

**North Carolina Department of Labor
Occupational Safety and Health Division**

Raleigh, North Carolina

Field Information System

Standards Notice 26A

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. **Scope.**

This interpretation applies to textile carding machines only.

B. **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, 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:
 - a. By a complete enclosure; or,
 - b. 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,
 - c. 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.

C. **Discussion.**

In 29 CFR 1910.219(a) (3), an exception is made for guarding textile machines because of the possible fire hazards which exists if the machinery is guarded in accordance with other provisions set forth in the references above. Additionally, the requirement to guard textile machinery in accordance with sections 29 CFR 1910.219(e) (1) (i) and 29 CFR 1910.219(f) (1) & (3) is not practical 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 carding machines in the textile industry is to be accomplished by all of the following.

1. A metal barrier between carding machines which prevents employees from entering the danger zone. The barrier must be a fixed, gate or movable barrier. It must be located at the front and back between the carding machines (which are adjacent to the employee's working alleys).
2. A carding machine located along an aisle and passageway must be guarded in accordance with the provision of section 29 CFR 1910.219 to include a barrier of expanded metal or other suitable material of adequate height.
3. If an employee must enter the danger zone, the carding machine must be locked out in accordance with 29 CFR 1910.147, *Control of Hazardous Energy (Lockout/Tagout)*.
4. An employee who enters the danger zone must be warned by appropriate signage. The sign must be clearly visible and legible to anyone about to enter the danger zone and must contain information illustrated as follows:

<p>DANGER UNGUARDED EQUIPMENT LOCK OUT AND TAG BEFORE ENTERING</p>
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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 must be guarded in the following manner:

1. A movable barrier which covers all power transmission apparatus or other hazardous parts to which an employee is exposed must be placed between the cards.
2. 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.

D. **Effective Date.**

SN 26 is canceled. This SN is effective on the date of signature. It will remain in effect until revised or canceled by the Director.

Signed on Original
Jack Forshey
Standards Supervisor

Signed on Original
Allen McNeely
Director

8/09/05
Date of Signature