

## Horizontal Cutoff Saw

## Detail Sheets

A band sawing machine uses a band saw blade traveling over the rims of two or more band wheels, one or more of which is power driven, to produce a cutting action on a workpiece. A horizontal band saw machine consists of a frame, which carries the band wheels and the band saw blade. The entire assembly is mounted on a work support table. The downward motion of the head produces the cutting action. The operator places the workpiece on the table and pulls the blade over a predetermined line.

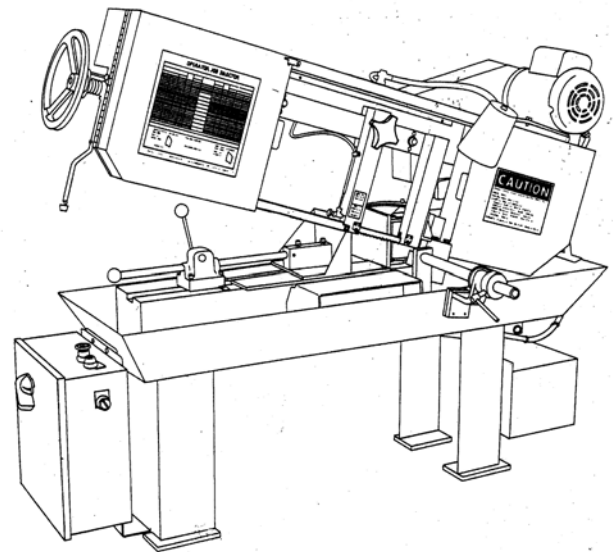
**Operator Involvement:** The amount of operator involvement is dependent on the type machine being used. In the use of cut-off sawing machines, all that is necessary is to set the stock to desired length, clamp, start machine, place operating blade on the work and observe. Normally, these machines will shut off automatically when the work is completely severed.

**Hazards:** Amputation or severe laceration from contact or entanglement with the blade. Getting struck by a breaking saw blade.

**Machines:** On applications where injury to the operator might result if motors were to restart after power failures, provision shall be made to prevent machines from automatically restarting upon restoration of power.

Efficient means of starting and stopping the machine should be readily accessible to the operator.

**Guarding:** Install an adjustable blade guard covering the portion of the blade within the point of operation that is not required to be exposed for the cutting operation (unused portion of the blade). Two guards are often required, one to guard the blade between the left saw guide and the left blade wheel guard, the other to guard the blade between the right saw guide and the right blade wheel guard. The guard must be adjustable and designed to protect from contact with the tooth edge of the blade to the extent allowed by machine design. Normally, only one side of the blade must be covered. However, in applications with very fast blade speeds, all four sides of a blade should be covered for containment should the blade break. 1910.212

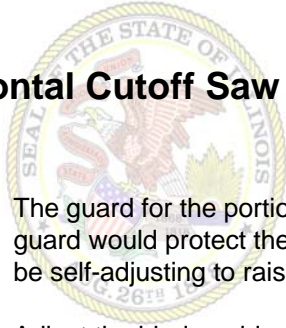


**References:** OSHA 1910.212; ANSI B11.10

### Case Study

While operating a band saw, an employee amputated his right index finger when his hand slipped and contacted the moving blade.

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- ❖ The guard for the portion of the blade between the sliding guide and the upper-saw-wheel guard would protect the saw blade at the front and outer side. This portion of the guard must be self-adjusting to raise and lower with the guide.
- ❖ Adjust the blade guide post to fit the thickness of stock being cut and to provide additional guarding.
- ❖ Make sure that all power transmission is completely enclosed to prevent contact. This includes rotating components such as flywheels, gears, sheaves, shafts, belts and pulleys, chain and sprocket, meshing gears. 1910.219

**Inspection:** Periodically examine blades; remove cracked or defective blades immediately.

### **Safer Work Practices:**

- Train operators and instruct them to use only sharp cutting blades and to tighten blades to the appropriate tension.
- Guards should always be in place and suitable eye and face protection should be worn.
- The floor space around the machine should be kept free of obstructions and slippery substances.

The number of accidents and the circumstances in which they occur show that most can be avoided by a knowledge of the risks and by adopting safety measures. The simple safety steps given below will help to prevent most accidents at grinding machines. You may find them useful as a safety check list.