RE: Passive Safety Devices for Brush and Wood Chippers (Petition 549)

January 21, 2019

Michael Nelmida
Senior Safety Engineer
Occupational Safety & Health Standards Board
2520 Venture Oaks Way, Ste. 350
Sacramento, CA 95833

Dear Mr. Nelmida,

The Tree Care Industry Association (TCIA) welcomes the opportunity to comment on the above-captioned issue, on behalf of its members residing or doing business (residential, commercial, utility line clearance and governmental contracting) in California.

TCIA is a national trade association representing approximately 2,500 private tree care employers nationally including 250 tree service employers residing or doing business in California. Additionally, the four largest brush chipper manufacturers are members of TCIA and important colleagues for us and our industry as we continuously seek ways to improve safety in the tree care profession.

We view the Advisory Council meeting on January 29 as an important opportunity to open a broader dialogue on brush chipper safety, and to review what is currently “state-of-the-art” in terms of safety devices.

We have three over-arching comments:

- Cal/OSHA should consider revision of §3424 to make and keep it consistent with the current revision of ANSI Z133 in terms of safety devices on brush chippers.
- It is misleading to consider the device in question to be truly “passive”.
- It would set dangerous precedent if Cal/OSHA mandated a proprietary safety device for all brush chippers; and it is preferable to create a performance standard allowing for various solutions to the problem at hand.

Regardless of what other action OSHB recommends, Cal/OSHA §3424 should be revised to be consistent with the accepted norm for mechanical infeed brush chippers as outlined in ANSI Z133 - 2017.
The Cal/OSHA current requirements are as follows (with emphasis added):

§3424(c)(1) Each rotary drum tree or brush chipper or disk-type tree or brush chipper not equipped with a mechanical infeed system shall be equipped with an infeed hopper not less than 85 inches, measured from the blades or knives to ground level over the centerline of the hopper, and shall have sufficient height on its side members so as to prevent personnel from contacting the blades or knives of the machine during normal operations.

In ANSI Z133 – 2017, clause 5.3.3, all brush chippers are subject to the 85-inch infeed hopper requirement. On mechanical infeed chippers, the measurement is made “...from the pinch point of the feeder wheels to ground level over the center line of the hopper.”

§3424(c)(6) Each disk-type tree or brush chipper equipped with a mechanical infeed system shall have a quick stop and reversing device on the infeed. The activating lever for the quick stop and reversing device shall be located across the top, along each side of, and as close to the feed end of the infeed hopper as practicable and within easy reach of the operator.

The current statement in §3424(c)(6) is consistent with what had been the ANSI Z133 requirement up through the 1988 revision of that standard. For 30 years, the industry’s standard has been that all mechanical infeed chippers must have a quick stop and reversing device.

In Z133’s 2017 revision is the following language:

5.3.5 Brush chippers equipped with a mechanical infeed system shall have a quick stop and reversing device on the infeed system. The activating mechanism for the quick stop and reversing device shall be located across the top, along each side, and close to the feed end of the infeed hopper within easy reach of the worker.

OSHSB and Cal/OSHA should recognize that the key difference in the design of chippers as it relates to safety is whether the unit has mechanical infeed. The cutting mechanism on units with mechanical infeed can be disk, drum, or some hybrid of these. The cutting mechanisms on units without mechanical infeed are drum only.

The term “passive sensing device” is inaccurate with respect to the device in question. The device in question is not passive in the sense that it requires several deliberate actions to function. Obviously, the chipper operator must wear wrist and ankle bracelets on all extremities for the sensors to detect. Furthermore, all co-workers and any others who share the responsibility for brush chipping must be similarly protected or the device will not function.

Users must not take any actions to bypass or override the device’s protection. They must test the device on a continuous basis to assure that it functions, and, as with any other safety device, must not use the chipper if the device does not function.
Another concern with the use of this system in general is that it may increase complacency and create a false sense of security. The result could be an increase in the likelihood of an individual not following accepted safe work practice – keeping their arms and legs out of the infeed chute area - because they assume the device will protect them.

We believe the device in question may prove to be an effective option to make brush chipping safer. Only time and empirical evidence will confirm this. We do know and it is fact that installing or retrofitting a chipper with the device is relatively expensive and complicated. This device should be evaluated as part of the safety systems that may be installed on a mechanical infeed chipper to afford protection to the operator(s).

Proprietary safety device vs. performance standard allowing a variety of solutions
The industry’s current standard is that mechanical infeed chipper operators shall be protected from contact with the infeed rollers by a combination of reach-distance guarding (created by the shape and dimensions of the infeed chute) as well as a quick stop and reversing device. It would not be unreasonable to require at least one more protection device which, when activated, stops the infeed rollers.

The device in question is currently commercially available on one brand of chipper, as an option. This manufacturer recently relinquished its exclusivity license for the device, but it remains under patent protection. Chipper manufacturers have brought forth various safety devices; such as the panic bar system, the bottom feed stop bar (bump bar), the four-position feed control lever, and last chance cables. Manufacturer representatives will be present at the Advisory Council meeting to discuss the effectiveness of these devices. Significantly, most if not all these devices are available to be installed on other manufacturers’ machines.

Conclusion
Our recommendation to OSHSB and Cal/OSHA is that regulatory language should first reflect what is currently required in the industry’s consensus standard, ANSI Z133. Our recommendation is to revise the regulatory language so that all mechanical infeed chippers have an 85-inch infeed chute, all have a quick stop and reversing device, and all have at least one other device that will stop the infeed rollers. The implementation date should be decided through ongoing discussion of the advisory council.

Thank you for this opportunity to comment on an important safety issue for our industry.

Sincerely,

Peter Gerstenberger,
Senior Advisor for Safety, Compliance & Standards