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I have an exhaust fan for the vehicle repair garage. Does it need guards?



29 CFR 1910.212(a) (5), specifies that all fans within **7 feet** of the floor or working level, (catwalks, mezzanines, etc) must be guarded. The guard must not have openings greater than one-half inch in width. The use of concentric rings with spacing between them not exceeding a one-half inch are acceptable, provided that sufficient radial spokes and firm mountings are used to make the guard rigid enough to prevent it from being pushed into the fan blade during normal use. The standard would apply to fan blades of cooling fans for motors and pumps, as well as cooling fans and turbine blades for Commercial Air Handling Units, which are 7 feet off the floor or working level.

Some **other** hazards are also subject to the **'seven-foot rule,'** which dictates that these potentially dangerous operations be enclosed or guarded if they are located less than seven feet above the floor or platform level. Guards are required to have one-half-inch or smaller openings. Blades both radial and axial and other overhead hazards—such as pulleys, belt rope and chain drives, overhead horizontal belts, vertical and incline belts, gears, sprockets and chains—must comply with this rule.

Workplace violations of guarding requirements are common. In many facilities, out-of-date, unguarded fans, and ones protected by guards with openings that are too big, are in operation. Another common sight is unguarded blades, fans or pulleys, which are within seven feet of the floor or platform level. Oversights also typically occur when machinery is repaired. Guards and safety devices are removed during repair but not replaced afterwards. This neglect leads to their dangerous, unguarded operation.

Unguarded moving parts, such as blades and fans, can injure a worker's hands, limbs or head during accidental contact. For example, an unguarded pulley or shear can ensnare an employee's clothing and pull the worker into a machine. Such hazards are serious health threats and should be immediately eliminated by placing proper guarding or installing new equipment.

Suggestion: Install a guard on that portion of the exposed fan blade that is below seven feet from the floor or working surface. The guard must not have openings greater than one-half inch in width.

Reference: 29 CFR 1910.212(a) (5).

Note: During design of the guard, it is prudent to make the necessary provisions for changing the motor and lubricating the bearings without requiring the guard to be removed. If it is anticipated that the guard will need to be removed for cleaning, provide an interlock which disables the fan when the guard is removed.

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