UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

This document has been electronically approved and signed.

DATE: June 27, 2018

BALLOT VOTE SHEET

TO: The Commission
Alberta E. Mills, Secretary

THROUGH: Patricia H. Adkins, Executive Director
Patricia M. Hanz, General Counsel

FROM: Patricia M. Pollitzer, Assistant General Counsel
David M. DiMatteo, Attorney, OGC

SUBJECT: Draft direct final rule: Safety Standard for Automatic Residential Garage Door Operators

BALLOT VOTE DUE: Tuesday, July 3, 2018

On January 11, 2017, and July 5, 2017, CPSC staff submitted briefing packages to the Commission recommending that the Commission accept revisions to the provisions of UL 325 regarding residential garage door operators because the changes are likely to reduce the possibility of children becoming entrapped by partially open garage doors. On January 18, 2017, and July 11, 2017, the Commission, in accordance with the procedure in the Consumer Product Safety Improvement Act of 1990, voted to approve staff's recommendations to accept the revisions to UL 325. Consistent with the Commission's previous votes, the Office of the General Counsel is providing for Commission consideration, the attached draft final rule to revise the Commission's residential garage door operators standard, 16 C.F.R. part 1211, to reflect changes made by UL to its standard, UL 325, upon which the Commission standard is based.

Please indicate your vote on the following options:

I. Approve publication of the attached document in the *Federal Register*, as drafted.

_____ _____
(Signature) (Date)

II. Approve publication of the attached document in the *Federal Register*, with changes as specified.

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_____ _____

(Signature) (Date)

III. Do not approve publication of the attached document in the *Federal Register*.

_____ _____

(Signature) (Date)

IV. Take other action specified below.

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_____ _____

(Signature) (Date)

Attachment: Draft *Federal Register* Notice: *Safety Standard for Automatic Residential Garage Door Operators*

[Billing Code 6355-01-P]

CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Part 1211

[Docket No. CPSC-2015-0025]

Safety Standard for Automatic Residential Garage Door Operators

AGENCY: U.S. Consumer Product Safety Commission.

ACTION: Direct final rule.

SUMMARY: The Consumer Product Safety Commission (Commission, or CPSC) is amending its regulation, *Safety Standard for Automatic Residential Garage Door Operators*, to reflect changes made by Underwriters Laboratories, Inc. (UL), in the entrapment protection provisions in UL's standard UL 325, Standard for Safety: Door, Drapery, Gate, Louver, and Window Operators and Systems, Seventh Edition.

DATES: The rule is effective on [**insert date 60 days after publication in the FEDERAL REGISTER**], unless we receive significant adverse comment by [**insert date 30 days after publication in the FEDERAL REGISTER**]. If we receive timely significant adverse comments, we will publish notification in the **Federal Register,** withdrawing this direct final rule before its effective date. The incorporation by reference of the publications listed in this rule is approved by the Director of the Federal Register as of [**insert date 60 days after publication in the FEDERAL REGISTER**].

ADDRESSES: You may submit comments, identified by Docket No. CPSC-2015-0025, by any of the following methods:

Electronic Submissions: Submit electronic comments to the Federal eRulemaking Portal at: www.regulations.gov. Follow the instructions for submitting comments. The Commission does not accept comments submitted by electronic mail (e-mail), except through www.regulations.gov. The Commission encourages you to submit electronic comments by using the Federal eRulemaking Portal, as described above.

Written Submissions: Submit written submissions by mail/hand delivery/courier to: Office of the Secretary, Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814; telephone (301) 504-7923.

Instructions: All submissions received must include the agency name and docket number for this notice. All comments received may be posted without change, including any personal identifiers, contact information, or other personal information provided, to: www.regulations.gov. Do not submit confidential business information, trade secret information, or other sensitive or protected information that you do not want to be available to the public. If furnished at all, such information should be submitted in writing.

Docket: For access to the docket to read background documents or comments received, go to: www.regulations.gov, and insert the docket number CPSC-2015-0025, into the "Search" box, and follow the prompts.

FOR FURTHER INFORMATION CONTACT: Troy W. Whitfield, Lead Compliance Officer, Office of Compliance, Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814-4408; Telephone (301) 504-7548 or e-mail: twhitfield@cpsc.gov.

SUPPLEMENTARY INFORMATION:

A. Background

The Commission has regulations for residential garage door operators (GDOs) to protect consumers from the risk of entrapment. 16 CFR part 1211. The Commission first issued the GDO standard in 1991, as required by the Consumer Product Safety Improvement Act of 1990 (Improvement Act), Public Law 101–608. Section 203 of the Improvement Act mandated that the entrapment protection requirements of the 1988 version of UL's 325, Third Edition, ''Door, Drapery, Louver and Window Operators and Systems,'' be considered a consumer product safety rule under the Consumer Product Safety Act. Section 203(c) of the Improvement Act established procedures for the Commission to revise the Commission's GDO standard. When UL revises the entrapment protection requirements of UL 325, UL must notify the Commission of the revision, and that revision "shall be incorporated in the consumer product safety rule . . . unless, within 30 days of such notice, the Commission notifies [UL] that the Commission has determined that such revision does not carry out the purposes of subsection (b) [of section 203 of the Improvement Act, which mandated the UL 325 entrapment protection requirements initially]. As provided in the Improvement Act, the Commission has revised the GDO standard after UL has notified the Commission of changes to UL 325's entrapment protection requirements several times in the past.

The mandatory rule (16 CFR part 1211) primarily requires that all residential GDOs sold in the United States have an inherent reversing mechanism capable of reversing the motion of a moving garage door within 2 seconds, to reduce the risk of entrapment. This system is known as an "inherent system" because it is physically

located within the housing of the GDO. In addition, the rule requires that the operator shall be provided with a means for connection of an external entrapment-sensing device. Most GDOs on the market today use an electric eye as the external entrapment-sensing device. The purpose of this device is to monitor the area under the garage door to detect people who might become entrapped by the garage door. The standard also allows a device, known as a "door edge sensor," similar to the sensors used on elevator doors, or allows for any other device that provides equivalent protection. These devices are known as "external entrapment-sensing devices" because they are located outside the housing of the GDO.

In addition, the rule requires all GDOs to have a device referred to as a "30-second clock." The 30-second clock is a back-up device that reopens the door if the door cannot close completely within 30 seconds, as would be the case when a person becomes entrapped by the door. The 30-second clock is a back-up to the primary, 2-second inherent entrapment system.

The rule also requires that every GDO be equipped with a "means to manually detach the door operator from the door." This requirement enables a person to detach the operator from the door quickly if a person becomes entrapped under the door. For most garage doors, the means of detachment occurs by pulling on a red handle that hangs below the GDO.

The Commission last updated the mandatory rule in 2016, to reflect changes made to the entrapment protection provisions of UL 325 up to that time.

B. Changes to UL 325

Since the last update of the mandatory rule in 2016, there have been three published revisions of the voluntary standard, UL 325, including publication of the Seventh Edition in May 2017.

On December 20, 2016, UL notified the CPSC that UL had revised the entrapment protection requirements of UL 325 and had published revisions to the Sixth Edition on December 15, 2016. On June 16, 2017, UL notified the Commission that UL published additional revisions to UL 325, Sixth Edition, on May 25, 2017, which became the Seventh Edition.

On January 11, 2017, and July 5, 2017, CPSC staff submitted briefing packages to the Commission, recommending that the Commission incorporate the applicable changes to UL 325, because the changes are likely to reduce the possibility of children becoming entrapped by partially open garage doors. On January 18, 2017, and July 11, 2017, the Commission voted to approve staff's recommendations to accept the revisions to UL 325 regarding the entrapment protection requirements for automatic residential GDOs, in accordance with the procedure in the Improvement Act.

Consistent with the Commission's previous votes to include the revisions regarding the entrapment protection requirements for automatic residential GDOs, this rule revises the mandatory GDO rule at 16 CFR part 1211, to include the revisions regarding the entrapment protection requirements for automatic residential GDOs in UL 325, Seventh Edition.

C. Description of the Direct Final Rule

The direct final rule amends 16 CFR part 1211, to include the revisions regarding the entrapment protection requirements for automatic residential GDOs in UL 325, Seventh Edition. All of the revisions in the direct final rule concerning the GDO standard are in subpart A and subpart D. The direct final rule does not change any of the certification (subpart B) or recordkeeping (subpart C) provisions of the GDO standard.

All of the revisions to the relevant provisions of 16 CFR part 1211 are described in the summary of changes below:

- *Alternative method to assess electronic circuits*. The revised UL 325 added a section titled, "Supplement SA" to UL 325, which provides an alternate method for evaluating protective electronic circuits and controls based on the requirements of UL/IEC 60335-1, "*Standard for Safety of Household and Similar Electrical Appliances, Part 1: General Requirements*." UL/IEC 60335-1 was developed to promote harmonization with international standards and will eventually replace UL 991, "*Standards for Tests for Safety-Related Controls Employing Solid-State Devices,*" which is being phased out. The Commission's mandatory safety standard for GDOs currently incorporates by reference UL 991 (§§ 1211.4(c), 1211.5(a), and 1211.5(b)(3)). The Supplement SA requirements allow an alternate method for assessing the reliability of GDO electronic or solid-state circuits, including entrapment-protection circuits, which perform back-up, limiting, or other functions intended to reduce the risk of fire, electric shock, or injury to persons (§§ 1211.4(c), 1211.5(a), 1211.5(b)(4), and a new paragraph for

an incorporation by reference of Supplement SA in § 1211.40(d)(1) and redesignating paragraphs (d)(1) through (3) as (d)(2) through (4)).

- *Additional requirements for unattended operation*. The revised UL 325 added a new section titled, "*Unattended operation control accessory*," which provides additional requirements for unattended operation of GDOs, including remote monitoring and unattended activation via wireless or Internet-connected devices. To ensure safe unattended operation of GDOs, the new requirements clarify visual and audible alarm operation, include provisions for maintaining compliance with the entrapment protection of an external accessory, and provides the necessary instructions and markings. (New § 1211.14(f)).

- *Revision to edge sensor requirements*. The revised UL 325 expanded the edge sensor test requirements (§ 1211.12) and clarified that external edge sensors shall operate as required when tested per the new requirements (§§ 1211.8(a) and 1211.8(b)), as well as comply with the applicable normal operation test (§§ 1211.10(b)(3), 1211.10(c) (3), and 1211.10(e)(4)). The revision expanded the edge sensor test requirements for GDOs to stipulate specific requirements based on the GDO type; for example: sectional door vs. one-piece door, and horizontally moving door vs. vertically moving door. The revision replaced Figure 6 with several new figures to illustrate the test procedures for each type of GDO (Figures 6A through 6I). The revision clarified that the edge sensor endurance test shall be conducted at room temperature (§ 1211.12(b)).

- *Clarification regarding visual alarm*. The revised UL 325 clarified the visual alarm flash rate required during unattended operation of the GDO (§

1211.14(c)).

- *Clarification regarding certain materials*. The revised UL 325 clarified that an external protection device using polymeric or elastomeric material must meet the specified impact test requirements and remain fully operational at room temperature (§ 1211.10(e)(1) and (3)).

- *Exception from impact test.* The revised UL 325 added an exception for polymeric or elastomeric materials that crack or break during the impact test to be acceptable if they pass the water exposure test in the damaged condition (§ 1211.10 (e) (1)).

- *Clarification regarding external secondary entrapment protection*. The revised UL 325 clarified the means for connection of an external secondary entrapment protection device applicable to vertically moving and horizontally moving GDOs (§ 1211.10) and clarified that for horizontally sliding GDOs, the GDO is not required to open the door a minimum of 2 inches when the GDO senses a second obstruction during the *reversing* travel (§ 1211.7(c)(1) and 1211.7(c)(7)).

- *Updated test figure references*. The revised UL 325 updated the figure references for the general (§ 1211.13(a)) and puncture-resistance test (§ 1211.12 (d)).

As noted, on January 18, 2017, and July 11, 2017, the Commission voted to include the revisions regarding the entrapment protection requirements for automatic residential GDOs in UL 325, Seventh Edition. In accordance with its previous vote, the Commission is issuing this direct final rule that amends the mandatory GDO rule at

16 CFR part 1211 to include the revisions to the entrapment protection requirements of UL 325.

D. Incorporation by Reference

The Office of the Federal Register (OFR) has regulations concerning incorporation by reference. 1 CFR part 51. Under these regulations, agencies must discuss, in the preamble to a final rule, ways that the materials the agency incorporates by reference are reasonably available to interested persons and how interested parties can obtain the materials. In addition, the preamble to the final rule must summarize the material. 1 CFR 51.5(b).

Supplement SA of UL 325 provides an alternate test method for assessing the reliability of GDO electronic or solid-state circuits, including entrapment protection circuits, which perform back-up, limiting, or other functions intended to reduce the risk of fire, electric shock, or injury to persons. As noted, the direct final rule adds references to Supplement SA in §§ 1211.4, 1211.5, and a new paragraph § 1211.40(d)(1) in subpart D that incorporates by reference Supplement SA.

The UL standard listed above is copyrighted. The UL standard may be obtained from UL, 151 Eastern Avenue, Bensenville, IL 60106, Telephone: 1-888-853-3503 or online at: http://ulstandards.ul.com/. One may also inspect a copy of the above-referenced standard at CPSC's Office of the Secretary, U.S. Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814, Telephone: (301) 504-7923.

E. Direct Final Rule Process

The Commission is issuing this rule as a direct final rule. Although the Administrative Procedure Act (APA) generally requires notice and comment rulemaking, section 553 of the APA provides an exception when the agency, for good cause, finds that notice and public procedure are "impracticable, unnecessary, or contrary to the public interest." In Recommendation 95-4, the Administrative Conference of the United States (ACUS) endorsed direct final rulemaking as an appropriate procedure to expedite promulgating rules that are noncontroversial and that are not expected to generate significant adverse comment. *See* 60 FR 43108 (August 18, 1995). Consistent with ACUS's recommendation, the Commission is publishing this rule as a direct final rule because we do not expect any significant adverse comments.

The Commission is taking the limited action of amending the GDO rule to conform the regulation to the changes to UL 325 that were previously accepted by the Commission in January and July 2017. Public comment will not impact the Commission's acceptance of the substantive changes to UL 325. Because this document merely updates the GDO rule, the Commission believes this rulemaking is a non-controversial matter that is not likely to generate comments. Therefore, the Commission concludes that the direct final rule process is appropriate.

Unless we receive a significant adverse comment within 30 days, the rule will become effective on [**insert date 60 days after publication in the FEDERAL REGISTER**]. In accordance with ACUS's recommendation, the Commission considers a significant adverse comment to be one in which the commenter explains why the rule did not accurately update the codified text in 16 CFR part 1211. We note that comments

on the Commission's previous underlying acceptance of the revisions to UL 325 are not considered significant adverse comments because the only change this rule makes is to revise the GDO rule to conform to the revisions to UL 325 previously accepted by the Commission.

Should the Commission receive a significant adverse comment, the Commission would withdraw this direct final rule. Depending on the comments and other circumstances, the Commission may then incorporate the adverse comment into a subsequent direct final rule or publish a notice of proposed rulemaking, providing an opportunity for public comment.

F. Effective Date

Based on reports from industry representatives, all known manufacturers and importers currently conform to the UL 325, Seventh Edition revisions contained in the direct final rule. Therefore, the effective date of the direct final rule is 60 days from the date of publication of the direct final rule in the *Federal Register*. This effective date would not adversely affect the cost or availability of conforming GDOs.

G. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires that agencies review proposed and final rules for the rules' potential economic impact on small entities, including small businesses, and prepare regulatory flexibility analyses. 5 U.S.C. 603 and 604. Staff researched the potential effects of the direct final rule on small entities, including small manufacturers, importers, and private labelers. Staff has identified 19 firms that market GDOs in the United States. Five of these are either large firms or subsidiaries of large foreign or domestic companies. The 14 remaining companies appear

to be small firms under U.S. Small Business Administration (SBA) size standards (13 CFR part 121).

Staff estimates, based on industry sales data, that about 5 million to 7 million GDOs are installed annually. A review of company information and staff's contacts with industry representatives indicate that all known manufacturers and importers market only products that conform to UL 325. All of these firms' GDOs reportedly conform to the UL 325, Seventh Edition requirements that became effective in May 2017. These firms, including the small firms, have already incurred the design and testing costs associated with the minor changes in the UL 325 test procedures made since 2016. Therefore, the direct final rule would not impose any new costs on small producers or importers. Pursuant to section 605(b) of the RFA, because the existing level of conformance is virtually 100 percent, and no new compliance costs or other burdens would be associated with the direct final rule, the Commission certifies that this rule will not have a significant impact on a substantial number of small entities.

H. Preemption

The Improvement Act contains a preemption provision which states: ‘‘those provisions of laws of States or political subdivisions which relate to the labeling of automatic residential garage door openers and those provisions which do not provide at least the equivalent degree of protection from the risk of injury associated with automatic residential garage door openers as the consumer product safety rule’’ are subject to preemption under 15 U.S.C. 2075. Public Law 101–608, section 203(f).

I. Environmental Considerations

The Commission's regulations provide a categorical exclusion for Commission rules from any requirement to prepare an environmental assessment or an environmental impact statement because they "have little or no potential for affecting the human environment." 16 CFR 1021.5(c)(2). This rule falls within the categorical exclusion, so no environmental assessment or environmental impact statement is required. The Commission's regulations state that safety standards for products normally have little or no potential for affecting the human environment. 16 CFR 1021.5(c)(1). Nothing in this rule alters that expectation.

List of Subjects in 16 CFR Part 1211

Consumer protection, Imports, Incorporation by reference, Labeling, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, the Commission amends 16 CFR part 1211 as follows:

PART 1211—SAFETY STANDARDS FOR AUTOMATIC RESIDENTIAL GARAGE DOOR OPERATORS

1. The authority citation for part 1211 continues to read as follows:

Authority: Sec. 203 of Pub. L. 101–608, 104 Stat. 3110; 15 U.S.C. 2063 and 2065.

SUBPART A – [Amended]

2. Amend § 1211.4 by revising paragraph (c) to read as follows:

§ 1211.4 General requirements for protection against risk of injury.

* * * * *

(c) An electronic or solid-state circuit that performs a back-up, limiting, or other function intended to reduce the risk of fire, electric shock, or injury to persons, including entrapment protection circuits, shall comply with the requirements in UL 991 (incorporated by reference, see § 1211.40), including environmental and stress tests appropriate to the intended usage of the end-product. Exception: A control or electronic circuit that complies with Supplement SA of UL 325-2017 (incorporated by reference, see § 1211.40) is considered to fulfill this requirement.

3. Amend § 1211.5 by revising paragraphs (a) introductory text, and adding paragraph (b)(4) to read as follows:

§ 1211.5 General testing parameters.

(a) The following test parameters are to be used in the investigation of the circuit covered by § 1211.4(c) for compliance with either, UL 991, or Supplement SA of UL 325-2017 (incorporated by reference, see § 1211.40):

(b) * * *

(4) During evaluation of the circuit to the requirements of Supplement SA of UL 325-2017 (incorporated by reference, see § 1211.40).

* * * * *

4. Amend § 1211.6 by revising paragraphs (b)(2), (3)(i), and (d)(2) to read as follows:

§ 1211.6 General entrapment protection requirements.

* * * * *

(b) * * *

(2) Shall be provided with a means for connection of an external secondary entrapment protection device as described in § 1211.8 (a) and (c) through (e), as applicable to vertically moving doors; or

(3)(i) Shall be provided with an inherent secondary entrapment protection device as described in §§ 1211.8(a) and (f), 1211.10, and 1211.12 and is:

* * * * *

(d) * * *

(2) Shall be provided with a means for connection of an external secondary entrapment protection device for each leading edge as described in § 1211.8 (c) through (e), as applicable to horizontally moving doors.

* * * * *

5. Amend § 1211.7 by revising paragraphs (c)(1)(ii) and (iii) and (7), to read as follows:

§ 1211.7 Inherent primary entrapment protection requirements.

* * * * *

(c) * * *

(1) * * *

* * * * *

(ii) The door operator is not required to open the door a minimum 2 inches (50.8 mm) when the operator senses a second obstruction during the reversing travel.

(iii) The door operator is not required to open the door a minimum 2 inches (50.8 mm) when a control is actuated to stop the door during movement towards the open position—but the door can not be moved towards the closed position until the operator reverses the door a minimum of 2 inches (50.8 mm).

* * * * *

(7)(i) An operator, employing an inherent entrapment protection control that measures or monitors the actual position of the door, shall initiate reversal of the door and shall return the door to, and stop the door at, the fully open position in the event the inherent door operation "profile" of the door differs from the originally set parameters. The system shall measure or monitor the position of the door at increments not greater than 1 inch (25.4 mm).

* * * * *

6. Amend § 1211.8 by revising paragraphs (a)(1)(ii), and (b)(2) to read as follows:

§ 1211.8 Secondary entrapment protection requirements.

(a)(1) * * *

(ii) An external edge sensor installed on the edge of the door that, when activated as tested per § 1211.12 (a)(4)(1) results in an operator that is closing a door to reverse direction of the door, returns the door to, and stops the door at the fully open position, and the sensor prevents an operator from closing an open door,

* * * * *

(b) * * *

(2) An external edge sensor installed on the edge of the door that, when activated as tested per § 1211.12 (a)(4)(2), results in an operator that is closing or opening a door to reverse direction of the door for a minimum of 2 inches (50.8 mm).

* * * * *

7. Amend § 1211.10 by revising paragraphs (b)(3)(ii), (c)(3)(ii), (e)(1)(ii), (e)(3), and (e)(4)(ii) to read as follows:

§ 1211.10 Requirements for all entrapment protection devices.

* * * * *

(b) * * *

(3) * * *

(ii) An edge sensor shall comply with the applicable Normal Operation test, per § 1211.12(a).

* * * * *

(c) * * *

(3) * * *

(ii) An edge sensor shall comply with the applicable Normal Operation Test, per § 1211.12(a).

* * * * *

(e) * * *

(1) * * *

(ii) The part shall operate as intended, per paragraph (e)(4) of this section at room temperature, or, if dislodged after the test, but not cracked or broken, is capable of being

restored to its original condition. Exception: If a part is cracked or broken, as an alternative, it may be subjected to the Splash Tests, § 1211.10 (c) after the impact test. After the water exposure tests, the device shall either:

(A) Operate as intended per § 1211.10 (e) (4); or

(B) Shut down safely (i.e. provide an obstruction signal to the door).

* * * * *

(3) In lieu of conducting the room temperature test described in paragraph (e)(2) of this section, each of three samples of a device exposed to outdoor weather when the door is the closed position are to be cooled to a temperature of minus 31.0 ±3.6 °F (minus 35.0 ±2.0 °C) and maintained at this temperature for 3 hours. Three samples of a device employed inside the garage are to be cooled to a temperature of 32.0 °F (0.0 °C) and maintained at this temperature for 3 hours. While the sample is still cold, the samples shall be subject to the test described in paragraph (e)(2) of this section, and shall comply with paragraph (e)(1)(i) of this section. After determining compliance with paragraph (e)(1)(i) of this section, the sample shall be allowed to return to room temperature, and then shall comply with paragraph (e)(1)(ii) of this section.

(4) * * *

(ii) An edge sensor shall comply with the applicable Normal Operation Test, per § 1211.12(a).

* * * * *

8. Amend § 1211.12 by adding paragraphs (a)(4) and (5), and revising paragraphs (b) and (d)(2) and (3) to read as follows:

§ 1211.12 Requirements for edge sensors.

(a) * * *

(4) (i) An edge sensor, when installed on a representative door, shall actuate upon the application of a 15 lbf (66.7 N) or less force in the direction of the application when tested at room temperature 25°C ±2°C (77°F ±3.6°F) and, additionally, when intended for use with gate operators, shall actuate at 40 lbf (177.9 N) or less force when tested at -35°C ±2°C (-31°F ±3.6°F).

(A) For an edge sensor intended to be used on a sectional door, the force is to be applied by the longitudinal edge of a 1-7/8 in (47.6 mm) diameter cylinder placed across the sensor so that the axis is perpendicular to plane of the door. See Figures 6A and 6B to this subpart.

(B) For an edge sensor intended to be used on a one piece door, swinging door, or swinging gate, the force is to be applied so that the axis is at an angle 30 degrees from the direction perpendicular to the plane of the door. See Figures 6C and 6D to this subpart.

(C) For an edge sensor that wraps around the leading edge of a swinging one-piece door, providing activation in both directions of travel, the force is to be applied so that the axis is at an angle 30 degrees from the direction perpendicular to both the closing direction and the opening direction. See Figure 6E to this subpart.

(ii) With respect to the Edge Sensor Test specified in paragraph (a)(4)(ii) of this section, the test is to be repeated at various representative points of the edge sensor across the length of the edge sensor. See Figures 6F and 6G to this subpart.

(5) *Residential garage door operators.* (i) For vertically moving residential garage door operators intended to be used with an external edge sensor, with reference to 32.3.1(b), a 1-5/8 in by 3-1/2 in (41.3 mm by 88.9 mm) solid rectangular object not less

than 6 in (152 mm) long is to be fixed in an immobile position at the fully closed position with the longitudinal axis perpendicular to the edge of the door. The 1-5/8 in (41.3 mm) side of the obstruction facing the leading edge is to contact the moving door at various points along the width of the door. See Figure 6H to this subpart.

(ii) For horizontally moving residential garage door operators intended to be used with an external edge sensor, with reference to 32.3.2(b), a 1-5/8 in by 3-1/2 in (41.3 mm by 88.9 mm) solid rectangular object not less than 6 in (152 mm) long is to be fixed in an immobile position with the longitudinal axis perpendicular to the edge of the door. The 1-5/8 in (41.3 mm) side of the obstruction facing the leading edge is to contact the moving door at various points along the leading edge of the door. The same object is then to be arranged to contact the moving door at various points along the trailing edge of the door. See Figure 6I to this subpart.

(b) *Endurance test.* An edge sensor system and associated components shall withstand 30,000 cycles of mechanical operation without failure. For this test, the edge sensor is to be cycled by the repetitive application of the force as described in paragraph (a)(4)(i) of this section but at room temperature only. The force is to be applied to the same location for the entire test. For an edge sensor system employing integral electric contact strips, this test shall be conducted with the contacts connected to a load no less severe than it controls in the operator. For the last 50 cycles of operation, the sensor shall function as intended when connected to an operator.

* * * * *

(d) * * *

(2) For a vertically moving door, a sample of the edge sensor is to be installed in the intended manner on a representative door edge. The probe described in figure 7 to subpart A is to be applied with a 20 pound-force (89N) to any point on the sensor that is 3 inches (76 mm) or less above the floor is to be applied in the direction specified in the Edge Sensor Normal Operation Test, Figure 6A or 6C to subpart A as applicable. The test is to be repeated on three locations on each surface of the sensor being tested.

(3) For horizontally sliding doors, sample of the edge sensor is to be installed in the intended manner on a representative door edge. The probe described in figure 7 to subpart A is to be applied with a 20 lbf (89 N) to any point on the sensor when the door is within 3 in (76 mm) of its fully open position and within 3 in (76 mm) of any stationary wall. For each type of door, the force is to be applied in the direction specified in the Edge Sensor Normal Operation Test, Figure 6B to subpart A. The test is to be repeated on three locations on each surface of the sensor being tested.

9. Amend § 1211.13 by revising paragraph (a)(4) to read as follows:

§ 1211.13 Inherent force activated secondary door sensors.

(a) * * *

(4) The test cylinder referred to in paragraph (b)(7) of this section shall be a $1\frac{7}{8}$ in (47.6 mm) diameter cylinder placed under the door so that the axis is perpendicular to the plane of the door. See figure 6A to subpart A.

* * * * *

10. Amend § 1211.14 by revising paragraph (c)(4), and adding paragraph (f) to read as follows:

§ 1211.14 Unattended operation requirements.

* * * * *

(c) * * *

(4) The visual alarm signal described in paragraph (c)(1) of this section shall be visible within the confines of a garage using a flashing light of at least 40 watt incandescent or 360 lumens. The flash rate shall be at least once per second, with a duration of 100 ms to 900 ms, for the duration of the alarm.

* * * * *

(f) *Unattended operation control accessory.* (1) *General.* A residential garage door operator control accessory shall be permitted to be supplied separate from the operator, and may permit unattended operation to close a garage door, provided the control accessory complies with the additional requirements of paragraphs (f)(2) through (6) of this section. Exception: Unattended operation shall not be permitted on one-piece garage doors or swinging garage doors. A control accessory that has an unattended operation close feature shall identify that the unattended operation closing feature is only permitted to be enabled when installed with a sectional door by complying with:

(i) The installation instructions of § 1211.16 (b) (1) (ii);

(ii) The markings of § 1211.17 (h); and

(iii) the carton markings of § 1211.18 (m).

(2) *Operator System.* The control accessory shall require one or more intentional actions to enable unattended operation to function when connected to an operator system, such as setting a power head switch or wall-control switch. For an accessory requiring installation and set-up in order to enable unattended operation, the installation and set-up may be considered satisfying this requirement.

(3) *Alarm signal.* (i) The control accessory alone or in combination with the operator system shall provide an audible and visual alarm signal.

(ii) The alarm shall signal for a minimum of 5 seconds before any unattended closing door movement, or before any door movement if the next direction of door travel cannot be determined.

(iii) The audible signal shall be heard within the confines of a garage. The audio alarm signals for the alarm specified in paragraph (f)(3)(i) of this section shall be generated by devices such as bells, horns, sirens, or buzzers. The signal shall have a frequency in the range of 700 to 3400 Hz, either a cycle of the sound level pulsations of 4 to 5 per second or one continuous tone, a sound level at least 45 dB 10 ft (305 cm) in front of the device over the voltage range of operation.

(iv) The visual alarm signal of (f)(3)(i) of this section shall be visible within the confines of a garage using a flashing light of at least 40 watt incandescent or 360 lumens.

(v) When the visual alarm or the audio alarm, or both, are external to the control accessory and are not part of main operator unit, the control accessory shall monitor for the connection of and proper operation of both the visual and audible alarms, prior to initiating door travel.

(4) *Controls.* (i) During the pre-motion signaling period defined in paragraph (f)(3)(ii) of this section, activation of any user door control (e.g. wall control, wireless remote, keypad) shall prevent the pending unattended door movement. Door movement resulting from activation of a user door control is not prohibited.

(ii) Upon activation of a user door control during unattended door movement:

(A) the operator shall function in the same manner as if the control accessory were not present;

(B) the control accessory shall not interfere with, override, or alter the normal operation of the operator; and

(C) the door shall stop, and may reverse the door on the closing cycle. On the opening cycle, activation of a user door control shall stop the door but not reverse it.

(iii) If an unattended door travelling in the closing direction is stopped and reversed by an entrapment protection device, the control accessory alone or in combination with the operator system shall be permitted one additional unattended operation attempt to close the door.

(iv) After two attempts per § 1211.14 (d)(3), the control accessory alone or in combination with the operator system shall suspend unattended operation. The control accessory alone or in combination with the operator system shall require a renewed, intended input, via user door control (*e.g.,* wall control, wireless remote, keypad) other than the unattended activation device, prior to re-enabling unattended operation.

(5) *Entrapment protection.* (i) The control accessory shall not interfere with, override, or alter any entrapment protection features of the operator or system per §§ 1211.7 and 1211.8. A control accessory that only provides a momentary signal (wired or wireless) to start the door is considered to comply with this requirement.

(ii) A control accessory shall only be used with an operator when the combination of the operator and the control accessory comply with the applicable entrapment protection features including:

(A) Inherent Primary Entrapment Protection, in accordance with § 1211.7;

(B) Secondary Entrapment Protection, in accordance with § 1211.8.

(iii) A control accessory shall be marked to indicate "For use only with garage door operators complying with UL 325, manufactured after _____," or, "For use only with the following garage door operators:_____." The date (*e.g.*, "1993," "February 21, 2008"), or the additional information provided in the blank shall be added by the accessory manufacturer such that the combination of the control and operator(s) it is intended for use with complies with paragraph (f)(5)(ii) of this section. This marking shall appear on the packaging and on the product, and shall be repeated in the instructions accompanying the accessory.

(iv) To comply with paragraph (f)(5)(ii) of this section a control accessory shall comply with one or more of the following:

(A) Not be capable of operating when connected to an operator that is not compliant with paragraph (f)(5)(ii) of this section;

(B) Be restricted to function only with specific operators, such that the combination of the control and the operator are compliant with paragraph (f)(5)(ii) of this section;

(C) Provide additional functionality to an operator or system such that when operating via the control accessory, the combination of the control accessory and the operator complies with paragraph (f)(5)(ii) of this section;

(D) Be marked to indicate as indicated in paragraph (f)(5)(ii) of this section.

(6) *Instructions and markings.* (i) The control accessory shall be provided with instructions as follows:

(A) Instructions per § 1211.16, as applicable.

(B) Instructions that repeat any warning or cautionary product markings and field labels required below.

(ii) The control accessory shall be provided with markings as follows:

(A) Markings on the product per § 1211.18, as applicable.

(B) In lieu of § 1211.18 (m), the product package shall be marked with the following or equivalent:

″WARNING: To reduce the risk of injury to persons – Only enable [+] feature when installed with sectional door.″, where + is the unattended operation closing function, or "WARNING: To reduce the risk of injury to persons – Do not use this device with one-piece doors or swinging doors."

(C) On the package or the product – any other markings related to use of the control with specific operators, per paragraph (f)(5)(iii) of this section.

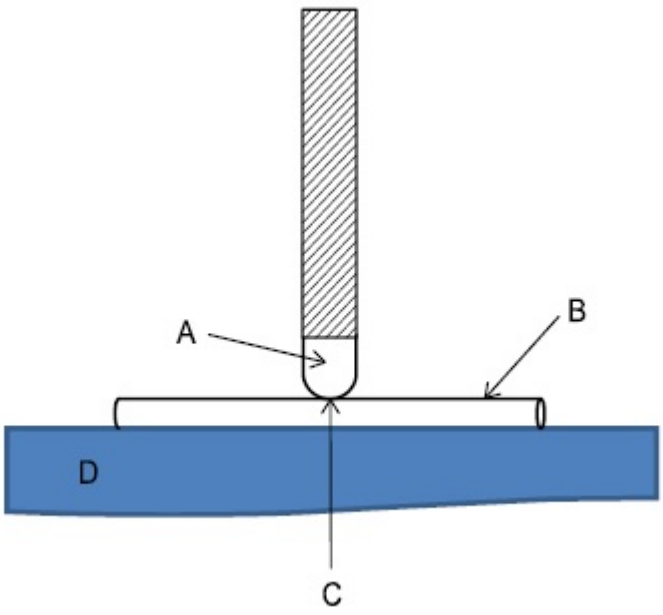
(iii) The control accessory shall be provided with a label for field installation as required by § 1211.17(c) through (g), including but not limited to § 1211.17(g)(2)(v).

11. Amend figures 1-1- to subpart A of part 1211 by replacing figure 6 with figures 6A through 6I to read as follows:

Figures 1-10 to Subpart A of Part 1211

Figure 6A

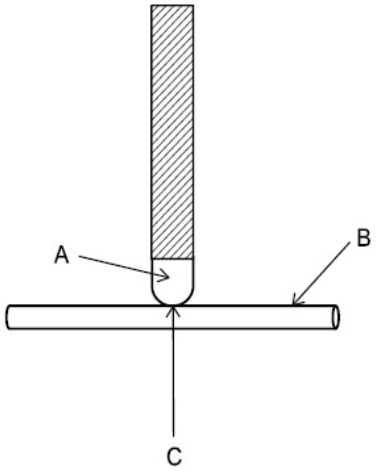
Side View – Sectional Door



A – Edge Sensor
B – 1-7/8” Diameter Cylinder
C – 15 Pound Force
D – Ground/Floor

Figure 6B

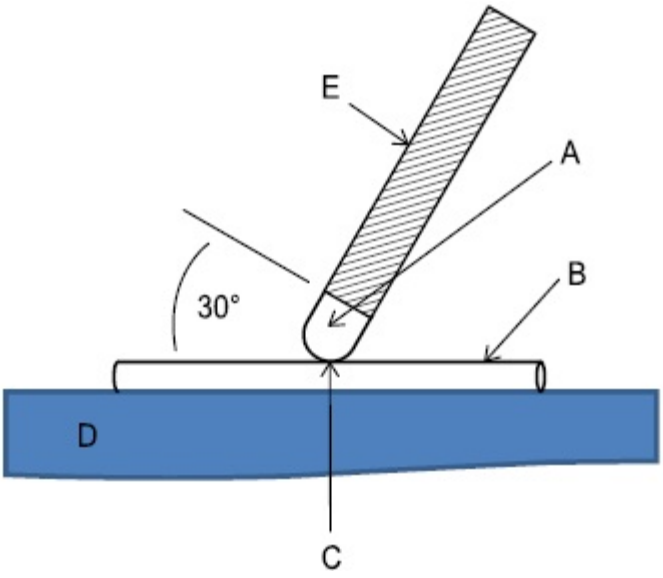
Top View – Horizontally Moving Door



A – Edge Sensor
B – 1-7/8” Diameter Cylinder
C – 15 Pound Force

Figure 6C

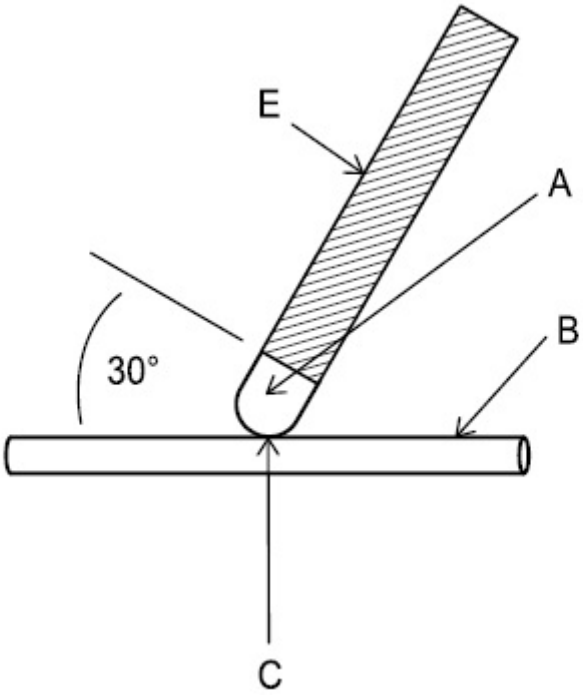
Side View – Once-Piece Door



A – Edge Sensor
B – 1-7/8” Diameter Cylinder
C – 15 Pound Force
D – Ground/Floor
E – Outside Surface

Figure 6D

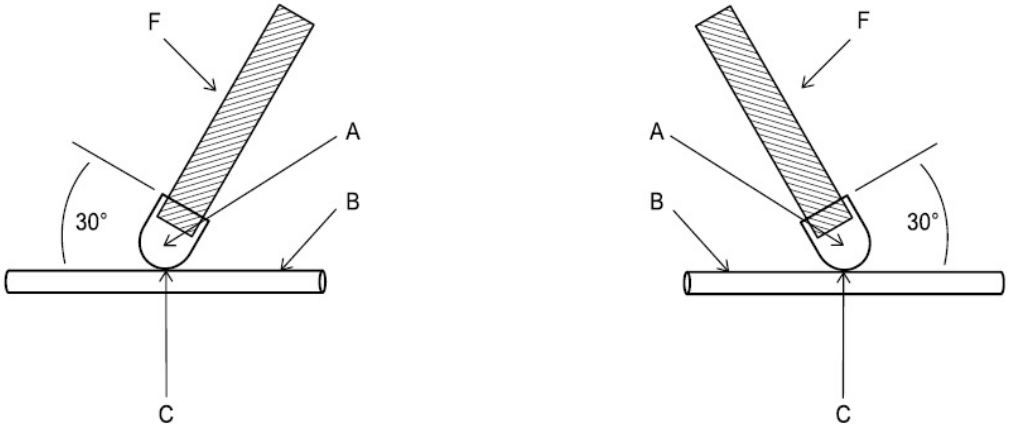
Top View – Horizontal Swing Door



A – Edge Sensor
B – 1-7/8” Diameter Cylinder
C – 15 Pound Force
D – Ground/Floor
E – Outside Surface

Figure 6E

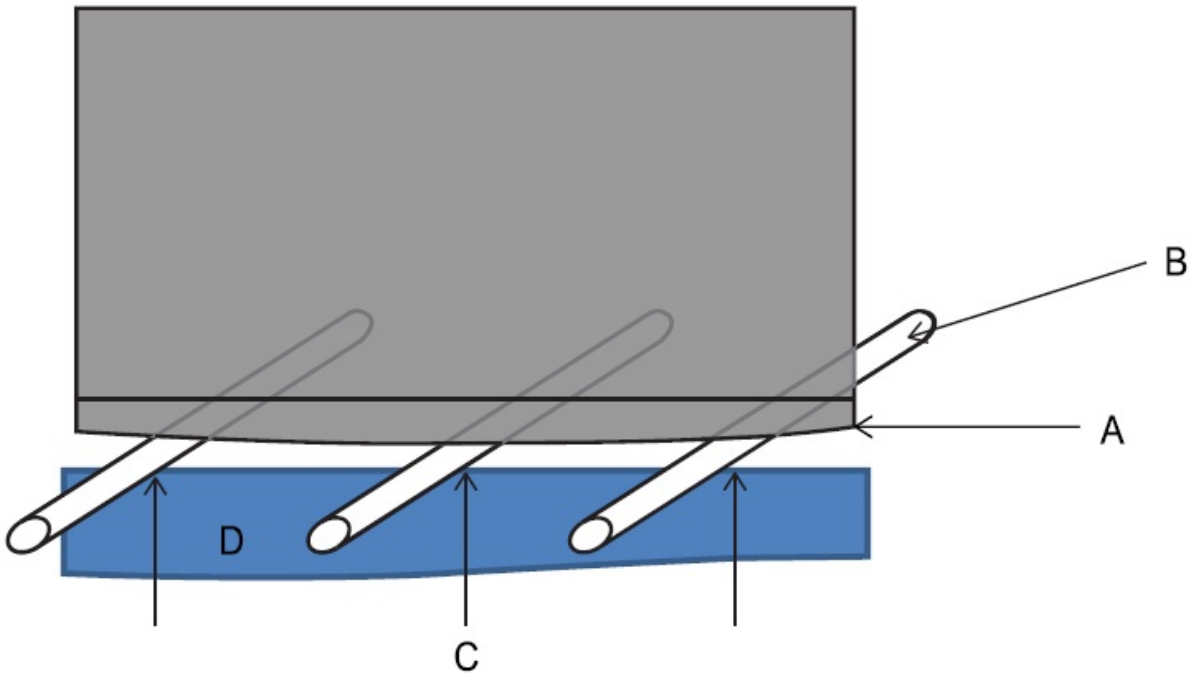
Top View – Horizontal Swing Door – Wraparound Edge



A – Edge Sensor
B – 1-7/8” Diameter Cylinder
C – 15 Pound Force
F – Direction of travel

Figure 6F

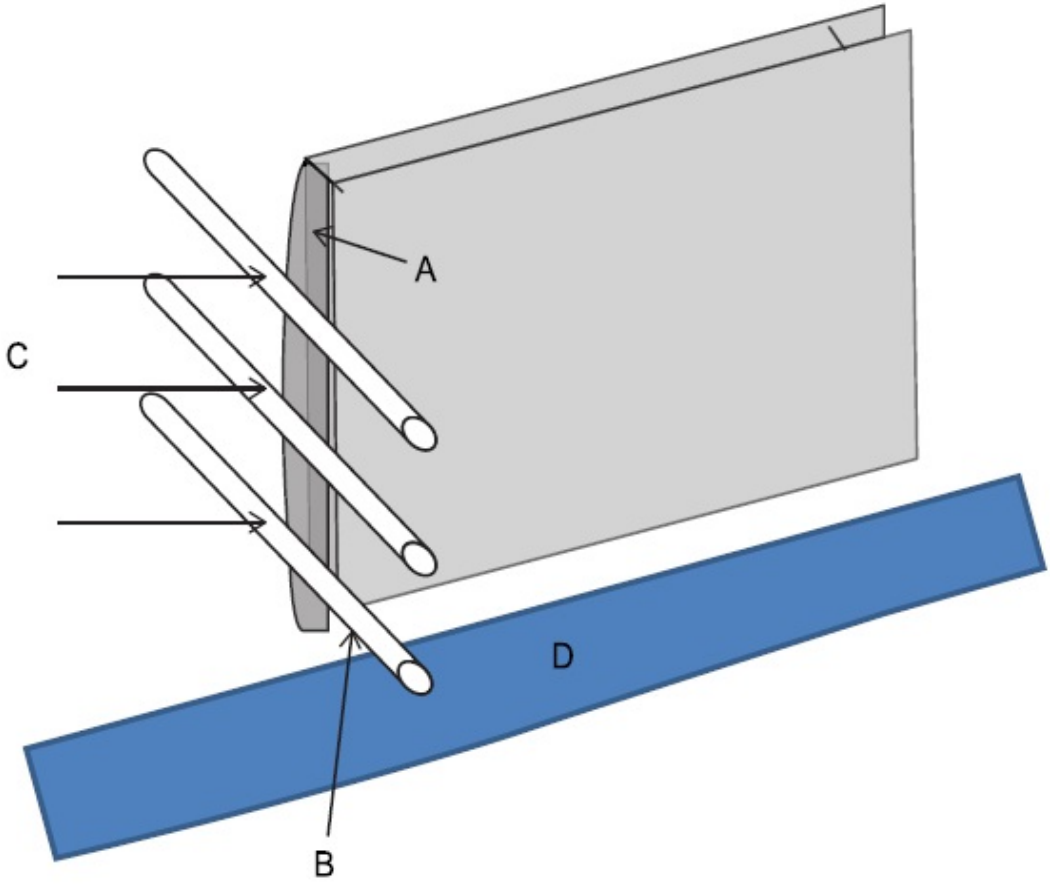
Front View – Sectional or One-Piece Door



A – Edge Sensor
B – 1-7/8” Diameter Cylinder – At various heights, perpendicular or at 30 degree angle, depending on door type.
C – 15 Pound Force
D – Ground/Floor

Figure 6G

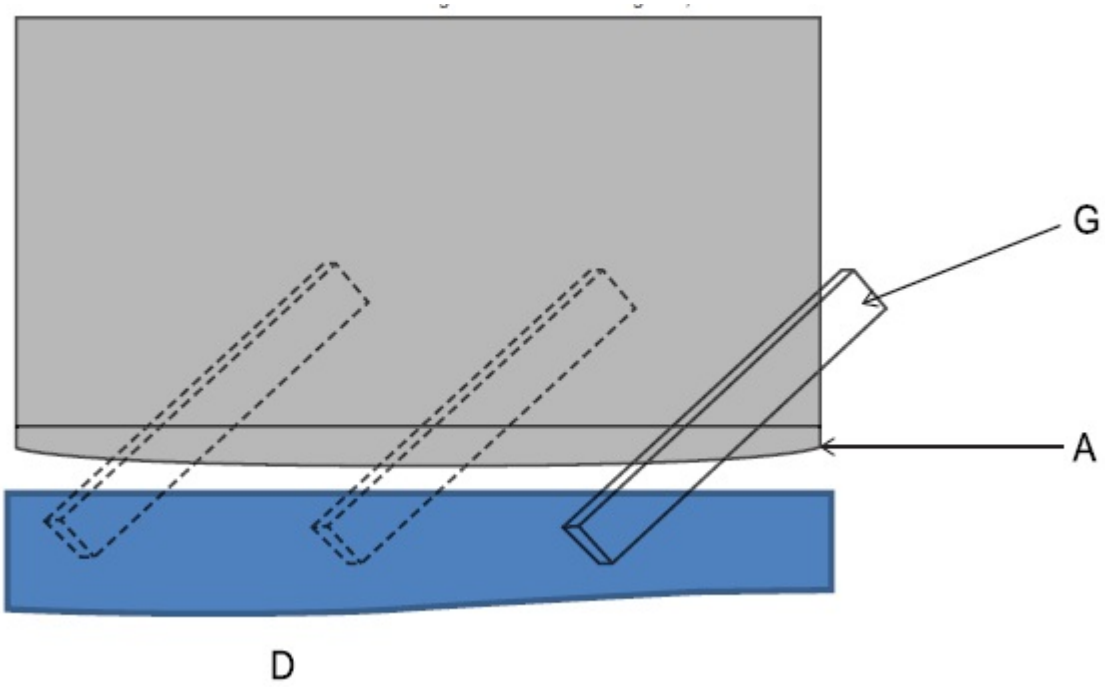
Side View – Horizontally Moving Door or Swinging Door



A – Edge Sensor
B – 1-7/8” Diameter Cylinder – At various heights, perpendicular or at 30 degree angle, depending on door type.
C – 15 Pound Force
D – Ground/Floor

Figure 6H

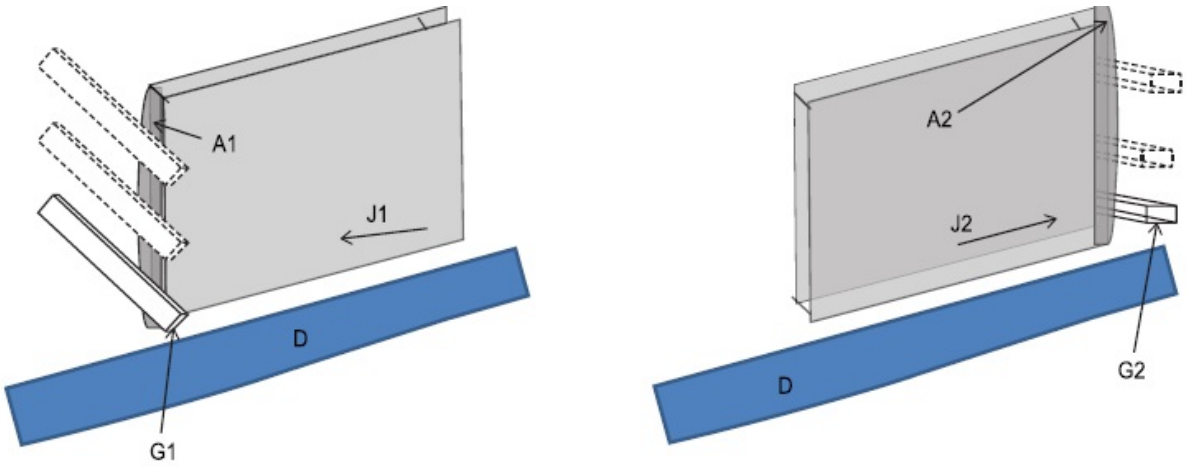
Front View – Vertically Moving Door or Swinging Door



A – Edge Sensor
D – Ground/Floor
G – 1-5/8” x 3-1/2” solid object, min 6 in. long, placed at various locations along edge of door.

Figure 6I

Side View – Horizontally Moving Door



A1 – Edge Sensor on Leading Edge of Door
A2 – Edge Sensor on Trailing Edge of Door
D – Ground/Floor
G1 – 1-5/8” x 3-1/2” solid object, min 6 in. long, placed at various locations along leading edge of door.
G1 – 1-5/8” x 3-1/2” solid object, min 6 in. long, placed at various locations along trailing edge of door.
J1 – Movement when closing
J2 – Movement when opening

SUBPART D – [Amended]

13. Amend § 1211.40 by redesignating paragraphs (d)(1) through (3) as (d)(2) through (4) and adding new paragraph (d)(1) to read as follows:

Subpart D—Incorporation by Reference

§ 1211.40 Incorporation by reference.

(d) * * *

(4) UL 325, Standard for Safety: Door, Drapery, Gate, Louver, and Window Operators and Systems, SUPPLEMENT SA - (Normative) – UL 60335-1/CAN/CSA-C22.2 No. 60335-1 Based Requirements for the Evaluation of Electronic Circuits, Seventh Edition, May 19, 2017, into §§ 1211.4 and 1211.5.

* * * * *

Dated: _____.

_____

Alberta E. Mills, Secretary,

U. S. Consumer Product Safety Commission

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

This document has been electronically approved and signed.

Memorandum

Date: May 29, 2018

TO : The Commission
Alberta E. Mills, Secretary

THROUGH: Patricia M. Hanz, General Counsel
Patricia H. Adkins, Executive Director
DeWane Ray, Deputy Executive Director for Safety Operations

FROM : George A. Borlase, Ph.D., P.E.
Assistant Executive Director
Office of Hazard Identification and Reduction

Vincent J. Amodeo, Mechanical Engineer
Directorate of Engineering Sciences
Office of Hazard Identification and Reduction

SUBJECT : Revision of Garage Door Operator Standard, 16 C.F.R. part 1211

I. Introduction

This memorandum provides background on the U.S. Consumer Product Safety Commission's (CPSC, or Commission) mandatory rule for garage door operators (16 C.F.R. part 1211) and recommends that the Commission publish a direct final rule (DFR) to amend the rule to reflect the most recent revisions to the UL 325 voluntary standard upon which the rule is based.[1]

II. Background

In the Consumer Product Safety Improvement Act of 1990 (Improvement Act) Congress mandated that automatic residential garage door operators (GDOs) manufactured on or after January 1, 1991, conform to the entrapment protection requirements of the 1988 version of a voluntary standard issued by Underwriters Laboratories Inc. (UL), UL 325 *Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems*. A copy of the Improvement Act is provided at Tab A. On June 19, 1991, the Commission issued the GDO rule (16 C.F.R. part 1211). The Commission last updated the rule in 2016.

The Improvement Act requires UL to notify the Commission of proposed revisions to the entrapment protection provisions in UL 325. Those revisions must be incorporated into the

[1] The underlying Commission approvals stated that the draft rule implementing the revisions would be published as an NPR, but staff now recommends a direct final rule because this rule merely updates the rule to reflect the changes to the voluntary standard that the Commission has already accepted. Therefore, staff believes that this rulemaking is a noncontroversial matter that is not likely to generate comments and concludes that the direct final rule process is appropriate.

Commission rule, unless the Commission notifies UL within 30 days that the Commission has determined the revisions do not carry out the purposes of the Improvement Act.

III. Discussion

A. The Current Mandatory Rule

The Commission's rule (16 C.F.R. part 1211) primarily requires that all residential GDOs sold in the United States have an inherent reversing mechanism capable of reversing the motion of a moving garage door within 2 seconds to reduce the risk of entrapment. This system is known as an "inherent system" because it is physically located within the housing of the GDO. In addition, the rule requires that the operator shall be provided with a means for connection of an external entrapment-sensing device. Most GDOs on the market today use an electric eye as the external entrapment-sensing device. The purpose of this device is to monitor the area under the garage door for people who might become entrapped by the garage door. The standard also allows a device known as a "door edge sensor," similar to the sensors used on elevator doors, or any other device that provides equivalent protection. These devices are known as "external entrapment-sensing devices" because they are located outside the housing of the GDO.

In addition, the rule requires all GDOs to have a device referred to as a "30-second clock." The 30-second clock is a back-up device that reopens the door if the door cannot close completely within 30 seconds, as would be the case when a person becomes entrapped by the door. The 30-second clock is a backup to the primary, 2-second inherent entrapment system.

The rule also requires that every GDO be equipped with a "means to manually detach the door operator from the door." This requirement enables a person to detach the operator from the door quickly if a person becomes entrapped under the door. For most garage doors, the means of detachment occurs by pulling on a red handle that hangs below the GDO.

The Commission last updated the mandatory rule in 2016, to reflect changes made up until that time to the entrapment protection provisions of UL 325.

B. Recent Revisions to UL 325 and Previous Commission Action

Since the last update of the current mandatory rule in 2016, there have been three published revisions of the voluntary standard, UL 325, including the publication of the Seventh Edition in May 2016.

On December 20, 2016, UL notified the CPSC that UL had revised the entrapment protection requirements of UL 325 and had published revisions to the Sixth Edition on December 15, 2016. On June 16, 2017, UL notified the Commission that UL published additional revisions to UL 325 Sixth Edition on May 25, 2017, as the Seventh Edition. Copies of the notifications are attached at Tabs B and C, respectively.

On January 11, 2017, and on July 5, 2017, CPSC staff submitted briefing packages to the Commission, explaining the latest revisions to the UL standard and the basis for staff's

conclusion that the revisions enhance entrapment protections, and are likely to reduce the possibility of children becoming entrapped by partially open garage doors. Staff recommended that the Commission incorporate the applicable changes to UL 325 into the mandatory rule for GDOs, in accordance with the procedure provided in the Improvement Act. On January 18, 2017, and on July 11, 2017, the Commission voted to approve staff's recommendation. (See records of the decisions at: RCA Jan 18, 2017[2] and RCA Jul 11, 2017[3])

In accordance with the Commission's vote, staff is sending the Commission a draft DFR that would revise the mandatory GDO rule at 16 C.F.R. part 1211 to include the revisions regarding the entrapment protection requirements for automatic residential GDOs in the Seventh Edition of UL 325, aligning it with the 2017 Commission decisions.

Since the last update of the rule in 2016, UL made several substantive changes to the entrapment protection requirements of UL 325. These changes allow for new technological advances. The sections of the rule that staff recommends revising to address the new UL requirements, as reflected in the draft DFR, are noted in parentheses in the summary of changes below:

- Alternative method to assess electronic circuits. The revised UL 325 added a section titled, "Supplement SA" to UL 325, which provides an alternate method for evaluating protective electronic circuits and controls based on the requirements of UL/IEC 60335-1, "*Standard for Safety of Household and Similar Electrical Appliances, Part 1: General Requirements*." UL/IEC 60335-1 was developed to promote harmonization with international standards and will eventually replace UL 991, "*Standards for Tests for Safety-Related Controls Employing Solid-State Devices*," which is being phased out. The Commission's mandatory safety standard for GDOs currently incorporates by reference UL 991 (§§ 1211.4 (c), 1211.5 (a), and 1211.5 (b) (3)). The Supplement SA requirements will allow an alternate method for assessing the reliability of GDO electronic or solid-state circuits, including entrapment protection circuits, which perform back-up, limiting, or other functions intended to reduce the risk of fire, electric shock, or injury to persons (§§ 1211.4 (c), 1211.5 (a), 1211.5 (b) (3), and Supplement SA).

- Additional requirements for unattended operation. The revised UL 325 added a new section titled, "*Unattended operation control accessory*," which provides additional requirements for unattended operation of GDOs, including remote monitoring and unattended activation via wireless or Internet-connected devices. To ensure safe unattended operation of GDOs, the new requirements clarify visual and audible alarm operation, provisions for maintaining compliance with the entrapment protection of an external accessory, and the necessary instructions and markings (§1211.14 (f)).

- Revision to edge sensor requirements. The revised UL 325 expanded the edge sensor test requirements (§1211.12) and clarified that external edge sensors shall operate as

[2] https://www.cpsc.gov/s3fs-public/RCA - Automatic Residential Garage Door Operators%3B Revision of the UL Standard - UL 325 011817.pdf.
[3] https://www.cpsc.gov/s3fs-public/RCA-Automatic_Residential_Garage_Door_Operators-Revision_of_UL_Standard-UL-325-071117.pdf?YkEVJrwF2pLIb3WfUxq3FAiddW88SCwU.

required when tested per the new requirements (§§1211.8 (a) and 1211.8(b)), as well as comply with the applicable normal operation test (§§ 1211.10 (b) (3), 1211.10 (c) (3), and 1211.10 (e) (4)). The revision expanded the edge sensor test requirements for GDOs to stipulate specific requirements based on the GDO type; for example: sectional door vs. one piece door, and horizontally moving door vs. vertically moving door. The revision added figures to illustrate the test procedures for each type of GDO (Figures 6A through 6I). The revision clarified that the edge sensor endurance test shall be conducted at room temperature (§ 1211.12 (b)).

- Clarification regarding visual alarm. The revised UL 325 clarified the visual alarm flash rate required during unattended operation of the GDO (§1211.14 (c)).

- Clarification regarding certain materials. The revised UL 325 clarified that an external protection device using polymeric or elastomeric material must meet the specified impact test requirements and remain fully operational at room temperature (§1211.10 (e) (1) and (3)).

- Exception from impact test. The revised UL 325 added an exception for polymeric or elastomeric materials that crack or break during the impact test to be acceptable if they pass the water exposure test in the damaged condition (§1211.10 (e) (1)).

- Clarification regarding external secondary entrapment protection. The revised UL 325 clarified the means for connection of an external secondary entrapment protection device applicable to vertically moving and horizontally moving GDOs (§1211.10) and clarified that for horizontally sliding GDOs, the GDO is not required to open the door a minimum of two inches when the GDO senses a second obstruction during the *reversing* travel (§1211.7 (c) (1) and 1211.7 (c) (7)).

- Updated test figures. The revised UL 325 updated the Figure references for the general (§ 1211.13 (a)) and puncture resistance test (§ 1211.12 (d)).

As noted, on January 18, 2017, and on July 11, 2017, the Commission voted to approve staff's recommendation.

C. Small Business Considerations

CPSC staff researched the potential effects of the draft amendment on small entities, including small manufacturers, importers, and private labelers (Tab D). Staff has identified 19 firms that market GDOs in the United States. Five of these are either large firms or subsidiaries of large foreign or domestic companies. The 14 remaining companies appear to be small firms under U.S. Small Business Administration (SBA) size standards (13 C.F.R. part 121).

Staff estimates, based on industry sales data, that about 5 million to 7 million GDOs are installed annually. A review of company information and staff's contacts with industry representatives indicate that all known manufacturers and importers market only products that conform to UL 325. All of these firms' GDOs reportedly conform to the UL 325 Seventh Edition requirements that became effective in May 2017. These firms, including the small

firms, have already incurred the design and testing costs associated with the minor changes in the UL 325 test procedures since 2016. Therefore, the draft amendment to the Commission's rule would not impose any new costs on small producers or importers. Because the existing level of conformance is virtually 100 percent, and no new compliance costs or other burdens would be associated with the amendment, the Commission could certify under the Regulatory Flexibility Act that the proposal would not likely have a significant economic impact on a substantial number of small businesses or other small entities.

D. Effective Date

The UL 325 Seventh Edition requirements for residential GDOs became effective on May 19, 2017. Based on reports from industry representatives, all known manufacturers and importers already conform to these provisions. Therefore, staff recommends that the effective date of the Commission's draft rule be 60 days from the date of publication of the rule in the *Federal Register*. This effective date would not adversely affect the cost or availability of conforming GDOs.

IV. Recommendations

CPSC staff recommends that the Commission issue a direct final rule (DFR) to amend the Commission's rule for automatic residential GDOs, 16 C.F.R. part 1211, to reflect all changes UL has made to the entrapment protection requirements of UL 325, *Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems*, since the last update of the rule in 2016. The underlying Commission approvals stated that the draft rule implementing the revisions would be published as an NPR; however, staff now recommends a direct final rule because this rule merely updates the rule to reflect the non-controversial changes to the voluntary standard that the Commission has already accepted. Staff recommends that the draft rule take effect 60 days after publication of the rule in the *Federal Register*, unless the Commission receives significant adverse comments within 30 days of publication.

TAB A

SEC. 203. AUTOMATIC GARAGE DOOR OPENERS.

15 USC 2056 note.

(a) CONSUMER PRODUCT SAFETY RULE.—The provisions of subsection (b) shall be considered to be a consumer product safety rule issued by the Consumer Product Safety Commission under section 9 of the Consumer Product Safety Act.

(b) REQUIREMENTS.—

(1) Effective on and after January 1, 1991, each automatic residential garage door opener manufactured on or after that date for sale in the United States shall conform to the entrapment protection requirements of the American National Standards Institute Underwriters Laboratories, Inc. Standards for Safety—UL 325, third edition, as revised May 4, 1988.

(2)(A) Effective on and after January 1, 1993, all residential automatic garage door openers manufactured on and after such date for sale in the United States shall conform to any additional entrapment protection requirements of the American National Standards Institute Underwriters Laboratories, Inc. Standards for Safety—UL 325, third edition, which were issued after the date of the enactment of this Act to become effective on or before January 1, 1993.

Regulations.

(B) If, by June 1, 1992, the Underwriters Laboratories, Inc., has not issued a revision to the May 4, 1988, Standards for Safety—UL 325, third edition, to require an entrapment protection feature or device in addition to that required by the May 4, 1988, Standard, the Consumer Product Safety Commission shall begin a rulemaking proceeding, to be completed no later than October 31, 1992, to require an additional such feature or device on all automatic residential garage door openers manufactured on or after January 1, 1993, for sale in the United States. If such a revision is issued by the Underwriters Laboratories, Inc. after the rulemaking has commenced, the rulemaking shall be terminated and the revision shall be incorporated in the consumer product safety rule under subsection (a) unless the Commission has determined under subsection (c) that such revision does not carry out the purposes of subsection (b).

(c) REVISION OF RULE.—If, after June 1, 1992, or the date of a revision described in subsection (b)(2)(B) if later, the Underwriters Laboratories, Inc. proposes to further revise the entrapment protection requirements of the American National Standards Institute Underwriters Laboratories, Inc. Standards for Safety—UL 325, third edition, the Laboratories shall notify the Consumer Product Safety Commission of the proposed revision and the proposed revision shall be incorporated in the consumer product safety rule under subsection (a) unless, within 30 days of such notice, the Commission notifies the Laboratories that the Commission has determined that such revision does not carry out the purposes of subsection (b).

(d) LABELING.—On and after January 1, 1991, a manufacturer selling or offering for sale in the United States an automatic residential garage door opener manufactured on or after January 1, 1991, shall clearly identify on any container of the system and on the system the month or week and year the system was manufactured and its conformance with the requirements of subsection (b). The display of the UL logo or listing mark, and compliance with the date marking requirements of UL 325, on both the container and the system, shall satisfy the requirements of this subsection.

Manufacturing.

(e) NOTIFICATION.—Effective on and after July 1, 1991, all manufacturers of automatic residential garage door openers shall, in consultation with the Consumer Product Safety Commission, notify the public of the potential for entrapment by garage doors equipped with automatic garage door openers and advise the public to test their openers for the entrapment protection feature or device required by subsection (b).

(f) PREEMPTION.—In applying section 26(a) of the Consumer Product Safety Act (15 U.S.C. 2075) with respect to the consumer product safety rule of the Consumer Product Safety Commission under subsection (a), only those provisions of laws of States or political subdivisions which relate to the labeling of automatic residential garage door openers and those provisions which do not provide at least the equivalent degree of protection from the risk of injury associated with automatic residential garage door openers as the consumer product safety rule provides shall be subject to such section.

(g) REGULATIONS.—Section 553 of title 5, United States Code, shall apply with respect to the issuance of any regulations by the Consumer Product Safety Commission to implement the requirements of this section and sections 7 and 9 of the Consumer Product Safety Act do not apply to such issuance. Any additional or revised requirement issued by the Commission shall provide an adequate degree of protection to the public.

(h) CONSTRUCTION.—Nothing in this section shall affect or modify in any way the obligations or liabilities of any person under the common law or any Federal or State law.

15 USC 2054 note.

SEC. 204. STUDY OF AVERSIVE AGENTS.

The Consumer Product Safety Commission shall conduct a study of requiring manufacturers of consumer products to include aversive agents, as appropriate, in products which present a hazard if ingested to determine the potential effectiveness of the aversive agents in deterring ingestion. In conducting the study, the Commission shall consult with appropriate consumer, health, and business organizations and appropriate government agencies. The Commission shall report to Congress the status of the study within one year of the date of the enactment of this Act and shall complete the study not later than 2 years after such date of enactment.

Reports.

Approved November 16, 1990.

LEGISLATIVE HISTORY—S. 605 (H.R. 4952):

HOUSE REPORTS: No. 101-567 accompanying H.R. 4952 (Comm. on Energy and Commerce) and No. 101-914 (Comm. of Conference).
SENATE REPORTS: No. 101-37 (Comm. on Commerce, Science, and Transportation).
CONGRESSIONAL RECORD:
Vol. 135 (1989): Aug. 3, considered and passed Senate.
Vol. 136 (1990): July 16, H.R. 4952 considered and passed House; S. 605, amended, passed in lieu.
Oct. 22, Senate agreed to conference report.
Oct. 25, House agreed to conference report.
WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 26 (1990):
Nov. 16, Presidential statement.

TAB B

December 15, 2016

U.S. Consumer Product Safety Commission
Mr. Todd Stevenson
Office of the Secretary
4330 East-West Highway
Bethesda, MD 20814

Subject: UL 325 - Published Revisions

Dear Mr. Stevenson,

In accordance with Public Law 101-608, Underwriters Laboratories Inc. hereby notifies the CPSC regarding published revisions to the sixth edition of the Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems, UL 325.

On April 29, 2016 UL proposed revisions to the residential garage door operator portion of UL 325. Ballots and comments to these proposed revisions were due June 13, 2016. During the course of UL's consensus (STP) process, additional revisions to proposal were necessary. UL proposed these revisions to the STP on September 16, 2016. Ballots and comments to these proposed revisions were due March 20, 2015. No additional changes were made to the proposal, and revisions were published December 7, 2016.

Attached is a copy of the revised pages, related to residential garage door operators, as published in the Standard. If you have any questions, please feel free to contact me.

Yours truly,

AMY K. WALKER
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Reviewed by:

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cc: Subject 325
Vincent Amodeo, CPSC
Sarah Owen, UL Government Affairs
Joe Musso, UL Standards
Amy Walker, UL Standards

THIS DOCUMENT HAS NOT BEEN REVIEWED
OR ACCEPTED BY THE COMMISSION.

CLEARED FOR PUBLIC RELEASE
UNDER CPSA 6(b)(1)

TAB C

June 16, 2017

U.S. Consumer Product Safety Commission
Mr. Todd Stevenson
Office of the Secretary
4330 East-West Highway
Bethesda, MD 20814

Subject: UL 325 - Published Revisions

Dear Mr. Stevenson,

In accordance with Public Law 101-608, Underwriters Laboratories Inc. hereby notifies the CPSC regarding published revisions to the sixth edition of the Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems, UL 325.

On March 10, 2017 UL proposed revisions to the residential garage door operator portion of UL 325. Ballots and comments to these proposed revisions were due April 25, 2017. No additional changes were made to the proposal, and revisions were published May 19, 2017, as the seventh edition.

Attached is a copy of the published seventh edition of UL 325. If you have any questions, please feel free to contact me.

Yours truly,

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TAB D

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

Memorandum

May 28, 2018

TO : Vincent Amodeo, Project Manager, Directorate for Engineering Sciences

THROUGH: Gregory B. Rodgers, Associate Executive Director,
Directorate for Economic Analysis

Robert L. Franklin, Senior Staff Coordinator,
Directorate for Economic Analysis

FROM : Charles L. Smith, Directorate for Economic Analysis

SUBJECT: Draft Amendment to CPSC Rule on Residential Garage Door Operators (16 C.F.R. Part 1211): Small Business Considerations

This memorandum addresses small business considerations related to a draft amendment to the CPSC's rule, *Safety Standard for Automatic Residential Garage Door Operators* (GDOs) (16 C.F.R. part 1211). The draft amendment would update the rule to include modifications to the entrapment protection provisions of the voluntary standard, UL 325, *Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems* that have been made since 2016.[4] All known GDO manufacturers and importers appear to be marketing only products that conform to the 6th (2013) edition UL 325 requirements currently in effect.

Background

In 1990, Congress mandated that automatic residential garage door operators conform to the entrapment protection provisions of UL 325, and that those provisions shall be considered a consumer product safety rule (§ 203 of Pub. L. No. 101-608). The CPSC's original 1992 rule contained performance and labeling requirements consistent with the Third Edition (1988) edition of UL 325, as well as certification requirements. The rule applied to all GDOs manufactured or imported after January 1, 1993. Congress also provided a process for updating the rule to reflect changes to the UL standard; accordingly, the CPSC amended the rule in 1997, 2000, 2007, and 2016.

Since the last update of the rule in 2016, UL made several changes to the entrapment protection requirements of UL 325. These changes clarify and address new technological advances for GDOs. The sections of the rule that have been modified to address the new UL requirements

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include the following:

- an alternate method for evaluating protective electronic circuits and controls;
- a new section titled, "*Unattended operation control accessory*," which provides additional requirements for unattended operation of GDOs, including remote monitoring and unattended activation via wireless or Internet-connected devices;
- the addition of specific edge sensor test requirements based on the garage door type;
- clarification regarding the visual alarm flash rate required during unattended operation;
- clarification that an external protection device using polymeric or elastomeric material must meet the specified impact test requirements and remain fully operation at room temperature, and;
- an exception for polymeric or elastomeric materials that crack or break during the standard's impact test to be acceptable if they pass the water exposure test in the damaged condition.

Thus, many of these new requirements clarify or provide alternatives to manufacturers. All known U.S. manufacturers and importers are already believed to conform to these new requirements.

Market & Industry Information

Market Data

UL 325 applies to numerous kinds of electric motor-driven doors, gates, windows, and other access control products and systems for vehicles and pedestrians. The Commission's rule incorporates requirements for primary and secondary anti-entrapment devices related only to GDOs that are described in the UL 325 category of "Class I" residential vehicular gate operators or systems designed for residential structures of one to four dwelling units.

Limited information is available about the consumer market for GDOs. A June 2014 publication of the principal industry trade group, the Door and Access Systems Manufacturers Association (DASMA), estimated annual sales of residential garage *doors* at roughly 2.5 million units; the average installed sale by dealers (presumably including the cost of any GDOs) was reportedly about $1,500. GDOs are more often sold as replacements for old units on existing doors than as components of new door installations; a significant but unknown portion of these are sold directly to consumers for do-it-yourself installation. The Directorate for Economic Analysis previously estimated that the number of GDOs sold annually may range from about 5 million to 7 million total units; perhaps 2 million of which are professionally installed, and 3 million to 5 million are installed by consumers (Ray, 2015). GDOs may range in retail price from under $100, to more than $1,000, depending on the type and features; many are sold with accessories, such as wireless security components, or other remote control devices. If the average price of professionally and consumer-installed GDOs is about $250, and 5 million to 7 million units are sold per year, then

total annual GDO retail sales may amount to $1.25 billion to $1.75 billion ($250 x 5 million to 7 million).

GDOs may be produced domestically or imported. Imports appear to be chiefly from Canada, Mexico, Germany, or the People's Republic of China. The value of shipments for domestic products is included in a large, multi-billion dollar category of manufactured items in the U.S. Department of Commerce's North American Industry Classification System (NAICS) code 335999, "other miscellaneous electrical equipment and components." The value of imports is included in the International Trade Commission's Harmonized Tariff System of the United States (HTS) code 8302.60.3000, "automatic door closers"; this HTS code also covers a variety of products not subject to 16 C.F.R. part 1211. Unfortunately, the available domestic production and foreign trade statistics do not provide sufficient detail to identify the value of GDO shipments. Based on the retail market discussion above, the wholesale value of annual shipments of GDOs by manufacturers and importers may be in the range of several hundred million dollars.

Industry & Small Business Overview

CPSC staff has identified 19 manufacturers and importers, including private labelers, of GDOs. These firms often market other, related products (including items subject to UL 325, but not the CPSC rule). Eleven of the leading producers and importers (along with 20 manufacturers and suppliers of accessories, commercial and industrial door and gate operators and components) are members of DASMA. Seven of the 11 DASMA producer/importer members participate in the ANSI/UL Standards Technical Panel for UL 325. DASMA claims that its members, including the leading, dominant manufacturer, account for 95 percent of the U.S. market for garage doors and installations. Some GDO companies may also be members of the American Association of Automatic Door Manufacturers (AAADM), a group primarily representing firms marketing pedestrian door operators.

The U.S. Small Business Administration's (SBA) size standards identify "small" businesses based on the number of employees or annual receipts. The standards vary by business sector, as described in NAICS. Two categories of firms subject to the draft amendment would be considered "small" under the SBA guidelines:

- Domestic manufacturers of "other miscellaneous electrical equipment" (NAICS code 335999) with fewer than 500 employees; and
- Merchant wholesalers (including importers) of "durable goods" (NAICS Subsector 423) with fewer than 100 employees.

Information from company websites and from Dun & Bradstreet business reports indicate that, of the 19 identified firms manufacturing or importing GDOs, five are either large companies or subsidiaries of large domestic or foreign companies (subsidiaries of large firms are considered to be large, regardless of the number of employees at the subsidiary). The remaining 14 appear to be small firms under the SBA size standards for their industry sectors.

Small Business Impact

CPSC staff considered the following information about potential impacts on small manufacturers and importers:

- Producers, importers, and retailers that market only UL 325-conforming products would not be affected by the draft amendment. Representatives of companies and DASMA have stated to CPSC Engineering staff that they know of no firms whose GDOs do not conform with the latest UL 325 revisions.
- The agency's compliance history supports an estimate of widespread conformance: over the past several years, there has been only one regulatory violation (2006), and one corrective action (2013) under Section 15; this corrective action was not an entrapment-related issue.
- Firms have already incurred design and testing costs associated with the changes in the UL 325 test procedures since 2016. Manufacturers routinely perform the UL 325 tests in developing their products. Some of the cost of testing is incurred in listing fees paid either to UL, which conducts verification tests for listed products, or to Intertek Testing Services, which also provides UL 325 certifications to some companies as a Nationally Recognized Testing Laboratory under the Occupational Safety & Health Administration's (OSHA) laboratory recognition program. The draft amendment would not impose any new testing costs on small producers or importers.
- It appears that virtually 100 percent of GDOs currently conform to UL 325 (including the most recent Sixth Edition provisions) and comply with the Commission's GDO rule. This includes the certification provision of the rule, under which a listing denoting UL conformance is considered sufficient evidence of certification.

Thus, it is likely that no firms, including small firms, would experience any increased costs or other impacts because the firms already comply.

Because there is virtually 100 percent conformance to UL 325, small firms should not experience any increases in compliance costs or other burdens associated with the rule. Therefore, the Commission could certify that the draft amendment to 16 C.F.R. part 1211 to reflect the Revision of UL 325 Seventh Edition would not likely have a significant impact on a substantial number of small businesses or other small entities.

References

Ray, Dale R. (2015, July 1). Draft Amendment to CPSC Rule on Residential Garage Door Operators (16 C.F.R. Part 1211): Small Business Considerations.