

NORTH CAROLINA DEPARTMENT OF LABOR  
OCCUPATIONAL SAFETY AND HEALTH DIVISION  
RALEIGH, NORTH CAROLINA

Standards Notice - 26  
Revision 1

TO: All OSHA Consultants, Supervisors, Safety Officers, and Industrial Hygienists

SUBJECT: Applicability of 29 CFR 1910.219(a) (3), 29 CFR 1910.219(e) (1) (i), 29 CFR 1910.219(f) (1) & (3), and 29 CFR 1910.262(c) (3) to the Guarding of the Sides of Carding Machines Used in the Textile Industry.

a. Standards

1. 29 CFR 1910.219(a) (3) For the textile industry, because of the presence of excessive deposits of lint, which constitute a serious fire hazard, the sides and face sections only of nip-point belt and pulley guards are required, provided the guard shall extend at least six inches beyond the rim of the pulley on the in-running and off-running sides of the belt and at least two inches away from the rim and face of the pulley in all other directions.
2. 29 CFR 1910.219(e) (1) (i) Where both runs of horizontal belts are seven feet or less from the floor level, the guard shall extend to at least 15 inches above the belt or to a standard height (see Table 0-12), except that where both runs of a horizontal belt are 42 inches or less from the floor, the belt shall be fully enclosed in accordance with paragraphs (m) and (o) of this section.
3. 29 CFR 1910.219(f) (1) Gears. Gears shall be guarded in accordance with one of the following methods:
  - i. By a complete enclosure; or
  - ii. By a standard guard as described in paragraph (o) of this section, at least seven feet high extending six inches above the mesh point of the gears; or
  - iii. By a band guard covering the face of the gear and having flanges extended inward beyond the root of the teeth on the exposed side or sides. Where any portion of the train of gears guarded by a band guard is less than six feet from the floor, a disk guard or a complete enclosure to the height of six feet shall be required.
4. 29 CFR 1910.219(f) (3) Sprockets and chains. All sprocket wheels and chains shall be enclosed unless they are more than seven feet above the floor or platform. Where the drive extends over other machine or working areas, protection against falling shall be provided. This subparagraph does not apply to manually operated sprockets.
5. 29 CFR 1910.219(e) (3) Machine guarding. Mechanical power transmission equipment shall be guarded in conformity with § 29 CFR 1910.219.

b. Discussion

Under 29 CFR 1910.219(e) (3) an exception is made for the guarding of textile machines because of the possible fire hazards which might exist if the machinery were guarded in accordance with other provisions set forth in references above. Additionally, the requirement of guarding textile machinery in accordance with sections 29 CFR 1910.219(e) (1) (i) and 29 CFR 1910.219(f) (1) & (3) is not applicable in many cases because of the spacing of machines and existing physical structures.

It is recognized that all mechanical action or motion requires safety precautions, but in varying degrees. Rotating parts, belts, chain and sprocket and gears require protection for those persons exposed. However,

the selection of the method of guarding depends upon a number of factors, i.e., space limitation, production method, hazards created by the guards and frequency of employee exposure.

Taking these factors into consideration, protection for employees must be accomplished by means which minimize the employee's exposure to the hazards.

c. Interpretation

The protection for exposure against nip-point motions, gears, and pulleys on the sides of cards for the textile industry is to be accomplished by all of the following.

1. A metal barrier between cards which would prevent employees from entering the danger zone or area. These barriers shall consist of fixed, gate or movable barriers. They shall be located at the front and back between the cards (which are adjacent to the employee's working alleys).
2. Those cards located along aisles and passageways shall be guarded in accordance with the provision of section 29 CFR 1910.219, including barriers of expanded metal or other suitable material of adequate height.
3. The cards shall have a means for locking off the power.
4. Those employees that enter the danger zone or area shall be warned by appropriate signs that the cards to which he is exposed must have their power turned off and a lock out installed.
5. The sign shall be clearly legible to anyone about to enter the danger zone and shall contain information illustrated as follows:

DANGER

UNGUARDED EQUIPMENT

LOCK OUT AND TAG

BEFORE ENTERING

This interpretation shall apply to textile cards only.

Where an employee desires to lock out only one of a pair of cards to which an employee is exposed when working within the perimeter of the barriers specified in c.1., the card which is left running may be guarded in the following manner. A movable barrier which covers all power transmission apparatus or other hazardous parts to which an employee is exposed may be placed between the cards. This movable guard must be of substantial construction, stable, and provide protection to employees at least as effective as that which would be provided by 29 CFR 1910.219.

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