American National Standard

for Outdoor Power Equipment – Portable, Handheld, Internal Combustion Engine–Powered Cut-Off Machines – Safety and Environmental Requirements

ANSI/OPEI B175.4-2013

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B175.4-2013
Revision and redesignation of
ANSI B175.4-2006

American National Standard
for Outdoor Power Equipment –

Portable, Handheld, Internal Combustion Engine-Powered Cut-Off Machines – Safety and Environmental Requirements

Sponsor

Outdoor Power Equipment Institute

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American National Standard

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Foreword (This foreword is not part of American National Standard ANSI/OPEI B175.4-2013.)

This standard revises ANSI B175.4-2006, *American National Standard for Outdoor Power Equipment - Portable, Handheld, Internal-Combustion-Engine-Driven Cut-Off Machines - Safety Requirements.*

The B175.4 Standards Development Committee developed this standard. The Committee is comprised of several organizations and individuals that evaluate or manufacture these products and accessories.

This standard covers maximum wheel diameters up to 16 inches.

A summary of the principal changes included in this standard is as follows:

- New important technical specifications and test procedures were added, such as fuel tank and fuel line integrity and machine drop testing.

- Reactive forces definitions were revised for clarity.

- During the development of this standard, an attempt to harmonize it globally with relevant ISO, CEN, and ANSI standards was considered and implemented where appropriate. In this regard, some of the clauses of this standard are identified as optional as they may only apply to certain market requirements.

- Concerning the maximum speed for cut-off machines, the definitions of ANSI B7.1-2010, *American National Standard, Safety Requirements for the Use, Care, and Protection of Abrasive Wheels*, apply, i.e., to define a maximum spindle speed, which correlates to the maximum speed of the cut-off wheel. Usually this maximum wheel speed is calculated from the maximum peripheral speed of the existing wheels, i.e., 100 m/s. Under these circumstances, section 8 of ANSI B7.1-2010 for Special Speeds is applicable.

- Requirements for heat protection were revised.

- A new Annex A was inserted for the Procedures for the Evaluation of Environmental and Fuel Compatibility of Fuel Lines and Tanks information and the remaining Annexes re-numbered.

There are seven annexes to this standard. Annexes A - F are normative and are considered part of the standard. Annex G is informative and is not considered part of the standard.

Suggestions for improvements to this standard are welcome. They should be sent to the Outdoor Power Equipment Institute, 341 South Patrick Street, Alexandria, VA 22314.

The following entities, recognized as having an interest in the standardization of safety requirements for cut-off machines, were contacted prior to the approval of this revised standard. Inclusion in the list does not necessarily imply that the organization concurred with the submittal of the proposal to ANSI:

Association of Equipment Manufacturers
Piedmont Technical Associates, Inc.
Concrete Sawing and Drilling Association
Construction Solutions Services LLC
Dolmar GmbH North American Division
ECHO, Inc. Husqvarna Outdoor Equipment
North American Equipment Dealers Association
STIHL, Inc.
U. S. Consumer Product Safety Commission
U. S. Forest Service – San Dimas
Underwriters Laboratories, Inc.

American National Standard
for Outdoor Power Equipment –

Portable, Handheld, Internal Combustion Engine–Powered Cut-Off Machines – Safety and Environmental Requirements

1 Scope and purpose

This standard applies to portable, handheld internal combustion engine-powered machines, which use a rotating cut-off (abrasive) wheel that is center-mounted on and driven by a spindle shaft, and designed for cutting construction materials such as asphalt, concrete, stone, and metal.

The requirements in this standard apply to machines using up to 406-mm (16-in) cut-off wheels. If the machine is designed for larger than 406-mm (16-in) cut-off wheels, the requirements of this standard shall be considered. The requirements listed may apply to machines designed for larger cut-off wheels.

Cut-off wheel design and safety specifications are not included in this standard.

The effective implementation date of this standard shall be two (2) years after the publication date and shall apply to all products built after that date. Manufacturers may also comply with the requirements of this standard any time after the publication date.

"ANSI/OPEI B175.4-2013" and "ANSI B175.4-2013" may be used interchangeably wherever referenced or required in this standard.

1.1. Purpose

This standard establishes safety and environmental requirements to reduce the risk of injury associated with the use of portable, hand-held internal combustion engine-powered machines using a rotating cut-off (abrasive) wheel.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ANSI B7.1-2010, *Safety requirements for the use, care, and protection of abrasive wheels*