

Also, an investigation into the types of equipment each definition would cover reveals that there is a very high degree of overlap. Equipment types considered by the EPA to be handheld include, but are not limited to, string trimmers, hedge clippers, brush cutters, hover mowers, leaf blowers, chain saws, clearing saws, and concrete, masonry, and cutoff saws.¹⁰ These equipment types meet EPA's general definition of handheld equipment, while pumps, generators, snowthrowers,¹¹ edgers, cultivators, tillers, continuous diggers, and trenchers must be under 14 kg and have no more than two wheels to be considered handheld, and augers must be under 20 kg and be intended for one-person use to be considered handheld.

Some commenters suggested that equipment weighing 14 kg is too heavy to be handheld, but did not suggest an acceptable alternative weight. Others felt it was too light for an upper limit. The Agency agrees that 14 kg is indeed heavy for some uses and some consumers, but also believes that certain pieces of equipment at that weight would be used in a handheld manner (such as lightweight edgers and tillers). It is likely that market forces would limit the manufacture and sale of "handheld" equipment that is too heavy for the typical consumer of such products. Indeed, a review of product literature indicates that 14 kg appears to be the break point that the market has chosen between equipment types powered with two-stroke engines and those powered by four-stroke.^{12 13}

Additionally, for products not falling into the general handheld definition (that is, products not carried throughout use and not used multipositionally), a product weight of less than 14 kg is not sufficient to qualify as handheld. Such products are also limited to no more than two wheels and must need some degree of operator carrying, support or attitudinal control in order to qualify as

handheld; that is, they must not be completely ground-supported. The Agency believes that these additional constraints will prevent true nonhandheld equipment from inadvertently falling into the handheld category.

On the other hand, the mere fact of some degree of ground support should not disqualify a piece of equipment from the handheld category. Some lightweight products requiring some level of ground support, including products with one or two wheels, would typically be considered handheld by the general public. Equipment such as lightweight snowthrowers, tillers and edgers with up to two wheels would require some carrying, support or attitudinal control; lawnmowers and three- and four-wheeled edgers, conversely, would be completely ground-supported and thus not handheld.¹⁴

Some commenters stated that pumps and generators under 14 kg should not qualify as handheld. The categorization was intended primarily for small pumps and generators that would be transported into remote areas, and is hereby retained. The State of California has a special provision allowing such equipment with non-certified engines to be purchased by emergency response organizations. The Agency is taking a somewhat different route toward a similar end, while making these pieces of equipment more widely available but subject to the handheld standards.

The Agency wishes to clarify that all pumps and generators under 14 kg with no more than two wheels will be categorized as handheld equipment. The phrase "the engine is used exclusively in a generator or pump" was not meant to preclude handheld status for pumps and generators with engine models that are also used in other pieces of handheld equipment. The Agency agrees that the term "exclusively" in the handheld definition is superfluous and it has been removed.

For this rule, only earth and ice augers that are under 20 kg (including a bit of typical size for that model) and are sold for use primarily by one person will be considered handheld.¹⁵ Two

person augers, and any auger of 20 kg or more (including the bit) must meet the nonhandheld standards. The Agency believes that this slight broadening of the definition reasonably responds to the needs of auger manufacturers to provide both a lightweight and a high-strength, high-power product during the time frame of the Phase 1 regulations. Light weight is important for one person to be able to counter the torque generated by the drilling operation, hold the auger vertically, lift it from the hole, and carry it to and from the drilling location. Also, in contrast to truly nonhandheld equipment, augers have no frame or wheels and, thus, require continuous operator support during use. In contrast to other equipment that is clearly handheld, however, augers are of a heavier construction to withstand greater forces during use, and are used for very short bursts of time, so that the 14 kg weight limitation is not applicable. A review of product literature and manufacturer comments indicate that an upper limit of 20 kg would include most or all one-person augers currently on the market.

Auger manufacturers are predominantly small companies and, therefore, are somewhat constrained in their ability to quickly re-engineer their product, acquire a new engine source, and absorb the costs of a four-stroke engine. It is for this reason, coupled with the technological reasons cited above, that the Agency is allowing one-person augers under 20 kg to meet the handheld definition for this Phase 1 regulation of small SI engines. However, this definition will not necessarily be carried into future regulation of small SI engines, such as in the Phase 2 negotiated rulemaking activities currently underway.

2. Snowthrowers

The Agency proposed that snowthrowers meeting the handheld definition be considered handheld equipment; all other snowthrowers would be considered nonhandheld. In general, industry either opposed regulating snowthrowers for HC emissions or favored relaxed emission standards for two-stroke snowthrowers, while environmental and state and local air officials' associations favored more stringent standards.

One industry commenter argued that EPA should at a minimum exempt snowthrowers from the hydrocarbon standards, since emissions from snowthrowers do not demonstrably contribute to summertime ozone

applicable handheld or nonhandheld CO standard. See below for further discussion.

¹⁰ The Agency is aware that concrete/masonry/cutoff saws are sometimes attached to carts for extended or heavy-duty cuts. This occasional use does not negate their overall status as handheld equipment. The Agency agrees with the comment that such saws are often used multipositionally, and thus fall into the general handheld category. Thus, the 14 kg weight limit does not apply. The same is true for hover mowers.

¹¹ Certain snowthrowers that do not meet the handheld definition are nevertheless allowed to meet the handheld, rather than nonhandheld, CO standards. Engines used exclusively in snowthrowers will not be required to meet the HC standards, either handheld or nonhandheld, unless manufacturers of these engines opt to certify to those standards. See below for further discussion.

¹² For augers, this break point is 20 kg.

¹³ See note to docket summarizing product weights, dated 2/17/95, by Lisa Snapp, U. S. Environmental Protection Agency. (EPA Air Docket #A-93-25.)

¹⁴ Additionally, the use of lawnmowers and, similarly, three- and four-wheeled edgers on hillsides is not considered to be multipositional use and, hence, they do not qualify as handheld equipment. Nevertheless, certain lawnmowers are allowed to meet the handheld, rather than nonhandheld, standards. See below for further discussion.

¹⁵ All ice augers, whether or not they qualify as handheld, will not be required to meet the HC standards, unless manufacturers of engines used in those products certify to the HC standards. Under today's rule, ice augers will only be subject to the