



Washington State Department of
Labor & Industries
Division of Occupational Safety and Health

Safety Standards for Laundry Machinery and Operations

Chapter 296-303 WAC

January 2007 Edition



Division of Occupational Safety and Health



www.Lni.wa.gov/Safety



1-800-423-7233

F414-012-000

Standards Update
Chapter 296-303 WAC
Safety Standards for Laundry Machinery and Operations
Form Number F414-012-000

Last Update: 1/24/07

This book contains rules for Safety Standards for Laundry Machinery and Operations, as adopted under the Washington Industrial Safety and Health Act of 1973 (Chapter 49.17 RCW). It is current as of the issue date shown on the bottom of each page of text.

TO RECEIVE E-MAIL UPDATES:

- Sign up for our Listserv at:
- <http://www.lni.wa.gov/Main/Listservs/default.asp>

TO PRINT YOUR OWN PAPER COPY OR TO VIEW THE RULE ONLINE:

- Go to: <http://lni.wa.gov/wisha/rules/laundrymachineryoperations/>

TO REQUEST A SAFETY CD THAT INCLUDES ALL OF OUR RULES:

- E-mail your CD request to: rulesrequests@lni.wa.gov

TO REQUEST A HARDCOPY:

- E-mail your mailing address and book request to:
rulesrequests@lni.wa.gov

DOSH CONTACT INFORMATION:

- Physical address: 7273 Linderson Way, Tumwater, WA 98501-5414, located off I-5 Exit 101 south of Tumwater.
- Mailing address: DOSH Standards and Information, PO Box 44810, Olympia, WA 98504-4810
- Information phone number is 1-800-423-7233

Also available on the WISHA web site:

- WISHA Core Rules
- Other General WISHA Rules
- Industry and Task-specific Rules
- Proposed rules and hearings
- Newly adopted rules and new rule information.
- WISHA Regional Directives (WRDs)
- WISHA Interim Operations and Interpretive Memoranda (WIIM)
- Memoranda of Understanding (MOU)

Chapter 296-303 WAC
LAUNDRY MACHINERY AND OPERATIONS

WAC		Page
296-303-010	Laundry machinery and operations Scope and application.	1
296-303-01001	General industrial safety standards.	1
296-303-01003	Definitions.	1
296-303-020	Point-of-operation guards-Scope and application.	3
296-303-02001	Washroom machines.	3
296-303-02003	Starching and drying machines.	3
296-303-02005	Finishing machines.	4
296-303-02007	Miscellaneous machines and equipment.	5
296-303-025	Operating rules-Scope and application.	6
296-303-02501	General.	6
296-303-02503	Mechanical.	6
296-303-030	Moving parts.	7
296-303-040	Starting and stopping devices.	7

WAC 296-303-010 Laundry machinery and operations-Scope and application. This chapter applies to moving parts of equipment used in laundries and to conditions peculiar to this industry, with special reference to the point of operation of laundry machines. This chapter does not apply to dry-cleaning operations.
[Order 74-18, § 296-303-010, filed 5/6/74.]

WAC 296-303-01001 General industrial safety standards.

- (1) General. These standards shall be augmented by the Washington state general safety and health standards, and any other regulations of general application which are or will be made applicable to all industries.
- (2) Additional requirements. The employer shall comply with the provisions of the standards referenced in this section. In the event of any conflict between this section and WAC 296-303-015 through 296-303-040, the requirements of WAC 296-303-015 through 296-303-040 shall apply. The provisions of this chapter shall prevail in the event of conflict with, or duplication of, provisions contained in chapters 296-24, 296-62, and 296-800 WAC.
 - (a) Industrial lighting. American National Standard Practice for Industrial Lighting, ANSI A11.1-1965 (R-1970).
 - (b) Floor and wall openings, railings, and toeboards. American National Standard Safety Requirements for Floor and Wall Openings, Railings, and Toeboards, ANSI 12.1-1956.
 - (c) Identification of piping systems. American National Standard Scheme for the Identification of Piping Systems, ANSI A13.1-1956.
 - (d) Mechanical power transmission apparatus. American National Standard Safety Standard for Mechanical Power Transmission Apparatus, ANSI B15.1-1971.
 - (e) Pressure piping-Power piping. American National Standard Code for Pressure Piping-Power Piping, ANSI B31.1.0-1967. Addenda to the American National Standard Code for Pressure Piping-Power Piping, ANSI B31.1.0a-1969.
 - (f) Sanitation. American National Standard Requirements for Sanitation in Places of Employment, ANSI Z4.1-1968.
 - (g) Local exhaust systems. American National Standard Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2-1960.
 - (h) Gas appliances and gas piping. American National Standard for the Installation of Gas Appliances and Gas Piping, ANSI Z21.30-1964.

(3) WAC 296-24-012 and 296-800-360 shall apply where applicable to this industry.
[Statutory Authority: RCW 49.17.010, .020, .040, .050, and .060. 07-03-163 (Order 06-30), § 296-303-01001, filed 01/24/07, effective 04/01/07. Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-303-01001, filed 05/09/01, effective 09/01/01. Order 74-18, § 296-303-01001, filed 5/6/74.]

WAC 296-303-01003 Definitions.

- (1) **“Laundry”** means an establishment wherein the washing, ironing, or other finishing of clothes, or any other textiles is done, but excluding printing, bleaching, dry cleaning, or dyeing of clothes or other textiles.
- (2) **“Marking machine”** means a power-driven machine used for marking clothes or other textiles.
- (3) **“Washing machine”** means a power-driven machine used for washing clothes or other textiles. It generally consists of a stationary case or shell inside of which is a revolving perforated cylinder.

WAC 296-303-01003 (Cont.)

- (4) **“Extractor”** means a power-driven centrifugal machine used for removing surplus moisture from clothes or other textiles by centrifugal action.
- (5) **“Wringer”** means one or more power-driven rolls used for removing surplus moisture from clothes or other textiles.
- (6) **“Starch mixer”** means a power-driven machine used for mixing or processing starch.
- (7) **“Starching machine”** means a power-driven machine used for the starching of clothes or other textiles.
- (8) **“Drying tumbler”** means a machine within which clothes or other textiles are dried by air, and which usually consists of an enclosure inside of which is a revolving cylinder.
- (9) **“Shaker”** (clothes tumbler) means a revolving cylinder used for shaking out clothes or other textiles.
- (10) **“Drying room”** means an enclosure used for drying clothes or other textiles, and containing any power-driven mechanism.
- (11) **“Dampening machine”** means a machine used for dampening clothes or other textiles.
- (12) **“Ironer”** means a hand- or power-operated machine, with one or more rolls or heated surfaces in contact, used for ironing or smoothing clothes or other textiles.
- (13) **“Shaping machine”** means a power-driven machine used to shape, mold, or otherwise finish clothes or other textiles; this term shall also include shaping tables, stands, or shelves upon which the machine may be mounted.
- (14) **“Sewing machine”** means a machine used for sewing or stitching clothes or other textiles.
- (15) **“Guarded”** means covered, shielded, fenced, enclosed, or otherwise protected by means of suitable covers or casings, barrier rails, safety bars, or screens, to eliminate the possibility of accidental contact with, or dangerous approach by, persons or objects.
- (16) **“Enclosed”** means that the object or equipment or part thereof is so guarded that accidental contact at the point of danger, during the regular operation of the equipment, is not possible.
- (17) **“Safety interlock”** means a device that will prevent the operation of the machine while the cover or door is open or unlocked and will hold the cover or door closed and locked while the basket or cylinder is in motion.
- (18) **“Moving parts”** means gears, sprockets, revolving shafts, clutches, belts, pulleys, or other revolving or reciprocating parts that are attached to, or form an integral part of, a machine.
- (19) **“Power transmission”** pertains to equipment such as shafting, gears, belts, pulleys, or other parts used for transmitting power to the machine, and shall include prime movers.
- (20) **“Prime movers”** includes steam, gas, oil, and air engines or motors, and steam and hydraulic turbines.
- (21) **“Point of operation”** means the point or points at which clothes or other textiles are inserted or manipulated in the operation of the machine.

[Order 74-18, § 296-303-01003, filed 5/6/74.]

WAC 296-303-020 Point-of-operation guards-Scope and application. All sections of this chapter which include WAC 296-303-020 in the section number apply to point-of-operation guards.
[Order 74-18, § 296-303-020, filed 5/6/74.]

WAC 296-303-02001 Washroom machines.

- (1) Marking machine. Each power marking machine shall be equipped with a spring-compression device of such design as to prevent injury to fingers, should they be caught between the marking plunger and platen; or the marking machine shall be equipped with a control mechanism that will require the simultaneous action of both hands to operate the machine; or there shall be a guard that will act as a barrier in front of, and which will prevent the operator's fingers from coming into contact with the marking plunger.
- (2) Washing machine.
 - (a) Each washing machine shall be equipped with an interlocking device that will prevent the inside cylinder from moving under power when the outer door on the case or shell is open, and will also prevent the door from being opened while the inside cylinder is in motion. This device should not prevent the movement of the inner cylinder under the action of a hand-operated mechanism or under the operation of an "inching device."
 - (b) Each washing machine shall be provided with means for holding open the doors or covers of inner and outer cylinders or shells while being loaded or unloaded. Spring loaded devices are an acceptable means.
- (3) Extractor.
 - (a) Each extractor shall be equipped with a metal cover.
 - (b) Each extractor shall be equipped with an interlocking device that will prevent the cover from being opened while the basket is in motion, and will also prevent the power operation of the basket while the cover is not fully closed and secured. This device should not prevent the movement of the basket by hand to ensure an even loading.
 - (c) Each extractor shall also be effectively secured in position on the floor or foundation so as to eliminate unnecessary vibrations, and shall not be operated at a speed greater than that given in the manufacturer's rating, which shall be stamped on the inside of the basket where it is easily visible, in letters not less than one-fourth inch in height. The maximum permissible speed shall be given in revolutions per minute.
 - (d) Each engine individually driving an extractor shall be provided with an approved engine stop and a speed-limit governor. It is suggested that where an extractor is driven by a direct-current motor a "no field" release be installed to prevent overspeed, which may result from an open or broken field.
- (4) Power wringer. Each power wringer shall be equipped with a safety bar or other guard across the entire front of the feed or first pressure rolls, so arranged that the striking of the bar or guard by the hand of the operator or other person will stop the machine.

[Statutory Authority: RCW 49.17.010, .020, .040, .050, and .060. 07-03-163 (Order 06-30), § 296-303-02001, filed 01/24/07, effective 04/01/07. Order 74-18, § 296-303-02001, filed 5/6/74.]

WAC 296-303-02003 Starching and drying machines.

- (1) Starching machine (cylinder or box type). Each starching machine, cylinder or box type, shall be enclosed or guarded so as to prevent the operator or other person from coming into accidental contact with the cylinder or box while the machine is in motion.

WAC 296-303-02003 (Cont.)

- (2) Drying-room fan. Each drying-room fan, any part of which is within 7 feet of the floor or working platform, shall be guarded with wire mesh or screen of not less than No. 16 gauge, the openings of which will reject a ball one-half inch in diameter.
- (3) Drying tumbler.
 - (a) Each drying tumbler shall be equipped with an interlocking device that will prevent the inside cylinder from moving under power when the outer door on the case or shell is open, and also prevent the door from being opened while the inside cylinder is in motion. This device should not prevent the movement of the inner cylinder under the action of a hand-operated mechanism or under the operation of an inching device.
 - (b) Each drying tumbler shall be provided with means for holding open the doors or covers of inner and outer cylinders or shells while being loaded or unloaded.
- (4) Shaker (clothes tumbler).
 - (a) Each shaker or clothes tumbler of the single-cylinder type shall be equipped with a device that will automatically prevent the tumbler from moving while the door is open.
 - (b) The tumbler shall also be enclosed or guarded so as to prevent accidental contact by the operator or other person while the machine is in motion.
 - (c) Each shaker or clothes tumbler of the double-cylinder type shall be equipped with an interlocking device that will prevent the inside cylinder from moving when the outer door on the case or shell is open and will also prevent the door from being opened while the inside cylinder is in motion. This device should not prevent the movement of the inner cylinder under the action of a hand-operated mechanism or under the operation of an inching device.
 - (d) Each shaker or clothes tumbler of the double-cylinder type shall be provided with means for holding open the doors or covers of inner and outer cylinders or shells while being loaded or unloaded.
- (5) Exception. Provisions of (3), (4)(a), (c) and (d) of this section shall not apply to shakeout or conditioning tumblers where the clothes are loaded into the open end of the revolving cylinder and are automatically discharged out of the opposite end.

[Order 74-18, § 296-303-02003, filed 5/6/74.]

WAC 296-303-02005 Finishing machines.

- (1) Dampening machine. Each roll-dampening machine shall be so equipped that the rolls will be entirely enclosed and so arranged as to prevent the fingers of the operator or other person from being caught between the rolls. This may be accomplished by:
 - (a) A slot or hopper;
 - (b) A rod or strip located directly in front of the feed and extending the full length of the rolls.

WAC 296-303-02005 (Cont.)

- (2) Ironer.
- (a) Each flat-work or collar ironer shall be equipped with a safety bar or other guard across the entire front of the feed or first pressure rolls, so arranged that the striking of the bar or guard by the hand of the operator or other person will stop the machine. The pressure rolls shall be covered or guarded so that the operator or other person cannot reach into the rolls without removing the guard. This may be either a vertical guard on all sides or a complete cover. If a vertical guard is used, the distance from the floor or working platform to the top of guard shall be not less than six feet.
 - (b) Each body-type ironer, roll or shoe type, including sleeve and band ironers, shall be equipped with a safety bar or other guard across the entire length of the feed roll or shoe, so arranged that the striking of the bar or guard by the hand of the operator or other person will stop the machine. The hot roll or shoe shall also be covered in such a way that the operator or other person cannot come into contact with the heated surfaces.
 - (c) Each combined rotary-bosom and coat ironer shall be equipped with a safety bar or other guard across the entire length of the feed roll or shoe, so arranged that the striking of the bar or guard by the hand of the operator or other person will stop the machine. The hot roll or shoe shall also be covered in such a way that the operator or other person cannot come into contact with the heated surfaces.
 - (d) Each ironing press (excluding hand or foot powered ones) shall be equipped with a guard or means that will prevent the fingers of the operator or other person from being caught between the ironing surfaces.

[Order 74-18, § 296-303-02005, filed 5/6/74.]

WAC 296-303-02007 Miscellaneous machines and equipment.

- (1) Sewing machine. Each sewing machine shall be equipped with a guard permanently attached to the machine, so that the operator's fingers cannot pass under the needle. It shall be of such form that the needle can be conveniently threaded without removing the guard. This requirement will not apply to domestic-type sewing machines having a presser-foot which is in the "down" position during operation of the machine.
- (2) Exhaust or ventilating fans. Each exhaust or ventilating fan within seven feet of the floor or working platform shall be completely covered with wire mesh of not less than No. 16 gauge, and with openings that will reject a ball one-half inch in diameter.
- (3) Steam pipes.
 - (a) All steam pipes that are within seven feet of the floor or working platform, and with which the worker may come into contact, shall be insulated or covered with a heat-resistive material or shall be guarded to prevent direct contact with the worker.
 - (b) Where pressure-reducing valves are used, one or more relief or safety valves shall be provided on the low-pressure side of the reducing valve, in case the piping or equipment on the low-pressure side does not meet the requirements for full initial pressure. The relief or safety valve shall be located adjacent to, or as close as possible to, the reducing valve. Relief and safety valves vented to the atmosphere shall be so constructed as to prevent injury or damage caused by fluid escaping from relief or safety valves. The vents shall be of ample size and as short and direct as possible. The combined discharge capacity of the relief valves shall be such that the pressure rating of the lower-pressure piping and equipment will not be exceeded if the reducing valve sticks or fails to open.

[Statutory Authority: Chapter 49.17 RCW. 89-11-035 (Order 89-03), § 296-303-02007, filed 5/15/89, effective 6/30/89; Order 74-18, § 296-303-02007, filed 5/6/74.]

WAC 296-303-025 Operating rules-Scope and application. All sections of this chapter which include WAC 296-303-025 in the section number apply to operating rules.

[Order 74-18, § 296-303-025, filed 5/6/74]

WAC 296-303-02501 General.

- (1) Floors.
 - (a) The floors of every room in a laundry that are used for washing purposes shall be properly constructed of cement, tile, or similar material. The floors shall be watertight, free from projections, crevices, or dangerous gradients. They shall be maintained in good repair and so drained that no water may accumulate.
 - (b) The floors of every room except washrooms shall be constructed of hardwood or any impervious material, free from protruding nails, splinters, or loose boards, and shall be so maintained.
- (2) Table tops, shelves, and machine woodwork. Table tops, shelves, and machine woodwork shall be constructed of materials properly surfaced, finished free from splinters, and so maintained.
- (3) Markers. Markers and others handling soiled clothes shall be warned against touching the eyes, mouth, or any part of the body on which the skin has been broken by a scratch or abrasion; and they shall be cautioned not to touch or eat food until their hands have been thoroughly washed.
- (4) Ventilation. Where artificial ventilation is necessary to the maintenance of comfortable working conditions, an adequate ventilating system shall be installed as specified in WAC 296-62-110 of the general occupational health standards.
- (5) Instruction of employees. Employees shall be properly instructed as to the hazards of their work and be instructed in safe practices, by bulletins, printed rules, and verbal instructions.

[Order 74-18, § 296-303-02501, filed 5/6/74.]

WAC 296-303-02503 Mechanical.

- (1) Safety guards.
 - (a) No safeguard, safety appliance, or device attached to, or forming an integral part of any machinery shall be removed or made ineffective except for the purpose of making immediate repairs or adjustments. Any such safeguard, safety appliance, or device removed or made ineffective during the repair or adjustment of such machinery shall be replaced immediately upon the completion of such repairs or adjustments.
 - (b) No machine shall be operated until such repairs and adjustments have been made and the machine is in good working condition.
- (2) Steam-pressure apparatus. Steam machines shall not be operated at a pressure above that given by the manufacturer's pressure rating as shown on name plate. If the steam source is at a pressure higher than that given by the manufacturer's rating, a stop valve, reducing valve, pressure gauge, and safety valve shall be installed, in the order named, from the source. The safety valve shall be located in a nonhazardous place.
- (3) Machine adjustments. No moving parts of any machine shall be oiled, cleaned, adjusted, or repaired while said machine is in operation or in motion except that the rolls of adjusting machines not equipped with hand-power means shall be operated at the slowest speed possible with an operator constantly at the starting mechanism.

WAC 296-303-02503 (Cont.)

- (4) Extractors. Each extractor shall be dismantled and inspected at least once a year and, if necessary, repaired. Overdriven extractors, if provided with handholes through which basket and rings can be inspected, need not be dismantled.

[Order 74-18, § 296-303-02503, filed 5/6/74.]

WAC 296-303-030 Moving parts.

- (1) Machine guarding (other than point of operation). Moving parts of machines, such as gears, sprockets, belts, pulleys, and shafts, shall be guarded in accordance with the requirements of chapter 296-806 WAC, Machine safety.
- (2) Prime-mover guarding. Moving parts of prime movers such as fly-wheels, cranks and connecting rods, tail rods or extension piston rods, and governor balls, shall be guarded in accordance with the requirements of chapter 296-806 WAC, Machine safety.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 04-14-028 (Order 01-12), § 296-303-030, filed 06/29/04, effective 01/01/05. Order 74-18, § 296-303-030, filed 5/6/74.]

WAC 296-303-040 Starting and stopping devices.

- (1) Each power-driven machine shall be provided with means for disconnecting from the source of power. Starting and stopping devices for machines shall be so located as to be operable from the front of the machine, and so constructed as to allow proper guarding of belts and pulleys.
- (2) Doors of washing machines, extractors, and tumbler/shaker dryer machines, shall have a cut-off micro switch or other method to shut-off power when loading doors are opened, making inner cylinder, tumbler, or shaker mechanisms inoperative while the door is open. In those situations where the cylinder or mechanism continues to rotate/move, and present a hazard after the power is off, an interlocking device, breaking switch, or a time-delay switch is additionally required to prevent injury.

[Statutory Authority: Chapter 49.17 RCW. 89-11-035 (Order 89-03), § 296-303-040, filed 5/15/89, effective 6/30/89; Order 74-18, § 296-303-040, filed 5/6/74.]

