



Designation: E2706 – 18

# Standard Practice for Equipment Technology and Operations for Mobile and Plant-Based Secure Destruction Safety Requirements<sup>1</sup>

This standard is issued under the fixed designation E2706; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## INTRODUCTION

Commercial secure destruction has grown from a relatively obscure service, often offered as an ancillary service by records storage providers or paper recyclers, to a stand-alone dedicated industry sector with a unique operating profile and health and safety concerns.

In the following practice, secure destruction services using plant-based (fixed facility) or mobile (truck-based) equipment are addressed.

The specifications and suggestions provided are offered as guidance only. They are meant to assist secure destruction service providers in creating a reasonably safe environment for employees and customers, and are not meant to be overly prescriptive.

## 1. Scope

1.1 This practice sets forth criteria for the design, manufacture, assembly, modification, operation, maintenance, service, or repair of plant-based and mobile secure destruction equipment.

1.2 This practice is applicable both to plant-based (fixed facility) and mobile (truck-based) secure destruction operations engaged in collecting, receiving, storing, processing, transporting, or combinations thereof, media and related items to provide for secure destruction by physical or electronic alteration.

1.3 In this practice, minimum safety requirements are established with respect to secure destruction operations and equipment.

1.4 This practice applies to both new and existing mobile and plant-based secure destruction equipment.

1.5 *Units*—The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appro-*

*priate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

[D4956 Specification for Retroreflective Sheeting for Traffic Control](#)

[E1542 Terminology Relating to Occupational Health and Safety](#)

2.2 *ANSI Standards:*<sup>3</sup>

[ANSI B11.0 Safety of Machinery—General Requirements & Risk Assessment](#)

[ANSI/ASSE Z244.1 Control of Hazardous Energy Lockout, Tagout and Alternative Methods](#)

[ANSI Z245.2 Stationary Compactors—Safety Requirements for Installation, Maintenance, and Operation](#)

[ANSI Z245.21 Stationary Compactors—Safety Requirements for Manufacturing and Reconstruction](#)

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee E34 on Occupational Health and Safety and is the direct responsibility of Subcommittee E34.10 on Industrial Safety.

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**ANSI Z245.30** Equipment Technology and Operations for Wastes and Recyclable Materials—Waste Containers—Safety Requirements

**ANSI Z245.5** Baling Equipment—Safety Requirements for Installation, Maintenance, and Operation

**ANSI Z245.51** Baling Equipment—Safety Requirements

**ANSI Z245.60** Equipment Technology and Operations for Wastes and Recyclable Materials—Waste Containers—Compatibility Dimensions

**ANSI Z535** Safety Color Code

**ANSI Z535.1** Safety Colors

**ANSI/ISEA 107** High Visibility Safety Apparel and Headwear Devices, Appendixes B and C

2.3 *SAE Standard*:<sup>4</sup>

**J994** Alarm—Backup—Electric Laboratory Performance Testing

2.4 *OSHA Standards*:<sup>5</sup>

**29 CFR 1910.147** Control of Hazardous Energy (Lockout/Tagout)

**29 CFR 1926.601** Motor Vehicles, Mechanized Equipment, and Marine Operations

2.5 *DOT Standards*:<sup>5</sup>

**49 CFR Parts 350–399, Subchapter 13** Federal Motor Carrier Safety Regulations

**49 CFR Part 567** Certification

**49 CFR Part 568** Vehicles Manufactured in Two or More Stages

**49 CFR Part 571** Federal Motor Vehicle Safety Standards (FMVSS)

**49 CFR Part 571.108** Lamps, Reflective Devices, and Associated Equipment

3.2.4 *manufacturer, n*—individual, corporation, partnership, or other legal entity that is in the business of designing, constructing, and fabricating products; the term *manufacturer* includes any intermediate or final-stage manufacturer, remanufacturer, or modifier.

3.2.5 *media, n*—information-bearing print, electronic digital devices, or other items that contain instruments used to contain or convey information or data; includes both static (primarily print) media and electronic or digital media.

3.2.6 *mobile secure destruction equipment, n*—truck-based machinery and tools used to collect, transport, process, or destroy information-bearing media.

3.2.7 *plant-based secure destruction equipment, n*—stationary machinery and tools used to collect, transport, process, or destroy information-bearing media.

3.2.7.1 *Discussion*—As used in this practice, media includes digital storage devices that contain information or data.

3.2.8 *secondary drive position, n*—position in a dual-drive configuration that is designed to be occupied by the driver during collection.

3.2.9 *secure destruction, n*—activity or service that destroys information-bearing media.

3.2.10 *secure destruction equipment, n*—refers to the general type of equipment used by commercial destruction services to destroy information-bearing media.

3.2.11 *special work area, n*—distinctly identified area, such as a system loading pit, where the use of guards and railings is functionally impracticable and specific training of affected employees is effective in avoiding hazards within the area.

3.2.12 *sustained manual pressure control, n*—control that requires continuous pressure by the operator.

3.2.13 *tipping area, n*—area of a secure destruction facility where incoming vehicles unload materials by placing the truck floor at an incline or using a walking floor.

3.2.14 *work brake, n*—feature of certain vehicles that holds the vehicle in a stopped position after the vehicle has been brought to a rest, using the service brake, to permit the operator to leave the cab temporarily to load material into the vehicle.

#### 4. Significance and Use

4.1 This practice was developed to help manufacturers, designers, maintenance personnel, trainers, owners, employees, and customers of secure destruction services to provide a reasonable level of safety for everyone exposed to hazards of equipment used to provide those services.

4.2 Sections 1 – 3 provide general information and definitions and apply to all plant-based and mobile secure destruction operations and equipment covered by this practice.

4.3 Sections 5 – 8 provide requirements for design, manufacture, reconstruction, modification, operation, and maintenance of plant-based and mobile equipment used for secure destruction.

### 3. Terminology

3.1 *Definitions*—For other terms used in this practice, refer to Terminology E1542.

3.2 *Definitions of Terms Specific to This Standard*:

3.2.1 *access door, n*—panel covering an opening on the equipment that is designed to allow access such that the entire employee's body is inside the equipment housing for the purpose of performing service or maintenance.

3.2.2 *collection and transfer equipment, n*—motor-powered vehicles, including trailers, that may or may not contain equipment for the loading, shredding, compaction, transporting, and unloading of material intended for secure destruction.

3.2.3 *container lifting mechanisms or lifting devices, n*—component mechanisms, such as (but not limited to) lifting arms, forks, hydraulic cylinders, cables, winches, and revving cylinders, mounted to a foundation or stationary equipment that are used to complete a lift-and-dump cycle of carts or containers into the loading chamber of processing equipment.

<sup>4</sup> Available from SAE International (SAE), 400 Commonwealth Dr., Warrendale, PA 15096, <http://www.sae.org>.

<sup>5</sup> Available from U.S. Government Printing Office, Superintendent of Documents, 732 N. Capitol St., NW, Washington, DC 20401-0001, <http://www.access.gpo.gov>.

## 5. Design, Manufacture, Reconstruction, and Modification

5.1 *Design and Manufacture*—Mobile or plant-based secure destruction equipment shall be designed and manufactured in accordance with the appropriate sections of this practice. A detailed risk assessment (see ANSI B11.0) based on a hazard assessment and job safety analysis shall be performed to determine the risks presented and safeguarding needed. Equipment shall be permanently identified with the name of the manufacturer, the date of manufacture (or a code traceable to the date of manufacture), and a compliance statement attesting to conformity with this practice.

5.1.1 Modifications to the chassis of mobile equipment shall be done in conformity to vehicle safety standards in 49 CFR Part 571.

5.2 *Body Mounting*—Any person or company who installs bodies upon chassis is considered to be the final-stage manufacturer for the purposes of this practice. They shall permanently identify the name of their company, the date of mounting, and a compliance statement attesting to conformity with this practice.

5.2.1 Body mounting shall be done in accordance with U.S. Department of Transportation (DOT) requirements 49 CFR Part 568.

5.3 *Installation of Container Lifting Mechanisms and Cart Lifters*—Any person or company who subsequently mounts container lifting mechanisms or cart lifters, or both, shall do so in accordance with the appropriate sections of this practice, applicable codes, local ordinances, and the manufacturer's recommendations including, but not limited to, the following requirements:

5.3.1 If installation of cart lifters interferes with the operation or visibility of the motor vehicle's rear lights (braking, turn signal, and backing), then the installer shall reposition original or add supplemental lights to be at least as effective as the original design;

5.3.2 Installation of cart lifters shall not compromise point of operation protections; and

5.3.3 For mobile equipment, the lowest edge of the lifter shall be no less than 5 in. (127 mm) above the ground when the lifter is in its lowest position.

5.4 *Reconstruction/Modification*—Any person or company reconstructing/modifying (including where permanent modifications occur) mobile equipment and container lifting devices after the effective date of this practice shall do so in accordance with this practice and shall affix to such equipment their name, the date of reconstruction, and a statement attesting to compliance with this practice.

5.4.1 Modifications to mobile equipment shall be made in conformance to DOT regulations 49 CFR 571 and U.S. Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1926.601.

5.5 *Stationary Compactors and Baling Equipment:*

5.5.1 Stationary compactors shall meet the requirements of ANSI Z245.2 and Z245.21.

5.5.2 Baling equipment shall meet the requirements of ANSI Z245.5 and Z245.51.

## 6. Instructions for Operations and Maintenance

6.1 *Documented Operating Instructions*—Manufacturers of mobile or plant-based secure destruction equipment shall develop and provide documented operating instructions establishing practice lines for the appropriate installation, use, cleaning, and care of mobile or plant-based secure destruction equipment. Such instructions shall include precautionary notices associated with the operation of the unit, transit position of the equipment, and instructions regarding the use of safety features.

6.2 *Reconstruction, Repair, and Modification*—Any person or company modifying mobile or plant-based secure destruction equipment shall furnish documented operating instructions establishing practice lines for the use, cleaning, and care of the unit or component associated with the reconstruction (where modifications occur) or modifications. Instructions shall include precautionary notices associated with the reconstruction or modification.

6.3 *Maintenance*—The manufacturer shall develop and provide a documented program for maintenance, including periodic and regular inspections of mobile or plant-based secure destruction equipment.

6.4 *Procedures for the Control of Hazardous Energy (Lockout/Tagout)*—The manufacturer shall provide documented instructions for a hazardous energy control (lockout/tagout) procedure that shall isolate and render safe energy sources, including hydraulic, pneumatic, potential, and kinetic, except during maintenance testing. The manufacturer will also provide information regarding the weight of any component exceeding 4000 lb (1814 kg) if additional props or blocking devices are required. The lockout procedure shall include, but is not limited to, the following and shall comply with 29 CFR 1910.147 and ANSI Z244.1 lockout/tagout standards:

6.4.1 Setting the parking brake and chocking the wheels;

6.4.2 Shutting down all power sources such as the truck engine and auxiliary engines, and disengaging the power take-off system;

6.4.3 Removing the key from the vehicle ignition;

6.4.4 Installing a tag and lock on the steering wheel/electrical disconnect or other appropriate location, or installing a similar device, such as a steering wheel cover;

6.4.5 Placing frame and body supports as specified in 8.2.5;

6.4.6 Either placing operating equipment at the lowest position or installation of additional blocking devices, or both, to prevent possible free fall of any raised or elevated equipment such as tailgate(s), bodies, front loader arms, and side-lifting device or arm; and

6.4.7 Installing blocking devices before releasing stored hydraulic or pneumatic pressure, if maintenance is to be done to the hydraulic or pneumatic system.

6.5 *Additional Operating Instructions*—If vehicles are manufactured in two or more stages, each intermediate-stage manufacturer that installs secondary drive position(s) shall provide an operator's manual with the vehicle that provides instructions related to that manufacturer's installation for vehicle use.



## 7. Operational Requirements

7.1 *Employer Responsibilities*—The employer shall be responsible for:

7.1.1 *Compliance with Regulations*—Ensuring that mobile or plant-based secure destruction equipment is operated and maintained in conformance with manufacturer’s instructions and applicable local, state, and federal codes and ordinances. Additionally, on mobile secure destruction vehicles, employers shall comply with 49 CFR Parts 350–399.

7.1.2 *Conformity to This Practice*—Providing properly maintained equipment in compliance with the requirements of this practice and its normative references.

7.1.3 *Training of Public, Employees:*

7.1.3.1 *General*—Assigning only trained public or employees to work (which includes driving, operating, loading, cleaning, servicing, maintaining, or repairing) on equipment that is subject to the provisions of this practice.

7.1.3.2 *Training Criteria*—Incorporating training requirements into a safety program, as specified in Section 9, using the information provided by manufacturers and employers according to Sections 5 and 6.

7.1.4 *Supervision:*

7.1.4.1 *General*—Monitoring the employee’s activities and taking appropriate action to ensure adherence to safe practices and the employee requirements of this practice.

7.1.4.2 *Access Doors and Service Covers*—Ensuring that access doors and service covers are in place while the vehicle or equipment is in use, including machine guarding.

7.1.4.3 *Safety Device Removal or Disabling*—Ensuring that no person removes or disables any safety device, whether installed by the manufacturer or added to the equipment after market.

7.1.5 *Maintenance Program*—Implementing a program for the maintenance of the equipment that will incorporate the following elements:

7.1.5.1 Requirements for trained, competent maintenance employees or contractors to perform inspection and repair work;

7.1.5.2 Provisions for cleaning, inspection, and repair of equipment in accordance with the manufacturer’s recommendations and in compliance with this practice, including regular periodic inspections to ensure that the technical requirements of this section and Section 8 are maintained;

7.1.5.3 Safety procedures, including safety signs, as required in accordance with ANSI Z535; and

7.1.5.4 Confirmation of safe condition before placing equipment back into service after a reported malfunction or defect that affects the safe operation of the equipment.

7.1.6 *Hazardous Energy Control Program (Lockout/Tagout)*—Using, at a minimum, the manufacturer’s recommended procedures for the control of hazardous energy sources (lockout/tagout) in a program complying with 6.4.

7.1.7 Providing safe conditions and equipment, including the following:

7.1.7.1 *Work Lighting*—Supplying a minimum of 15 fc (161.5 lx) of lighting for mobile and plant-based operations. For mobile equipment, the requirement applies to visibility in areas of operation, including loading hoppers and potential

contact with overhead obstructions. This provision does not require the manufacturer to install extra lighting on the equipment.

7.1.7.2 *Container and Cart Lifting Devices*—When container lifting devices are used:

(1) *Container and Cart Lifting Training*—Training employees in the proper use of container or cart lifting devices to be encountered in the performance of their job;

(2) *Container Lifting Device Load Limits*—Ensuring that the container or cart lifting device will not be used to lift any weight established to exceed the load rating of any of the individual components of the container or cart lifting device; and

(3) *Compatibility of Containers and Lifting Devices*—When mobile collection vehicles are used to lift, load, unload, or transport containers, ensuring that those containers comply with the provisions of ANSI Z245.30 regarding container-type compatibility dimensions.

(a) *Cart Lifter Cycle Time*—Ensuring that the cart lifter cycle time has not been modified above the maximum indicated on the marking.

7.1.7.3 *Stationary Compactors and Baling Equipment*—When stationary compactors and baling equipment are used, ensuring that operations meet the requirements of ANSI Z245.2, ANSI Z245.21, ANSI Z245.5, and ANSI Z245.51.

7.1.7.4 *Personal Protective Equipment (PPE)*—Requiring PPE as appropriate to the tasks assigned to employees as mandated by regulations (see Table X1.1).

7.1.7.5 *High-Visibility Apparel*—Requiring high-visibility apparel as appropriate to the tasks assigned and conditions that employees will experience as prescribed in ANSI/ISEA 107, Appendixes B and C.

7.2 *Employee Responsibilities*—Employees who drive, operate, load, clean, service, maintain, or repair equipment that is subject to the provisions of this practice shall be responsible for working safely, including the following:

7.2.1 *Receipt of Training*—Perform work, as authorized by the employer, in and around mobile or plant-based secure destruction equipment that is subject to the provisions of this practice only after being properly supervised, instructed, and trained in safe work practices relative to the work assigned.

7.2.2 *General Work Practices:*

7.2.2.1 *General Equipment Operation*—The employee shall be familiar with the manufacturer’s operator’s manual and operate equipment in accordance with the manufacturer’s instructions and the employer written safety training programs.

7.2.2.2 *Driving and Riding Positions*—When driving or riding in the vehicle:

(1) Follow the employer’s instructions regarding driving and riding positions;

(2) Ride only in the cab and not anywhere else on the vehicle;

(3) Keep cab doors closed and latched during transit;

(4) Remain in driving or riding position(s) during collection activities until the vehicle has come to a complete stop and the brakes are set;

(5) Wear seat belts at all times when the vehicle is in transit, except as necessary during collection;

(6) When a vehicle is being operated in reverse, ensure that the area behind the vehicle is clear;

(7) Do not cross or stand behind a vehicle operating, or about to operate, in reverse;

(8) Ensure the locations of all coworkers are known before operating the vehicle in reverse;

(9) During transit, place and keep the lifting device in the transit position;

(10) Be aware of the maximum overall height of the equipment as posted in the cab; and

(11) Stand-up fork trucks shall be guarded to prevent any impalement or ejection of any part of the operator's body.

**7.2.2.3 PPE**—Use PPE and high-visibility apparel as required by the employer.

**7.2.2.4 Work Near Other Mobile Equipment**—Maintain appropriate separation from other mobile equipment that may be operating near the employee's work area.

**7.2.2.5 Special Work Areas**—Enter posted special work areas only if trained and authorized by the employer to do so, and observe safety-related requirements and instructions posted for that area.

**(1) Bale Storage Areas:**

**(a) Bale Condition**—Bales not in the collection vehicle shall be stacked and of consistent material composition and shape. Bales shall be contained by straps, ties, or similar devices in sufficient number for the type of material as well as the size and shape of the bale.

**(b) Bale Stacking**—Bales stored in tiers shall be stacked, blocked, interlocked, or limited in height so that they are stable and secure against sliding or collapse. Cross-stacking or a step method of stacking shall be considered.

**(c) Unstable Bales**—Loose, incomplete, or out-of-shape bales shall not be stacked or used to support other bales in the stack.

**(d) Special Work Area**—Bale storage areas shall be designated as special work areas, with access limited to authorized employees only.

**7.2.2.6 Energy Control Procedures**—Adhere to the employer's procedure for the control of hazardous energy sources (lockout/tagout) when repairing or servicing mobile or plant-based secure destruction equipment. See 6.4.

**7.2.3 Safety Features:**

**7.2.3.1 General**—Use applicable safety devices and protective equipment related to operation, maintenance, and use of the equipment.

**7.2.3.2 Reporting Defects**—Report to the employer any safety-related deficiency or defect in the equipment, including damaged or illegible signage (safety signs/warning labels); damaged, altered, or removed machine guarding; and damaged emergency stops.

**7.2.3.3 Access Doors and Service Covers**—Ensure that all access doors and service opening covers are closed and secured before operations begin.

**7.2.3.4 Disabling of Safety Equipment**—Ensure that no one disables or bypasses safety equipment or other protective devices, and that mobile or plant-based secure destruction equipment is not operated unless these devices are fully functional.

**7.2.4 Equipment Operating Practices:**

**7.2.4.1 Overhead Clearance**—Ensure that there is adequate overhead clearance for collection operations and equipment positioned for transit as posted in the vehicle.

**7.2.4.2 Automated Side-Loader Operation**—Know the overhead clearance that is possible with the normal operation of the lifting device, arm, and the container for the normal loading path. Ensure that overhead obstructions and persons are free and clear of the normal path.

**7.2.4.3 Tailgates**—On vehicles, which are so equipped, ensure that all persons are clear of the tailgate before the tailgate is opened or shut, and the operator shall warn all persons in the vicinity not to cross under an open tailgate.

**7.2.4.4 Shredding and Material Handling Controls**—Ensure that all persons are clear of the hopper or lifting mechanism before actuating any shredding cycle or material handling controls. For mobile shredding equipment, the operator shall remain at the controls during the cycle ready to stop the cycle or material handling operation, if necessary, during the portion of the cycle when there is a potential point of operation hazard.

**7.2.4.5 Work Brakes**—On vehicles so equipped, use the work brake feature only to maintain the vehicle at rest after bringing it to a complete stop with the service brake, and not as a primary means of stopping the vehicle.

**7.2.4.6 Container Lifting Devices**—On vehicles equipped with devices to lift, load, unload, or transport containers:

(1) Use the lifter in accordance with the manufacturer's instructions, ensuring the use of safety features provided;

(2) Use only carts that conform to this practice;

(3) Use only cart types designed by the lift manufacturer as being compatible with the cart lifter;

(4) Stand clear of raising or raised cart lifters when in operation and fully extended;

(5) Do not modify lifters, for example, to reduce cycle time below that indicated on the markings; and

(6) When moving carts manually, ensure the cart is in the closed position.

**7.2.4.7 Unsafe Acts/Unsafe Conditions**—If a cart is not fully closed, the cart can tip backwards and the lid can fly open and move backwards, becoming an unsafe condition (trip) causing serious injury.

(1) **Adequate Clearance**—Ensure that persons are away from container lifting devices, containers, and areas of operation during all phases of the operation, and that there is adequate clearance for the operation before activating any container lifting device.

(2) **Container Compatibility**—Ensure that the containers are compatible with the lifting devices used, that containers are properly secured to the lifting devices, and that the contents of overfilled containers are adjusted so as not to interfere with the performance of the lifting devices.

**(3) Cart Handling:**

(a) Use the lifter in accordance with the manufacturer's instructions, ensuring the use of safety features provided on lifting systems;

(b) Use only cart types designated by the lift manufacturer as being compatible with the cart lifter;

(c) People should not place themselves beneath a raised cart lifter;

(d) Do not modify a lifter so as to reduce the cycle time below that indicated on the marking.

(e) A cart with a hinged lid shall be able to be moved forward with the lid in its fully open position without a person stepping on the lid or tripping;

(f) The cart lid, when free, shall drop freely to its fully open position. If the cart tips backwards and the lid makes contact with the ground, or until the measurement from the ground to the center of the handle is 27 in. (69 cm), whichever occurs first, the cart shall be capable of moving 3 ft (0.9 m); and

(g) The lid shall not make contact with the ground behind a line extending vertically from the ground to the handle. The lid may make contact with the ground ahead of the vertical line, but shall not suffer deformation such that it cannot be safely used in accordance with this practice.

## 8. Mobile Equipment Safeguards and Features

8.1 *Compliance with Federal Motor Vehicle Safety Standards*—Vehicles shall be designed, constructed, reconstructed, or modified in compliance with 49 CFR Parts 567, 568, and 571, and the country’s vehicle requirements if not used in the United States.

### 8.2 *General Equipment Safeguards and Features:*

8.2.1 *Access Doors*—Access doors, except hoods and vehicle doors, of mobile secure destruction equipment shall be provided with either interlocks that deactivate unguarded moving machinery when the doors are opened, access doors that require the use of hand tools to open or remove, or access doors that are equipped with a lockable latching device. When the operation being guarded is a continuing function, interlocks shall be provided unless point-of-operation protection is provided, similar to that appearing in 8.2.7 or equivalent.

8.2.2 *Support Points*—Components that shall be raised to perform service or maintenance shall be provided with attachment points for additional support. Attachment points shall be identified and instructions shall be provided to explain their proper use.

8.2.3 *Automatic Neutral Interlock*—A neutral position interlock shall be required on vehicles equipped with an automatic transmission, if the throttle is advanced by means of an external control located outside the cab of the vehicle.

### 8.2.4 *Controls for Secure Destruction Equipment:*

8.2.4.1 Controls shall be conspicuously labeled as to their function.

8.2.4.2 Sustained manual pressure controls shall be used for raising/lowering the body or tailgate or moving, hoisting, and loading container and cart lifting mechanisms, hopper covers, the ejector panel, or automated lifts.

8.2.4.3 Start buttons for electrically controlled components operated by push buttons shall be recessed or located so as to prevent unintentional activation. Stop buttons shall be white or black, distinguishable from other controls by size and color, and not be recessed.

8.2.4.4 All toggle switches in the control panel shall start or stop a function electrically, and the panel shall be recessed.

8.2.4.5 Means shall be provided for stopping the shredding cycle at any point and for reversing the packing mechanism away from any pinch point.

8.2.5 *Frame, Body, Props, and Supports*—Equipment with elevating or dumping bodies or tilt frames shall be provided with a positive means of support, permanently attached and capable of being locked in position, to prevent accidental lowering of an empty body or tilt frame while maintenance or inspection work is being performed. A sign shall be located near the prop or support providing instructions for its use.

### 8.2.6 *Lifting Devices:*

8.2.6.1 *Safety Factor for Cables and Chains*—Cables and chains that are used on container lifting or loading devices shall have a 2:1 ratio of breaking strength to maximum rated load, lift, or pull capacity of the lifting or loading device.

8.2.6.2 *Container Lifting Devices and Arms*—Lifting devices and arms shall be designed in such a way that the vehicle operator may enter and leave the cab at any time. The operator shall have a constant and complete view of the area of operation. This view shall be direct through mirrors or a camera system, or both.

8.2.6.3 *Markings for Container Lifting Devices (see 8.2.6.6 for cart lifter markings)*—For equipment designed to accommodate one or more types of containers that conform to the compatibility dimensions of ANSI Z245.60, additional permanent markings shall be provided for container lifting devices, which are adjacent to the operating controls, that indicate COMPATIBLE WITH ANSI Z245.60.

8.2.6.4 *Two-Wheeled Cart Lifters (not to include automated side loader):*

(1) *General Requirements*—The lowest edge of the lifter shall be no less than 5 in. (127 mm) above the ground when the lifter is in its lowest position.

#### (2) *Cycle Time:*

(a) The lifter manufacturer shall specify a minimum cycle time for each lifter.

(b) The lifter cycle time shall be capable of being adjusted only by the use of a tool.

#### (3) *Controls:*

(a) Lifters shall be operated by a sustained manual pressure control.

(b) The control shall be capable of reversing the direction of motion of the lifter at any point in the cycle.

(c) Operating controls shall be located such that the employee operating the lifter is in a position where he or she can observe the lifter in operation. The control is to be located such that the operator cannot activate the controls while standing under a raised cart.

(d) If there are two or more lifters installed on a truck, the controls shall be located between them.

8.2.6.5 *Securing the Cart*—The lifter shall secure the cart to the lifter during the operation.

8.2.6.6 *Cart Lifter Markings*—Cart lifters shall be permanently identified with the following:

(1) Manufacturer’s name or trademark;

(2) Model identification, if any;

(3) Year and month of manufacture or a code traceable to the date of manufacture;