

Part VIII MACHINERY AND EQUIPMENT

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Explanations

The Standards listed below are referenced in this Part of the Regulations.

Standard Agency	Standard Number	Standard Title
CSA	CSA Z432	<i>Safeguarding of Machinery</i>
ANSI	ANSI/ASME B20.1 - 1993	<i>Safety Standards for Conveyors and Related Equipment</i>
CSA	CAN/CSA-Z142	<i>Code for Power Press: Health, Safety and Guarding Requirements</i>
ANSI	B11.4 – 1993	<i>American National Standard for Machine Tools – Shears – Safety Requirements for Construction Care and Use</i>
ANSI	B11.5 – 1988 (R1994)	<i>American National Standard for Machine Tools – Ironworkers – Safety Requirements for Construction Care and Use</i>
ANSI	B7.1 – 1988	<i>The Use, Care and Protection of Abrasive Wheels</i>
ANSI	A10.3 – 1995	<i>American National Standard for Construction and Demolition Operations – Safety Requirements for Powder-Actuated Fastening Systems</i>
CSA	Z62.1	<i>Chain Saws</i>
ANSI	ANSI/ALI ALCTV -	<i>American National Standard for Automotive Lifts – Safety Requirements for the Construction, Care and Use</i>

	2006	
ANSI	ASME PALD-2005	Safety Standard for Portable Automotive Lifting Devices

Section E110 AUTOMOTIVE LIFTS AND VEHICLE SUPPORTS

Subsection E110(1) refers to ANSI Standard ANSI/ALI ALCTV – 2006 “American National Standard for Automotive Lifts – Safety Requirements for the Construction, Care and Use”.

Note: The following are referenced as companion standards in the above standard:

1. ANSI/ALI ALOIM (Safety Requirements for Operation, Inspection and Maintenance of Automotive Lifts) that expands the requirements pertaining to the responsibilities of the owners of automotive lifts and/or the employers of personnel who use automotive lifts; and
2. ANSI/ALI ALIS (Safety Requirements for Installation and Service of Automotive Lifts) that expands the requirements pertaining to the responsibilities of installation and service companies of automotive lifts.

Subsection E110(4) A record of each periodic inspection should be prepared by a qualified automotive lift inspector as defined in *ANSI/ALI ALOIM-2000*. The record should include observations of all points of inspection as recommended by the manufacturer, and the subsequent repairs or replacements made.

In addition to the above, thorough records of all preventive maintenance and repairs performed should be prepared by the auto lift owner, employer or others performing the work. These records should include the specific checks made, measurements taken, adjustments, parts replaced, recommendations, and repairs performed.

The inspection, maintenance, modification and repair records should be maintained by the auto lift owner or employer and kept at the auto lift or in a place that is immediately available to the auto lift operator or to any other person involved with inspection and maintenance of the equipment.

Examples of a preventive maintenance log, repair maintenance log, inspection checklists and an inspection certificate are provided in the appendices of standard *ANSI/ALI ALOIM-2000*.

Section E122 ABRASIVE BLASTING MATERIALS - CLEANUP

Subsection E122(1) applies to used abrasive blasting materials and the hazardous substances such materials may contain and the potential risk for worker exposure. This section does not apply to new, unused abrasive blasting material.

Abrasive blasting involves the removal of a coating, or an encrustation such as dirt or rust, from an object such as a metal structure. The types of surface coating, the nature of the encrustation, the composition of the base material being treated, as well as the abrasive material itself are some of the sources of contaminants that may be present in used abrasive material.

There is a reasonable expectation for the employer to be aware of the composition of the material being removed and of the base material, and to be aware of any hazardous substances that may end up being present in the used abrasive material. For example, for a job involving removal of paint from a steel bridge structure, the employer is expected to determine the composition of the coating - does it contain lead or other hazardous substances? If so, Subsection 122(1) applies and procedures must be established to minimize the generation of airborne dust and workers must wear suitable personal protective equipment. Note that the employer has control over the type of abrasive grit selected for the blasting task. Where practicable, a non-silica-containing grit is to be used as a substitute for silica-containing grits, as required by Section 42(3).

Used abrasive material can also contain high concentrations of fine dust, making it considerably more hazardous than new abrasive material. Any disturbance of used abrasive material can create large amounts of airborne dusts that can be readily inhaled. For this reason, particular attention must be paid to the handling and disposal of this material. Refer to Part VII – Personal Protective Equipment of the OHS Regulation to determine the type of personal protective equipment that may be required for cleanup.

Subsection E122(2) Regular removal of accumulations of used abrasive materials from the work area, such as at the end of the work shift as required by Subsection 122(2), is an effective work practice for lowering the potential exposure of workers to harmful contaminants. Vacuum recovery is the most effective method of removing large quantities of spent abrasive materials but other effective control methods may also be used, for example, a wet floor scrubber. Wet sweeping or shoveling should not be used except where vacuuming or other effective means are not practicable. Due to the high concentrations of airborne dust that may be generated, compressed air must not be used for cleanup.

It is recognized that complete removal from the work area of used abrasive blasting material containing a designated substance may not always be possible. For example, small traces of material or dust may be unavoidably left in places that the normal methods of cleaning will not reach. Subsection 122(2) states that removal under Subsection 122(1) must take place at the end of each shift except in three situations.

1. The first of the exceptions is where the risk of removal will exceed the risks of leaving the materials in place. Some examples of this are:
 - The dust enters places that are difficult to access and would involve risks for workers attempting to reach the material.
 - The used material is combined with water and forms a solid cake that is safe to work on, but would have to be broken up, with a consequent creation of dust, in order to remove it.
2. The second exception, Subsection 122(2)(b), refers to workers that are not expected to be exposed to used abrasive material containing a hazardous substance prior to its eventual removal. There may be no need to remove the materials if the work process results in the used materials collecting in a location where workers are not present. Some examples are:
 - Blasting done in a completely closed environment to which workers do not have access during the blasting process,
 - Blasting done remotely from where the workers controlling the process are located,
 - Blasting conducted in a frame building, either wood or steel, where the spent abrasive material tends to collect on ledges and flanges of the structure with minimal or no impact on workers below.
3. The third exception, Subsection 122(2)(c), states that removal need not take place at the end of the shift if the used abrasive material containing hazardous substance "cannot be separated from the environment in which the abrasive blasting takes place." This is intended to cover situations where blasting takes place outdoors and the used material containing such a substance becomes inextricably mixed with the existing natural material. Some examples are:
 - Sandblasting non-lead paint from a metal bridge over water where the used material falls into the water (where permitted by environmental regulations),
 - Sandblasting at a location with sandy ground.

For the last example above, removal may be practicable if, for example, the work creates a distinct pile of used material. In that case, it is reasonable to expect removal of the pile of used abrasive material. Cleanup in this example may be

further aided by placing a tarp or similar covering on the ground below where the blasting will take place.

Subsection E122(3) This section is applicable where there is a delay of the clean up as outlined in Section 122(2). These safe work procedures must be written. Refer to Section 119 – Risk Assessment regarding the requirement of a risk assessment prior to “any abrasive blasting.....”

The intent of the written safe work procedures are to ensure:

- Workers are not unduly exposed to dusts from waste abrasive materials containing a hazardous substance,
- Steps are taken to monitor the risks imposed by the remaining quantity of waste material,
- Unauthorized, unprotected workers do not approach or walk through waste material,
- Workers involved in cleanup are wearing the appropriate personal protective equipment, and
- There are provisions for a thorough cleanup at the end of the particular job or task.