

WAC 296-56-60233 Related terminal operations and equipment—Machine guarding. (1) You must meet the following general requirements for machine guarding:

(a) Danger zones on machines and equipment used by employees must be guarded.

(b) Where chips and dust produced by machine operation may result in a hazard to the operator, the machinery must be equipped with an effective exhaust system at the point of origin, or other equally effective means must be provided to protect the operator.

(c) Fixed machinery must be secured to prevent shifting.

(d) A power cut-off device for machinery and equipment must be provided at the operator's working position.

(e) Machines driven by belts and shafting must be fitted with a belt-locking or equivalent protective device if the belt can be shifted.

(f) In operations where injury to the operator might result if motors were to restart after power failures, provisions must be made to prevent machines from automatically restarting upon restoration of power.

(g) The power supply to machines must be turned off, locked out, and tagged out during repair, adjustment, or servicing.

(h) Machines must be maintained in a safe working condition.

(i) Only designated employees must maintain or repair machinery and equipment.

(j) Machines with defects that affect the safety of operation must not be used.

(2) You must guard hand-fed circular rip saws and hand-fed circular crosscut table saws as follows unless fixed or manually adjustable enclosures or guarding provides equivalent protection:

(a) Equipped with hoods completely enclosing those portions of the saw above the table and the material being cut;

(b) Have spreaders to prevent material from squeezing the saw. Spreaders must be in true alignment with the saw. Spreaders may be removed only during grooving, dadoing, or rabbeting operations, and must be replaced at the completion of such operations; and

(c) Have nonkickback fingers or dogs to oppose the tendency of the saw to pick up material or throw material toward the operator.

(3) You must guard swing cutoff saws as follows:

(a) Swing cutoff saws must have hoods completely enclosing the upper half of the saw, the arbor end and the point of operation at all saw positions to protect the operator from material thrown up by the saw. The hood must automatically cover the lower portion of the blade so that when the saw returns to the back of the table the hood rises on top of the fence, and when the saw is moved forward the hood drops on top, remaining in contact with the table or the material.

(b) Swing cutoff saws must have a device to return the saw automatically to the back of the table without rebound. The device must not be dependent upon rope, cord or springs.

(c) Devices must be provided to prevent saws from swinging beyond the front or back edges of the table.

(d) Inverted swing cutoff saws must have hoods covering the part of the saw protruding above the table top or the material being cut. Hoods must automatically adjust to the thickness of, and remain in contact with, material being cut.

(4) You must guard radial saws as follows, unless fixed or manually adjustable enclosures or guards provide equivalent protection:

(a) The upper hood of radial saws must enclose the upper portion of the blade up to and including the end of the saw arbor and must protect the operator from being struck by debris. The sides of the lower exposed portion of the blade must be guarded to the blade diameter by a device automatically adjusting to the thickness of the stock and remaining in contact with the stock. The lower guard may be removed only when the saw is used for bevel cuts;

(b) Radial saws used for ripping must have nonkickback fingers or dogs on both sides to oppose the thrust or tendency of the saw to pick up material or throw material toward the operator;

(c) An adjustable stop must be provided to prevent travel of radial saw blades beyond the table's edge;

(d) Radial saws must be installed so that the cutting head returns to the starting position without rebound when released; and

(e) You must direct that employees perform ripping and ploughing against the saw turning direction. Rotation direction and an indication of the end of the saw to be used must be conspicuously marked on the hood.

(5) You must guard band saws and band resaws as follows:

(a) Saw blades and band saw wheels must be enclosed or guarded, except for the working portion of the blade between the bottom of the guide rolls and the table, to protect employees from point-of-operation hazards and flying debris.

(b) Band saws must be equipped with brakes to stop the band saw wheel if the blade breaks.

(c) Band saws must be equipped with a tension control device to keep the blade taut.

(6) You must guard abrasive wheels and machinery as follows:

(a) Abrasive wheels must be used only on machines having enclosure guards to restrain pieces of grinding wheels and to protect employees if the wheel breaks, except as provided in (b) and (c) of this subsection. Where the operator stands in front of the safety guard opening, the safety guard must be adjustable or have an adjustable tongue or piece at the top of the opening. The safety guard or the tongue must be adjusted so that it is always within one-fourth inch of the periphery of the wheel. Guards must be aligned with the wheel and the strength of fastenings must be greater than the strength of the guard.

(b) When the work provides equivalent protection, or when the machine is designed as a portable saw, guards may be constructed with the spindle end, nut and outer flange exposed. When the work entirely covers the side of the wheel, the side covers of the guard may be removed.

(c) Guarding is not required:

(i) For wheels used for internal work while the wheel is contained within the work being ground; or

(ii) For mounted wheels two inches (5 cm) and smaller in diameter used in portable operations.

(d) Work rests must be used on fixed grinding machines. Work rests must be rigidly constructed and adjustable for wheel wear. They must be adjusted closely to the wheel with a maximum opening of one-eighth inch (3.18 mm) and must be securely clamped. Adjustment must not be made while the wheel is in motion.

(e) Grinding wheels must fit freely on the spindle. The spindle nut must be tightened only enough to hold the wheel in place.

(f) Grinding machine wheels must turn at a speed that is compatible with the rated speed of the wheel.

(g) Flanges and blotters must be used only with wheels designed for their use. Flanges must be of a type ensuring retention of pieces of the wheel in case of breakage.

(h) Abrasive wheels with operational defects must not be used.

(7) You must guard rotating parts, drives and connections as follows:

(a) Rotating parts, such as gears and pulleys, that are located seven feet (2.13 m) or less above working surfaces must be guarded to prevent employee contact with moving parts.

(b) Belt, rope and chain drives must be guarded to prevent employees from coming into contact with moving parts.

(c) Gears, sprockets and chains must be guarded to prevent employees coming into contact with moving parts. This requirement does not apply to manually operated sprockets.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 15-24-102, § 296-56-60233, filed 12/1/15, effective 1/5/16. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. WSR 00-21-103, § 296-56-60233, filed 10/18/00, effective 2/1/01. Statutory Authority: RCW 49.17.040 and 49.17.050. WSR 86-03-064 (Order 86-02), § 296-56-60233, filed 1/17/86; WSR 85-10-004 (Order 85-09), § 296-56-60233, filed 4/19/85; WSR 85-01-022 (Order 84-24), § 296-56-60233, filed 12/11/84.]