



OSHA Machine Guarding Standard

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The Occupational Safety and Health Administration (OSHA), in 1976, issued a Machine Guarding Standard for Agriculture*. The standard's purpose is to protect all agricultural workers from hazards associated with moving machinery parts of farm field equipment, farmstead equipment, and cotton gins used in agricultural operations. This publication is to provide farm employers with a clear summary of what the standard requires you to do to make machines safer and to make employees and all other workers aware of operating procedures.

The OSHA Machine Guarding Standard requires the following:

All farm field and farmstead equipment, regardless of date of manufacture, be provided with guarding of the power take-off.

Farm field equipment is defined as tractors or implements, including self-propelled implements; farmstead equipment means agricultural equipment normally used in a stationary manner, such as materials handling equipment.

Under this rule, all equipment already on farms must have all power take-off shafts, including rear, mid, or side-mounted shafts, guarded by a master shield or other protective guards. When the master guard is removed for any reason, the equipment must also include protection from the portion of the power take-off shaft which protrudes from the tractor. Signs must be placed on tractors and equipment specifying that the safety shields must be kept in place. The above portion of the standard became effective October 25, 1976.

All power transmission components on new field and farmstead equipment must be provided with Nip-point guarding.

Nip-points are "pinch or mesh" points on gears, belts, pulleys, etc. This portion of the standard is directed at the manufacturers of such equipment.

One special provision is where removal of a guard or access door will expose an employee to any component which continues to rotate after power is disengaged. It is the employer's responsibility to provide a readily visible or audible warning of rotation (employee must be able to see or hear it). Also a safety sign that tells employees to look and listen for evidence of rotation and not to remove the guard or access door until all components have sopped. It is the employer's responsibility to purchase equipment that meets the rules after October 25, 1976.

Means must be provided to prevent accidental application of electrical power to farmstead equipment.

All equipment (including existing equipment on farms) must have methods to prevent one person from starting a piece of equipment while another person is performing maintenance or service on it. Such accidents must be prevented by:

- a. providing an exclusive, positive-locking means on the main switch which can be operated only by the person(s) performing the maintenance or service; or
- b. in the case of materials handling equipment located in a bulk storage structure, by physically locating on the equipment an electrical or mechanical means to disconnect the power.

*This standard is in effect only on farms with eleven or more employees. Nevertheless, the standard should be adhered to on all farms.

All circuit protection devices including those which are built into an electric motor, must be of the manual reset type except where the employer establishes that the use of manual reset is not feasible. In this situation, the employer must provide:

- a. an electrical disconnect switch within 15 feet of each motor and
- b. a sign posted near each motor which warns employees that the motor could automatically start unless the electrical disconnect switch is utilized.

Employees must be instructed in the safe operation and servicing of equipment which they operate.

At the time of assignment and at least annually thereafter, the employer must instruct every employee in the safe operation and servicing of all equipment with which they will be involved or will be involved, including at least the following safe operating practices.

- a. keep all guards in place when the machine is in operation.
- b. permit no riders on farm field equipment other than persons required for instruction or assistance in machine operation.
- c. stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning, or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.
- d. make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.
- e. lock out electrical power before performing maintenance or service on farmstead equipment.

Although OSHA does not require that employers document that employees have been instructed about safe operation procedures, it would be desirable for the farm employer to keep some record of this activity. Such a record might prove useful in handling employee grievances, lawsuits, or insurance claims.

Cotton gin components must be guarded by June 30, 1977.

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