practical, you must ground the secondary of all welding transformers used in multispot, protection and seam welding machines. This may be done by permanently grounding one side of the welding secondary current circuit. Where not technically practical, a center tapped grounding reactor connected across the secondary or the use of a safety disconnect switch in conjunction with the welding control are acceptable alternates. You must arrange safety disconnect to open both sides of the line when welding current is not present.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 15-24-100, § 296-24-69003, filed 12/1/15, effective 1/5/16; WSR 04-14-028, § 296-24-69003, filed 6/29/04, effective 1/1/05; Order 73-5, § 296-24-69003, filed 5/9/73 and Order 73-4, § 296-24-69003, filed 5/7/73.]