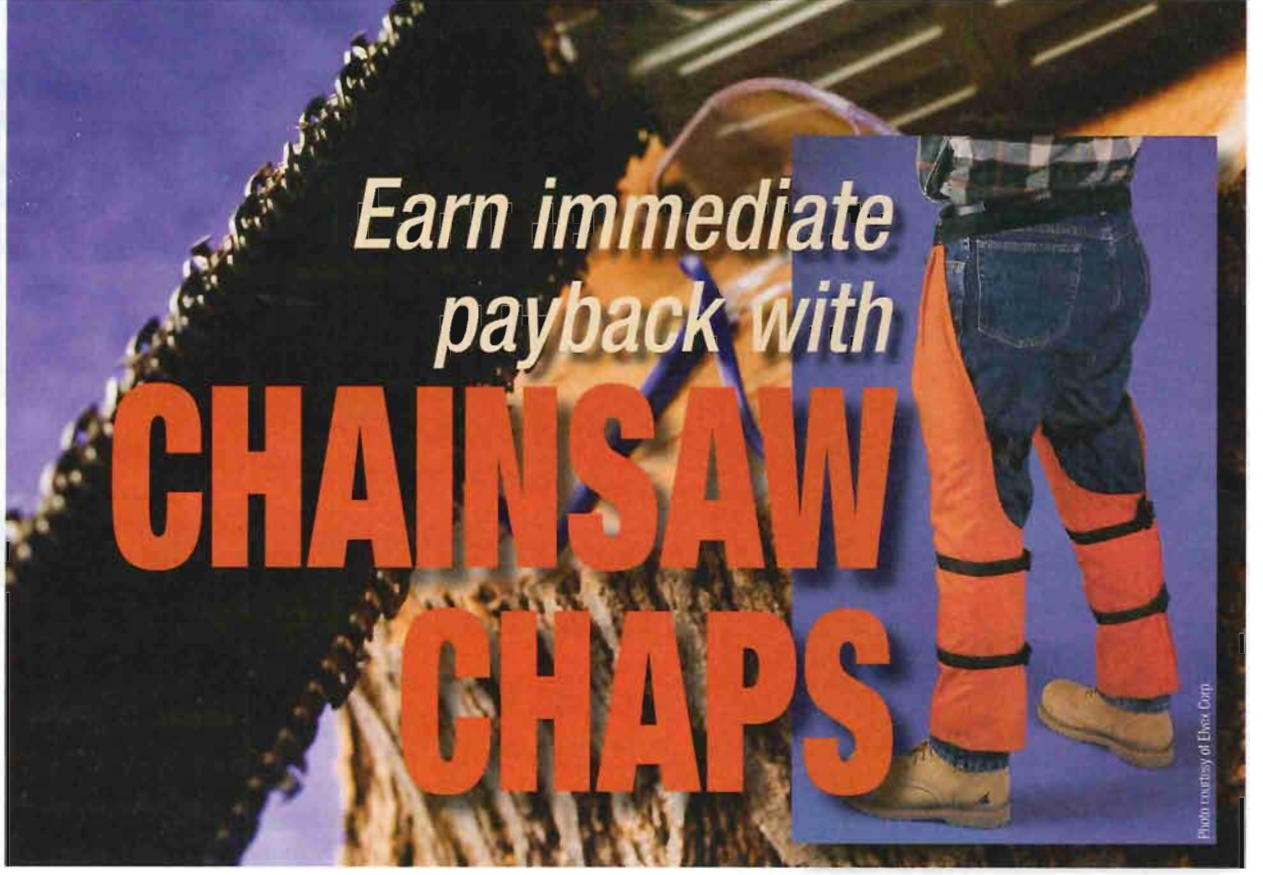
Earn immediate payback with CHAINSAW CHAPS



By FRED RAVETTO

The need for leg protection when working with chainsaws cannot be overstated. According to the last available U.S. Consumer Products Safety Commission report, there are over 28,500 chainsaw injuries per year, and more than 36 percent are injuries to the legs and knees. The average chainsaw injury requires 110 stitches, with medical costs for these injuries amounting to about 350 million dollars per year. In addition, workers' compensation costs can be estimated at 125 million dollars annually. Loss of production as well as loss of quality of life for the injured cannot be adequately quantified, but may in fact represent the single largest cost.

On the other hand, the cost of equipping each worker with one pair of chainsaw chaps is approximately $80.00. There are few situations in industry where safety has a more immediate payback than with chainsaw protective clothing.

Updated standards

The American Society for Testing and Materials (ASTM) standard governing chainsaw leg protective clothing underwent a major change in 2008. ASTM F-1897-2008 increased the speed at which leg protective clothing is required to prevent a "cut through" to 2,750 feet per minute, an increase of 250 fpm from the old standard of 2,500 fpm.

To ensure that the standard is being met, ASTM requires certification by laboratories such as Underwriter's Laboratories (UL) where compliance tests are performed in accordance with ASTM F-1414, Measurement of Cut Resistance to Chain Saw Lower Body Protective Clothing. These tests involve making cuts at measured speeds with a gas-powered chainsaw under controlled conditions. A successful test requires cuts to be made at both 45 degrees and 90 degrees to the longitudinal axis of the test sample, without cutting through the bottom of the protective clothing.

OSHA regulation 29 CFR 1910.266 requires employers to provide each chainsaw operator with leg protection constructed with cut-resistant material, at no cost to the employee. OSHA's Advisory states that: "Logging is one of the most dangerous occupations found in the United States, and the felling of trees with a chainsaw is the most dangerous of all logging activities. Compliance with OSHA's Logging Standard (29 CFR 1910.266) will eliminate many of the fatal accidents and greatly reduce the number of lost workday injuries occurring in this industry." (http://www.osha.gov/SLTC/etools/logging/userguide/scopeapplication/scopeapplicationhtml)

Chainsaw chaps - key features

After June of 2008, manufacturers' shipment of chainsaw protective chaps should be certified to the 2008 standard — and so labeled — and companies must verify that the chaps they purchase are certified to this standard and that the UL label prominently states ASTM 1897-2008.

Today's up-to-date designs incorporate high-strength fabric materials in multiple layers. In combination with these materials, the weaving is structured so fibers will be drawn into the saw chain. The protective material inside the chaps works by jamming the chain against the saw and forcing it to stop. This action happens because the chain catches the woven fibers and pulls from the length of the chaps, jamming the saw.

With the 2008 generation of chaps, stopping power is certified at the higher speed, yet the weight of most chaps remains light and comfortable for the user. Chaps that are too heavy can make the user excessively hot, while chaps that have an improper fit won't allow the user to move easily and can create safety problems in and of themselves. Buyers may want to sample chaps to be sure they satisfy the criteria for comfort and weight as well as meeting the higher performance rating.

Some chaps incorporate an asymmetric design which provides an extended area of protection opposite the angle of most chain cuts. Chaps are generally available in lengths to suit the height of the user, typically from 28 to 39 inches, measured from the waist to the top of the shoe.

The denier rating (referring to the thickness of a thread or yarn) of the outer fabric nylon material is another important consideration. To provide wear and abrasion resistance, an industrial grade 420 denier nylon cover material provides good durability. For heavy brush conditions, higher grade outer fabric of 1000 denier provides a higher level of abrasion resistance. Finally, products should be designed with heavy-duty stitching at stress points and should include high-strength buckles and straps for ease of use and durability. ISHN

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