



Understanding the ANSI Z133 Standard Changes-Incidental Line Clearance*

John Ball-SDSU and Tim Walsh, The Davey Tree Expert Company

- I. History
 - a. Key dates
 - i. August 17, 1965
 - ii. April 4, 1968
 - iii. July 14, 1971
 - iv. December 20, 1972
 - v. 1978, 1982, 1994, 2000, 2006, 2012, 2017, 2022
- II. Key points
 - i. Shall/Should
 - ii. Exceptions
 - iii. Hierarchy
 - iv. Definitions
 - v. Responsibilities
 1. Employer
 2. Employee
 - vi. Compliance
- III. Electrical Hazards
 1. History of Federal Standards impacting tree care
 - i. 29 CFR 1910 Subpart S – Electrical 8/6/90
 1. 1910.331-335
 - ii. 29 CFR 1910.269 Final Rule 1/31/94
 1. Preamble to Final Rule
 - iii. Revisions to “269”
 1. What parts apply?
 - a. Paragraphs (a)(2), (a)(3), (b), (c), (g), (k), (p), and (r)
 2. Final Rule 7/10/14
 3. Settlement Agreement 2/13/15
 2. Significant Changes
 - i. Clarification of Line Clearance Tree Trimming
 1. Projection of specified horizontal distance
 2. “for or on behalf of utility”
 3. If not, then Subpart S applies
 3. Now there are three:
 - i. Levels of qualification
 1. Non-Qualified (to work in proximity to overhead energized power lines)-Section 4.1 applies including Table 1 (“10-foot rule”)

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2. Incidental Line Clearance, Subpart S and ANSI Section 4.2 applies including Table 2 (New, exceeds Table S-5 29 CFR 1910.333)
3. Qualified Line Clearance Arborist, 1910.269 and Section 4.3 applies, including update Table 3 (includes transient overvoltage update and phase-to-ground distances)
4. Key Sections/topics
 - i. "Avoid contact" means DO NOT TOUCH!
 - ii. "Browned branches"
 1. 4.2.7
 2. 4.3.14
 - iii. Insulating Tools (See Annex J)
 1. History: Federal Register Volume 59, Number 20 Page 4411 (Monday, January 31, 1994)
 2. Individual tool poles need not be tested.
 3. The Agency will accept evidence indicating that tools of a given construction generically meet the test criteria.
 4. Revised in 2015, no change on this issue
 5. 4.2.8 Tools that are not rated as insulated for the voltage to which they are exposed shall be considered conductive.
 - iv. What to do if MAD can't be maintained
 1. Arborists not qualified
 2. Incidental line clearance
 3. Qualified Line Clearance Arborist
 - a. 4.3.12
 - b. DIG-Annex H Electrical Hazard Abatement
 - v. MAD applies to booms too, even insulated ones
 1. Qualified Line Clearance Arborists can use "insulating tools" (see above) to remove branches contacting energized conductors or that are within specified distances in Table 3.
 - vi. Spotters
 - vii. Step potential hazards
5. Annex B Recommended Guidelines for Standard Performance and Safety Training...
6. Annex H Electrical Hazard Abatement/Sample Procedures
7. Annex J Live Line Tools

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