

maximum width of the beam illustrated in Figure W-27 shall be 6 in. (152 mm).

(f) *Performance requirements.* (1) *General.* The performance requirements set forth in 29 CFR 1926.1002(i)(2), (3), and (4) shall be met.

(2) *Drop test performance requirements.* (i) Instantaneous deformation due to impact of the sphere shall not enter the protected zone as illustrated in Figures W-25, W-26, and W-28.

(ii) In addition to the dimensions set forth in 29 CFR 1926.1002(i)(1)(i), the following dimensions apply to Figure W-28:

$H = 17.5$  in. (444 mm); and

$J = 2$  in. (50.8 mm), measured from the outer periphery of the steering wheel.

(3) *Crush test performance requirements.* The protected zone as described in Figure W-28 must not be violated.

(g) *Source of standard.* This standard is derived from, and restates, in part, the portions of Society of Automotive Engineers ("SAE") standard J167-1970 ("Protective frame with overhead protection—test procedures and performance requirements"), which pertain to overhead protection requirements. The SAE standard appears in the 1971 SAE Handbook, which may be examined at any OSHA regional office.

[70 FR 76985, Dec. 29, 2005]

APPENDIX A TO SUBPART W TO PART 1926—FIGURES W-14 THROUGH W-28

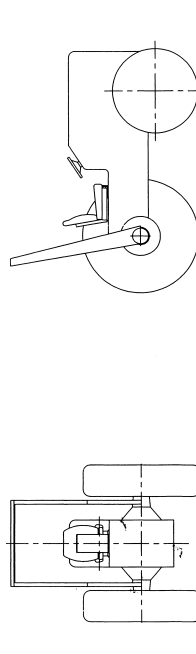


FIGURE W-14 - TYPICAL FRAME CONFIGURATION.

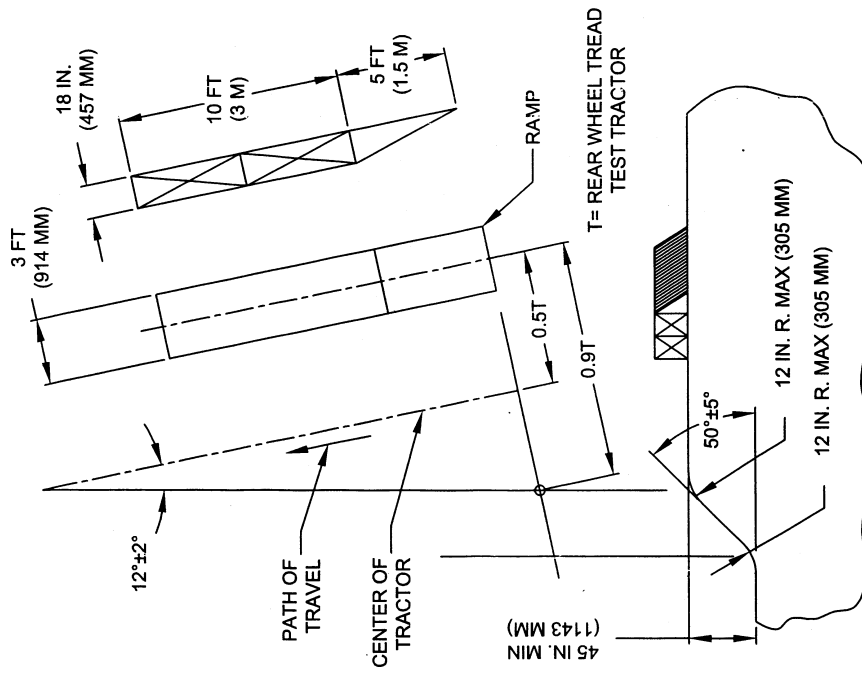


FIGURE W-15 - SIDE OVERTURN BANK AND RAMP.

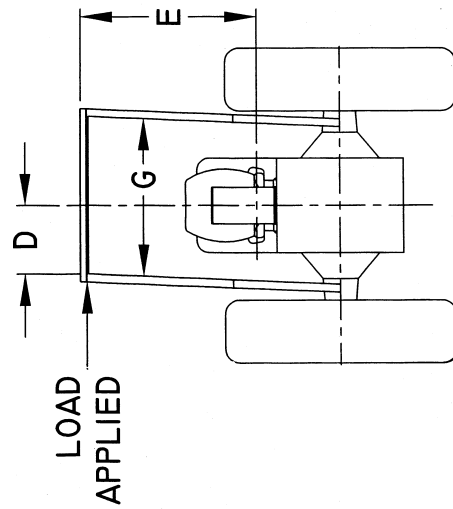


FIGURE W-16 - SIDE LOAD APPLICATION.

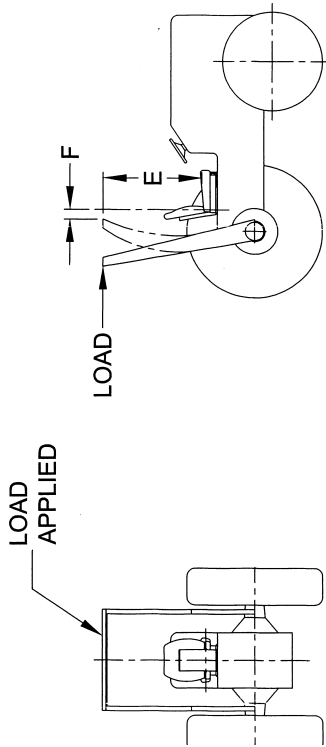


FIGURE W-17 - REAR LOAD APPLICATION.

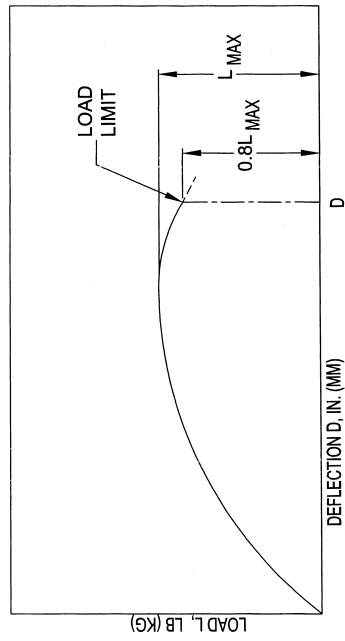


FIGURE W-19 - TYPICAL L-D DIAGRAM.

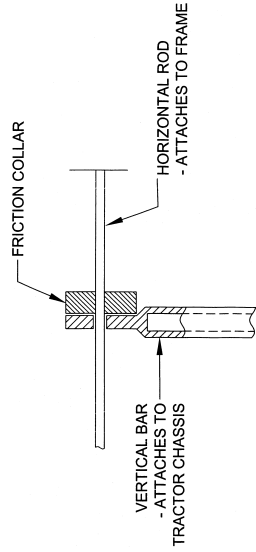


FIGURE W-18 - METHOD OF MEASURING INSTANTANEOUS DEFLECTION.

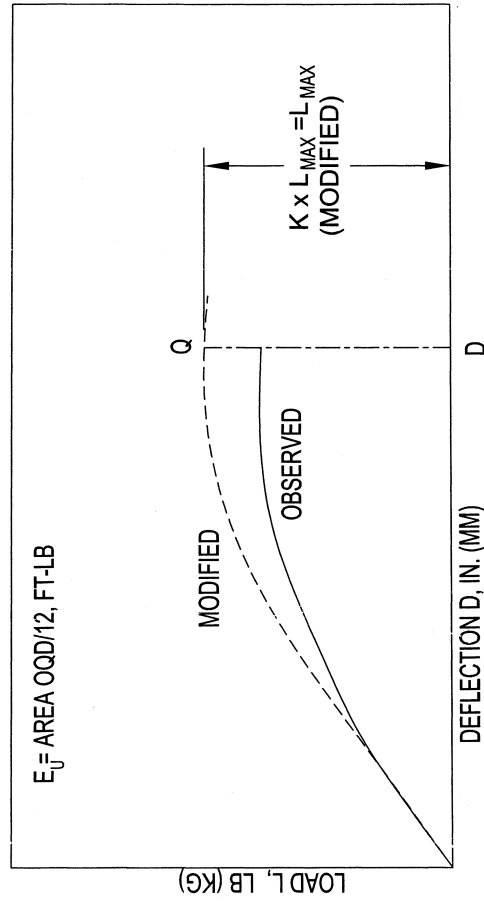


FIGURE W-20 - TYPICAL MODIFIED  $L_M$ - $D_M$  DIAGRAM.

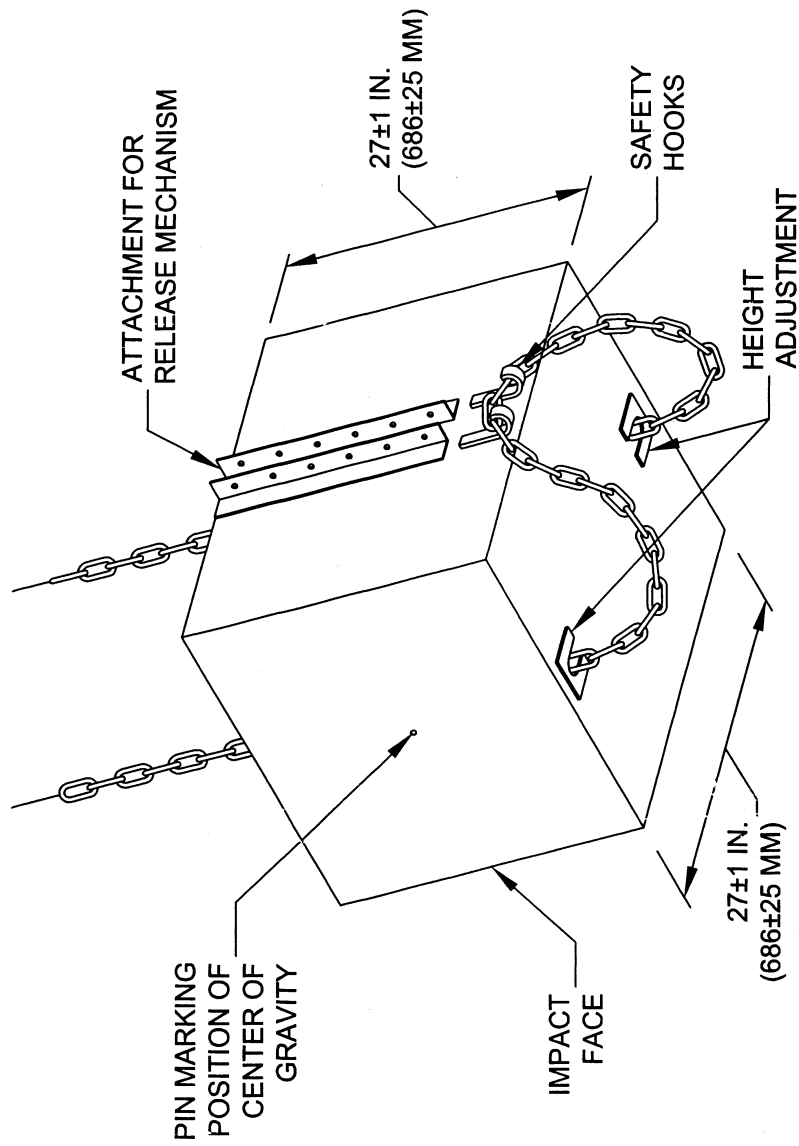


FIGURE W-21 - PENDULUM.

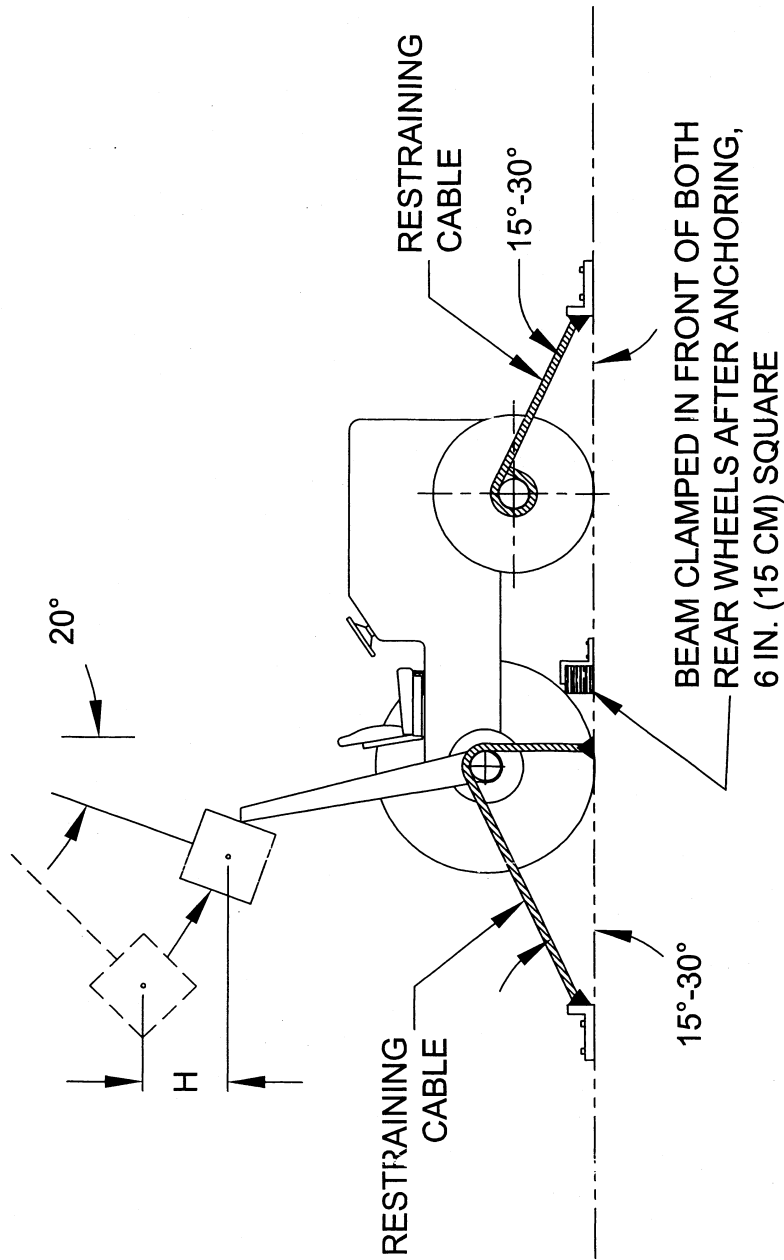


FIGURE W-22 - METHOD OF IMPACT FROM REAR.



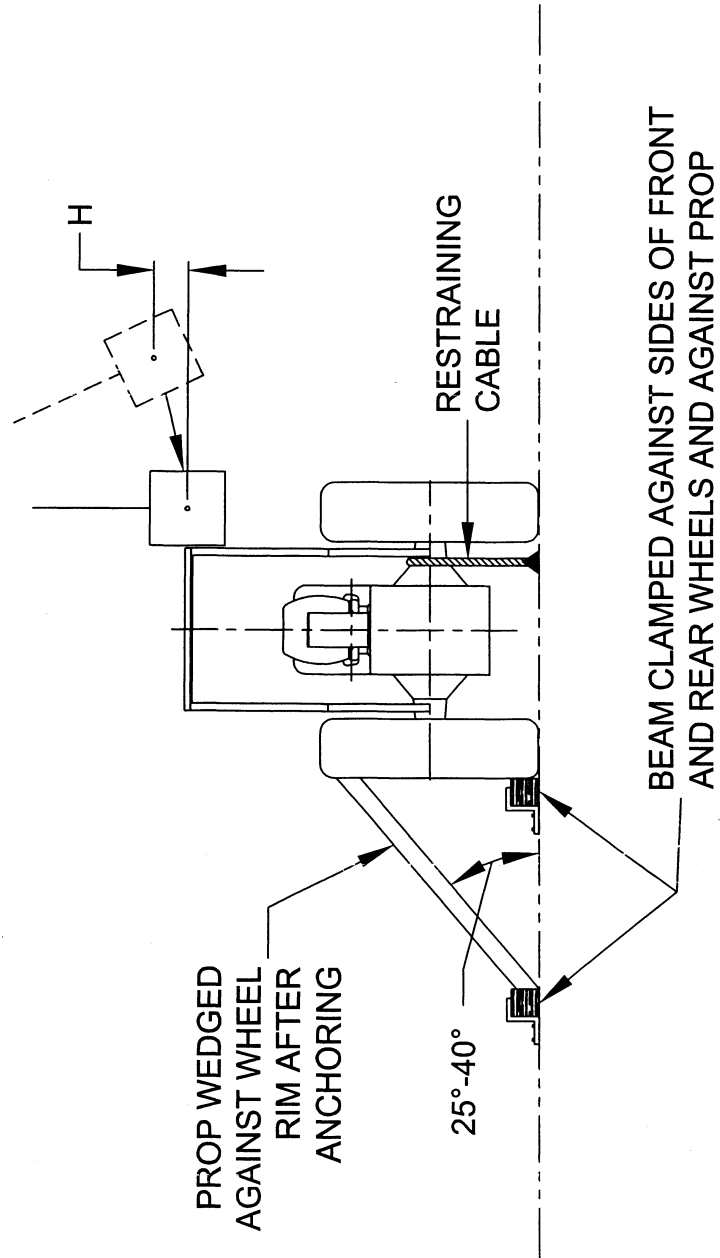
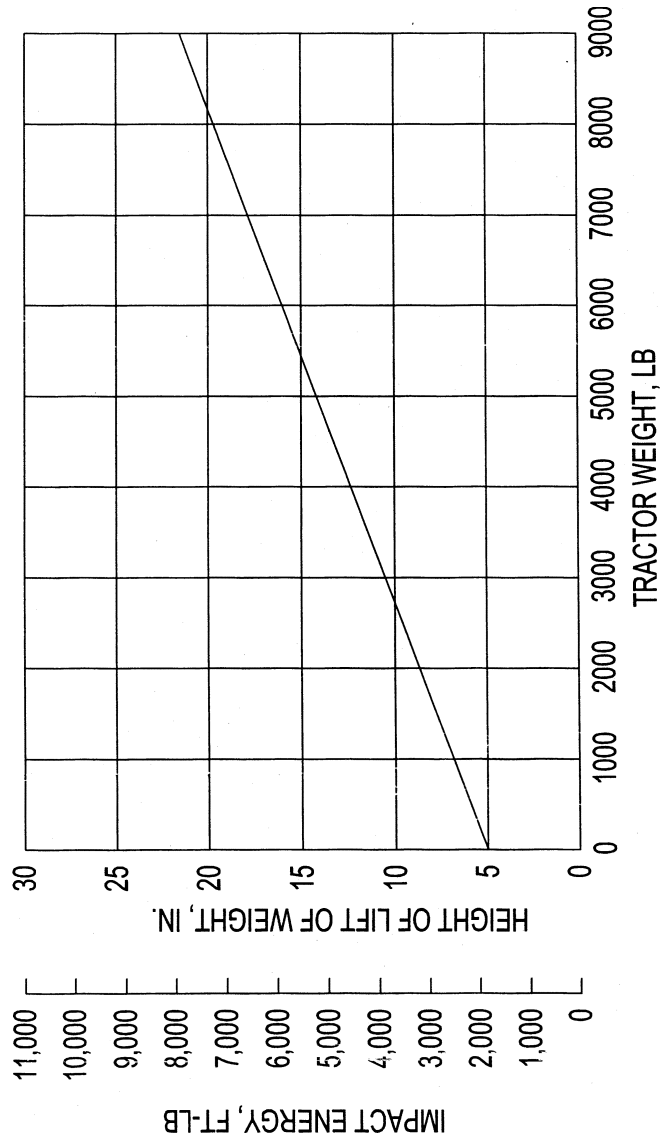


FIGURE W-23 - METHOD OF IMPACT FROM SIDE.



NOTATION OF FORMULAE

$H=4.92+0.00190W$  or  $H'=125+0.107W'$

$W$ =tractor weight specified by 29 CFR

1926.1002(e)(1) and (e)(3) in lbs ( $W'$  in kg).

**FIGURE W-24 - IMPACT ENERGY AND CORRESPONDING LIFT HEIGHT OF 4,410 lb (2,000 kg) WEIGHT.**

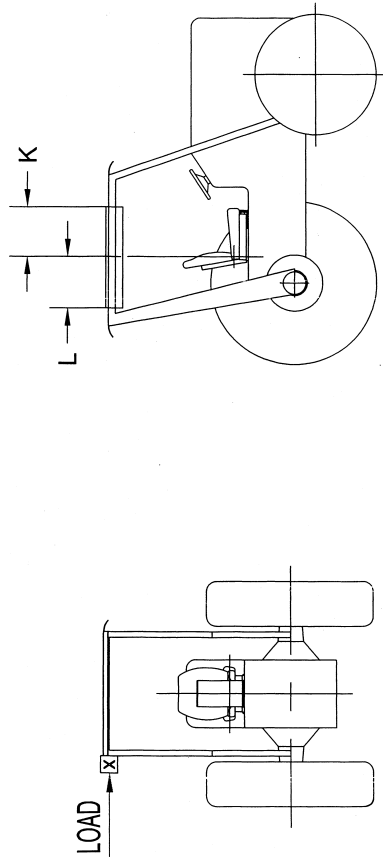


FIGURE W-25 - LOCATION OF SIDE LOAD.

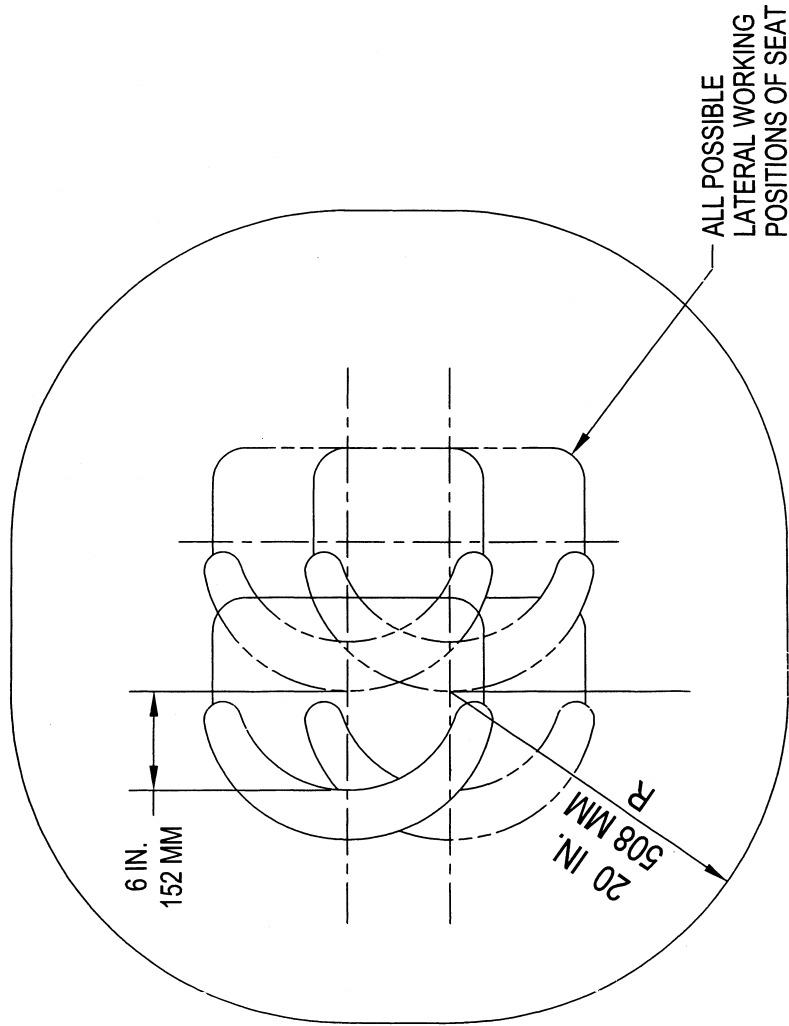


FIGURE W-26 - ZONE OF PROTECTION FOR DROP TEST.

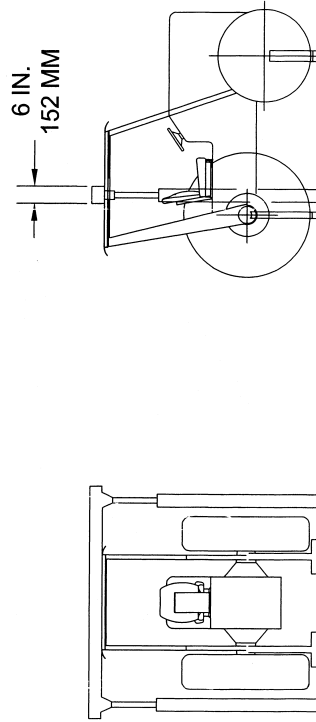


FIGURE W-27 - METHOD OF LOAD APPLICATION FOR CRUSH TEST.

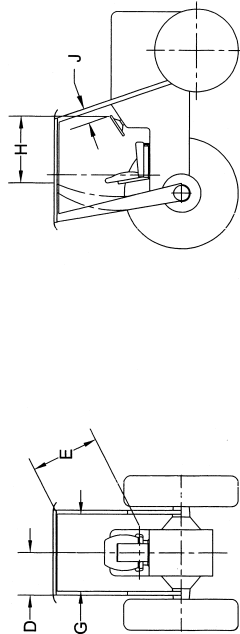


FIGURE W-28 - PROTECTED ZONE DURING CRUSH AND DROP TEST.

[70 FR 76985, Dec. 29, 2005, as amended at 71 FR 41130, July 20, 2006]

**Subpart X—Stairways and Ladders**

**AUTHORITY:** Section 107, Contract Work Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333); Secs. 4, 6, 8, Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor’s Order No. 1-90 (55 FR 9033); and 29 CFR part 1911.

**SOURCE:** 55 FR 47687, Nov. 14, 1990, unless otherwise noted.

**§ 1926.1050 Scope, application, and definitions applicable to this subpart.**

(a) *Scope and application.* This subpart applies to all stairways and ladders used in construction, alteration, repair (including painting and decorating), and demolition workplaces covered under 29 CFR part 1926, and also sets forth, in specified circumstances, when ladders and stairways are required to be provided. Addi-

tional requirements for ladders used on or with scaffolds are contained in subpart L—Scaffolds

(b) *Definitions.* *Cleat* means a ladder crosspiece of rectangular cross section placed on edge upon which a person may step while ascending or descending a ladder.

*Double-cleat ladder* means a ladder similar in construction to a single-cleat ladder, but with a center rail to allow simultaneous two-way traffic for employees ascending or descending.

*Equivalent* means alternative designs, materials, or methods that the employer can demonstrate will provide an equal or greater degree of safety for employees than the method or item specified in the standard.

*Extension trestle ladder* means a self-supporting portable ladder, adjustable in length, consisting of a trestle ladder base and a vertically adjustable extension section, with a suitable means for locking the ladders together.