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U.S. Consumer Product Safety Commission  
Office of the Secretary  
4330 East West Highway, Room 820  
Bethesda, MD 20814

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**Comments of the National Consumers League, Consumers Union, the Consumer Federation of America, Public Citizen, and US PIRG to the  
U.S. Consumer Product Safety Commission on the Notice of Proposed Rulemaking:  
Safety Standard Addressing Blade-Contact Injuries on Table Saws  
Docket No. CPSC-2011-0074**

**I. Introduction**

The National Consumers League (NCL), Consumers Union, the Consumer Federation of America, Public Citizen and US PIRG respectfully submit these comments to the U.S. Consumer Product Safety Commission (“CPSC” or “the Commission”) in the matter of the proposed safety standard addressing blade-contact injuries on table saws. These organizations support the Commission’s April 27, 2017, vote to issue a Notice of Proposed Rulemaking (NPR) setting a safety standard on table saws.

As documented in the NPR, there were an estimated 33,400 table saw, emergency department-treated injuries in 2015. An estimated 4,700 of these injuries were amputations, which averages to more than 12 amputations occurring every day. These injuries cost society more than \$4 billion annually, and rob victims of employment and recreational opportunities for the rest of their lives.<sup>1</sup>

Current safety standards described under the voluntary *UL 987 Standard for Stationary and Fixed Electric Tools* do not adequately mitigate the risk posed by table saws. A trend analysis performed by CPSC staff found “no discernable change in the number of injuries or type of injuries related to table saw blade contact from 2004 to 2015.”<sup>2</sup> This conclusion was reached despite the fact that the data analysis covered time periods that included the introduction of several new provisions in various revisions of UL 987, such as the 2005 requirement of a riving knife and the 2007 requirement of a modular blade guard.<sup>3</sup>

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<sup>1</sup> CPSC, “Safety Standard Addressing Blade-Contact Injuries on Table Saws” (notice of proposed rulemaking), 82 Fed. Reg. 22190 (May 12, 2017).

<sup>2</sup> Staff briefing package of “Notice of Proposed Rulemaking Performance Requirements to Address Table Saw Blade Contact Injuries,” CPSC (Jan. 2017), page 3.

<sup>3</sup> *Id.* at page 30-31.

The CPSC should adopt a mandatory safety standard when the existing voluntary safety standard does not adequately mitigate the risk of injury. Our comments underscore the need for a mandatory safety standard that establishes performance requirements for table saws.

## **II. Injury Risk and Financial Burden Posed by Table Saws**

CPSC staff estimates that there were 33,400 table saw, emergency department-treated injuries in 2015. Of these, 30,800 (92%) involved the victim making contact with the blade, resulting in injuries ranging from lacerations, fractures, amputations, and avulsions. Amputations account for an estimated 4,700 injuries per year, which averages to more than 12 per day. Table saws account for an estimated 52.4 percent of all amputations related to workshop accidents.<sup>4</sup>

CPSC staff concluded that medical expenses as a result of table saw injuries cost upwards of \$1 billion annually. Treatments in the form of amputations account for roughly two-thirds of these expenses. The overall economic impact to society of these injuries is approximately \$4.06 billion.<sup>5</sup>

The Commission has determined preliminarily that there may be an unreasonable risk of blade-contact injuries associated with table saws. Given the rate, severity, and financial impact of these injuries, current table saws are indeed a consumer product that poses an unreasonable risk of injury. The question then becomes what measures can be taken to best mitigate the risks they pose to society.

## **III. Failure of Current Safety Measures**

Current industry-wide safety measures have proven ineffective at reducing the risk of blade-contact, table saw injuries. The existing measures are described under voluntary standards by the safety science company widely known as Underwriters Laboratories, or UL, which has published several editions of *UL 987, Standard for Stationary and Fixed Electric Tools*. Despite the introduction of recent safety features such as the riving knife and modular blade guard, CPSC staff's trend analysis on table saw injury rates found no discernable change in the number of injuries or type of injuries and no discernible change in the risk of injury associated with table saw blade contact from 2004 to 2015.<sup>6</sup> Efforts to incorporate more advanced safety features in recent editions of UL 987 have been opposed by the power tool industry, which claims the existing industry standards are sufficient. For example, in 2011, the Power Tool Institute (PTI), the largest trade partnership of power tool manufacturers, stated in comments to the CPSC that based on results from "their own survey" of table saw safety, the voluntary

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<sup>4</sup> CPSC notice of proposed rulemaking, *supra* note 1.

<sup>5</sup> CPSC staff briefing package, at Tab C page 2-3.

<sup>6</sup> CPSC staff briefing package, *supra* note 2.

standards as they currently stand “[are] adequately addressing table saw injuries.”<sup>7</sup> However, the CPSC’s data contradicts this claim. The CPSC notice of proposed rulemaking states that there is “little evidence that improvements in these passive safety devices has effectively reduced the number or severity of blade contact injuries on table saws.”<sup>8</sup>

A thorough examination of specific cases of injuries associated with table saws reveals why safety measures such as the modular blade guard are ineffective. An estimated two-thirds of injuries occur when the blade guard has been removed prior to an operator making a cut, while the other third occur with the guard intact.<sup>9</sup> This is troubling for two reasons. First, the fact that blade guards can or must be removed in order to make certain cuts means they are insufficient as a safety measure. If operators are removing the blade guard, there needs to be some other safety mechanism in place to mitigate the risk of injury. Second, the fact that thousands of injuries occur even when the blade guard is in use means it is ineffective as a safety measure. Because injuries occur at a high rate even in the presence of the blade guard, something far more effective should be required. Given the poor track record of current industry-wide safety features and the availability of active injury mitigation (AIM) technology that would mitigate injuries, CPSC should finalize an effective and mandatory safety standard.

#### **IV. The CPSC Recognizes Need for Improved Safety**

The CPSC has identified table saws as a consumer product necessitating a performance requirement to reduce the unreasonable risk of blade-contact injuries, as demonstrated by the issuance of the advance notice of proposed rulemaking and now the NPR. The Commission’s proposed standard requires table saws to be equipped with AIM technology to limit the severity of injury as a result of contact with a spinning blade. AIM is a term used to describe a system that detects imminent or actual contact between a body part and a saw blade, thus triggering a response to mitigate the extent of injury that would have otherwise occurred. It is “active” rather than “passive” because the mitigation strategy reacts to the actions of the operator. By contrast, a modular blade guard is a passive system, because its level of protection is fixed and independent of the actions of the operator. The specific requirement calls for a performance standard that limits the depth of a cut to 3.5 mm to a body part approaching the blade at a rate of one meter per second. The performance standard *does not* require a specific type of technology – such as a sensor, laser, or any other design. Instead, it requires that the saw perform in such a way that it does not inflict serious injury on the user, leaving it to the industry to use their own innovative approaches to protect consumers.

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<sup>7</sup> Power Tool Institute, “Table Saw Blade Contact Injuries; Advance Notice of Proposed Rulemaking Comment of Power Tool Institute, Inc.” (Mar. 16, 2012).

<sup>8</sup> CPSC notice of proposed rulemaking, page 48.

<sup>9</sup> Sadeq R. Chowdhury, Ph.D., Caroleene Paul, Survey of Injuries Involving Stationary Saws, Table and Bench Saws, 2007-2008, CPSC (Mar. 2011).

## **V. Safety and Financial Benefit to Consumers**

Adoption of the CPSC's proposed standard would address roughly 54,850 medically-treated table saw injuries per year—a figure that includes both those treated in emergency departments and those that are treated in other medical settings.<sup>10</sup> Mitigating these injuries would carry a substantial safety and economic benefit to consumers, table saw operators, small business owners, and society at large. From a safety standpoint, the Commission's proposal would significantly reduce the risk associated with operating a table saw. The proposal is based on many years of careful research by CPSC experts on staff. The Commission identifies the 3.5 mm benchmark as an appropriate level to ensure safety. What was once a devastating injury resulting in lacerations to vital nerves and blood vessels would become a minor cut.

The economic benefits of this mandatory standard to society are significant. Conservative estimates place the benefits at \$753 per table saw equipped with an automatic safety system,<sup>11</sup> and CPSC staff has estimated benefits ranging from \$2,300 to \$4,300 per saw.<sup>12</sup> These values derive from the assessment of medical expenses saved by table saws being equipped with AIM technology. Altogether, CPSC staff places the total benefits to society at \$630 million to \$2.3 billion.<sup>13</sup>

In sum, our organizations believe that CPSC should—without delay—implement its proposed performance standard for table saws. CPSC was created to assess marketplace hazards and address unreasonable risks of injury with better and safer designs when there is an affordable and available solution. The table saw safety standard readily meets these criteria. Table saws represent an important consumer product to the woodworking professional and hobbyist, but at present their use can lead to serious injury if even the slightest mistake is made. The existing industry voluntary safety standard is inadequate in reducing the risks, as demonstrated by the incidence of injuries. . Since the voluntary standard has failed to successfully prevent injuries, the CPSC should quickly move forward on an effective mandatory standard.

## **VI. Conclusion**

We support the conclusion of the CPSC staff analysis finding that a mandatory standard including a performance standard for AIM technology that limits the depth of cut by a spinning table saw blade to no more than 3.5 mm is appropriate, and we encourage the Commission to quickly finalize the proposed rule accordingly.

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<sup>10</sup> CPSC staff briefing package, Tab C, page 17-18.

<sup>11</sup> Letter to U.S. Consumer Product Safety Commission from George F. Carpinello of Boies, Schiller & Flexner, LLP, July 13, 2011, page 2.

<sup>12</sup> CPSC staff briefing package, page 4.

<sup>13</sup> CPSC staff briefing package, Tab C, page 41.

Table saw blades are associated with over 30,000 emergency department-treated injuries annually, resulting in excruciating pain, expensive medical costs, and lifelong disabilities to victims. The CPSC has formally investigated table saw safety since 2006. In the time since then, numerous detailed studies conducted by CPSC staff and others have confirmed that the adoption of a performance requirement makes sense both for consumer safety and for the economic benefits it would bring to society at large.

Thank you for your consideration of our comments.

Respectfully Submitted,

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