UL 687

STANDARD FOR SAFETY

Burglary-Resistant Safes

UL Standard for Safety for Burglary-Resistant Safes, UL 687

Fifteenth Edition, Dated July 19, 2011

Summary of Topics

This revision of ANSI/UL 687 is being issued to reflect the reaffirmation of the ANSI approval of the standard. No technical changes have been made to the document.

The revisions are substantially in accordance with Proposal(s) on this subject dated September 25, 2015.

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

No Text on This Page

JULY 19, 2011
(Title Page Reprinted: November 25, 2015)

UL 687

Standard for Burglary-Resistant Safes

First Edition – June, 1938
Second Edition – June, 1943
Third Edition – January, 1953
Fourth Edition – May, 1955
Fifth Edition – June, 1960
Sixth Edition – August, 1967
Seventh Edition – July, 1972
Eighth Edition – December, 1977
Ninth Edition – January, 1982
Tenth Edition – September, 1987
Eleventh Edition – December, 1991
Twelfth Edition – May, 1995
Thirteenth Edition – August, 2000
Fourteenth Edition – October, 2005

Fifteenth Edition

July 19, 2011

This ANSI/UL Standard for Safety consists of the Fifteenth Edition including revisions through November 25, 2015.

The most recent designation of ANSI/UL 687 as a Reaffirmed American National Standard (ANS) occurred on November 25, 2015. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, or effective date information.

The Department of Defense (DoD) has adopted UL 687 on June 10, 1976. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at http://csds.ul.com.

No Text on This Page

CONTENTS

INTRODUCTION

CONSTRUCTION

PERFORMANCE

MARKING

INTRODUCTION

1 Scope

1.1 These requirements cover combination locked burglary-resistant safes classified as follows:

a) Test attack against the door and front face:

1) Tool-Resistant Safe – Class TL-15

2) Tool-Resistant Safe – Deposit Safe

3) Tool-Resistant Safe – Class TL-30

4) Torch- and Tool-Resistant Safe – Class TRTL-30

b) Test attack against the door and body:

1) Tool-Resistant Safe – Class TL-15X6

2) Tool-Resistant Safe – Class TL-30X6

3) Torch- and Tool-Resistant Safe – Class TRTL-15X6

4) Torch- and Tool-Resistant Safe – Class TRTL-30X6

5) Torch- and Tool-Resistant Safe – Class TRTL-60X6

6) Torch-, Explosive-, and Tool-Resistant Safe – Class TXTL-60X6

1.2 These requirements do not cover night depositories intended to receive deposits from outside a building into a receiving safe inside a building. Such requirements are in the Standard for Night Depositories, UL 771.

1.3 A safe classified as TL-15, TL-30, TL-15X6, or TL-30X6 may be constructed with an opening in the body for connection to the chute of a night depository. A safe classified as TL-15 or TL-30 that has a body constructed of solid metal may be marked to provide for an opening to be cut into the body in the field for connection to the chute of a night depository.

2 General

2.1 Components

2.1.1 Except as indicated in 2.1.2, a component of a product covered by this standard shall comply with the requirements for that component.

2.1.2 A component is not required to comply with a specific requirement that:

a) Involves a feature or characteristic not required in the application of the component in the product covered by this standard, or

b) Is superseded by a requirement in this standard.

2.1.3 A component shall be used in accordance with its rating established for the intended conditions of use.

2.1.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

2.2 Units of measurement

2.2.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

2.3 Undated references

2.3.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

3 Glossary

3.1 For the purpose of this standard the following definitions apply.

3.2 ABRASIVE CUTTING WHEEL – Metal or stone cutting abrasive wheel, maximum 8 inches (203 mm) diameter, and maximum 1/8 inch (3.2 mm) thick. Driven by electrically-powered disk grinder rated 10 – 20 A, 115 – 120 V, 5 – 10 A, 230 – 240 V), 8000 rpm maximum.

3.3 COMMON HAND TOOLS – Common hand tools include: chisels, punches, wrenches, screwdrivers, pliers, hammers and sledges not exceeding the 8-pound (3.6-kg) size, and pry bars and ripping tools not exceeding 5 feet (1.52 m) in length.

3.4 CUTTING TORCH – Oxygen-acetylene fueled cutting torch, 180 degrees (straight) or 90 degrees, maximum No. 18 tip with six preheat holes 0.055 inch (1.4 mm) diameter each, and one oxygen hole 3/16 inch (4.8 mm) diameter. A smaller tip may be used.

3.5 DEPOSIT BAG – A bag constructed of canvas, reinforced plastic, or the like, that is provided with a closing mechanism, such as a zipper.

3.6 DEPOSIT ENVELOPE – A No. 10 or larger size business envelope.

3.7 ENTRY :

a) SAFES CLASSED TL-15 AND TL-30 – Opening the door or making a 6 square inch (38.7 cm^2) opening entirely through the door or front face.

b) SAFES CLASSED DEPOSIT SAFES – Opening the door or making a 6 square inch opening entirely through the door, front face, or deposit mechanism; removing three deposit envelopes or one deposit bag through the deposit mechanism; or trapping deposit envelopes or bags.

c) SAFES CLASSED TL-15X6 AND TL-30X6 – Opening the door or making a 6 square inch (38.7 cm^2) opening entirely through the door or body.

d) SAFES CLASSED TRTL-30 – Opening the door or making a 2 square inch (12.9 cm^2) opening entirely through the door or front face.

e) SAFES CLASSED TRTL-15X6, TRTL-30X6, TRTL-60X6, AND TXTL-60X6 – Opening the door or making a 2 square inch opening entirely through the door or body.

3.8 FISHING – Introducing through the deposit mechanism, fishing tools that may be manipulated so as to grasp the deposit envelope, or bag, and then withdraw it.

3.9 FISHING AND TRAPPING TOOLS – Cardboard, plastic sheet, fish hooks, flexible spring shaft pickup fingers, lines, shim stock, and the like.

3.10 GRINDING POINT – Various shaped grinding points (cone, cylinder, disk, and the like) driven by electrically-powered grinder rated 4 – 12 A, 115– 120 V (2 – 6 A, 230 – 240 V), at speeds of 14,000 to 21,000 rpm.

3.11 IMPACT TOOLS – Includes portable electric impact hammers and hammer drills, not exceeding the 1 inch (25.4 mm) size and rated 10 – 20 A, 115 – 120 V (5 – 10 A, 230 – 240 V).

3.12 PICKING TOOLS – Picking tools include common or standard patterns that are not designed for use against a special make of safe.

3.13 PORTABLE ELECTRIC DRILL – Electric hand drills not exceeding the 1/2 inch (12.7 mm) size and rated 5 – 15 A, 115 – 120 V (2.5 – 7.5 A, 230 – 240 V).

3.14 PRESSURE APPLYING DEVICES – Includes portable drill presses, portable drilling jigs, or other types of drill holding mechanisms.

3.15 SAW, CIRCULAR – Metal or stone cutting, maximum 8-inch (203-mm) diameter circular blade with high-speed steel or carbide-tipped cutting teeth. Driven by electrically-powered circular saw rated 10 – 20 A, 115 – 120 V (5 – 10 A, 230 – 240 V), 5000 rpm maximum.

3.16 SAW, HOLE – Cylinder-shaped saws used to cut holes. Maximum 3-inches (76-mm) diameter with high-speed steel or carbide-tipped cutting teeth. Used with a 1/2-inch (12.7-mm) electric drill, defined in 3.13.

3.17 SAW, RECIPROCATING – Hand-held reciprocating saw with high-speed or carbide-tipped cutting teeth. Rated 10 – 20 A, 115 – 120 V (5 – 10 A, 230 – 240 V). Length of blade may be the maximum length commercially available.

3.18 SIX-SQUARE-INCH OPENING – This type of opening is defined as:

a) A rectangular-shaped opening 6 square inches (39 cm^2) in area, with the smallest dimension 1.5 inches (38 mm) or greater;

b) A circular opening 2.76 inches (70 mm) in diameter; or

c) A triangular opening with at least a 2-inch (51-mm) dimension from the base to the peak.

3.19 TESTING PARTY – A testing party shall consist of two experienced operators under the supervision of a test director. The testing party shall be familiar with the construction of the safe being tested.

3.20 TRAPPING – The use of trapping tools that may be introduced into the deposit mechanism in such a manner as to avoid detection by a depositor, in order to prevent the deposit from reaching the safe. The deposit can then be withdrawn after the depositor has left.

3.21 TWO-SQUARE-INCH OPENING – This type of opening is defined as:

a) A rectangular-shaped opening 2 square inches (12.9 cm^2) in area, with the smallest dimension 1 inch (25.4 mm) or greater;

b) A circular opening 1.6 inches (40.6 mm) in diameter; or

c) A triangular opening with at least a 1-inch (25.4-mm) dimension from the base to the peak.

CONSTRUCTION

4 General

4.1 Compliance

4.1.1 In addition to specific requirements for each class, all safes shall comply with 4.2.1 and 4.3.1.

4.2 Locks

4.2.1 A combination lock shall be provided on all safes.

4.3 Corrosion protection

4.3.1 All iron and steel parts shall be painted, plated, or the equivalent to protect against corrosion.

5 Class TL-15 and Deposit Safes

5.1 General

5.1.1 The safe shall weigh at least 750 pounds (340 kg), or shall be equipped with anchors and instructions for anchoring the safe in a larger safe, in concrete blocks, or to the premises in which the safe is to be located.

5.1.2 The metal in the body shall be:

a) Equivalent to solid open-hearth steel at least 1 inch (25.4 mm) thick having an ultimate tensile strength of 50,000 psi (345 MPa);

b) Either cast or fabricated; and

c) Fastened in a manner equivalent to a continuous 1/4-inch (6.4-mm) penetration weld of open-hearth steel having an ultimate tensile strength of 50,000 psi.

5.1.3 Materials other than solid metal may be used for the body construction if attack tests using the tools specified in Table 14.1 and 15.1.1 for Class TL-15, or 16.1.1 for deposit safes, indicate that the material has the resistance to attack at least equal to 1-inch (25.4-mm) thick open-hearth steel having a tensile strength of 50,000 psi (345 MPa).

5.1.4 In place of 1-inch (25.4-mm) thick steel having an ultimate tensile strength of 50,000 psi (345 MPa), 3/4-inch (19.1-mm) thick steel alloy having an ultimate tensile strength of 75,000 psi (518 MPa), or 1/2-inch (12.7-mm) thick steel alloy having an ultimate tensile strength of 100,000 psi (690 MPa) may be used. Steel alloy less than 1/2 inch thick shall comply with the requirement in 5.1.5 for material other than solid metal.

5.1.5 In order to establish if other materials are equivalent to 1-inch (25.4-mm) thick steel having an ultimate tensile strength of 50,000 psi (345 MPa), the material shall resist for 5 minutes an attempt to make a 6 square inch (38.7 cm^2) opening entirely through the material using the tools specified for a TL-30 rating, for an equivalent or greater amount of time than that of an attack on a 1-inch (25.4-mm) 50,000 psi (345 MPa) construction.

5.1.6 One hole, not exceeding 1/4 inch (6.4 mm) in diameter, may be provided in the top, side, bottom, or back of the safe body to permit insertion of electrical conductors. It shall be arranged so as not to permit a direct view of the door or locking mechanism.

5.2 Locks

5.2.1 The safe shall be provided with a combination lock complying with either Group 1, 1R, or 2M requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks.

5.2.2 The safe may be provided with an auxiliary lock complying with either Group 1, 1R, or 2M requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks, or a key operated lock meeting security container Type 2 requirements in the Standard for Key Locks, UL 437.

6 Class TL-30

6.1 General

6.1.1 The safe shall weigh at least 750 pounds (340 kg), or shall be equipped with anchors and instructions for anchoring the safe in a larger safe, in concrete blocks, or to the premises in which the safe is to be located.

6.1.2 The metal in the body shall be:

a) Equivalent to solid open-hearth steel at least 1 inch (25.4 mm) thick having an ultimate tensile strength of 50,000 psi (345 MPa);

b) Either cast or fabricated; and

c) Fastened in a manner equivalent to a continuous 1/4-inch (6.4-mm) penetration weld of open-hearth steel having an ultimate tensile strength of 50,000 psi.

6.1.3 Materials other than solid metal may be used for the body construction if attack tests using the tools specified in Table 14.1 and 18.2.1 indicate that the material has the resistance to attack at least equal to 1-inch (25.4-mm) thick open-hearth steel having a tensile strength of 50,000 psi (345 MPa).

6.1.4 In place of 1-inch (25.4-mm) thick steel having an ultimate tensile strength of 50,000 psi (345 MPa), 3/4-inch (19.1-mm) thick steel alloy having an ultimate tensile strength of 75,000 psi (518 MPa), or 1/2-inch (12.7-mm) thick steel alloy having an ultimate tensile strength of 100,000 psi (690 MPa) may be used. Steel alloy less than 1/2 inch thick shall comply with the requirement in 6.1.5 for material other than solid metal.

6.1.5 In order to establish if other materials are equivalent to 1-inch (25.4-mm) thick steel having an ultimate tensile strength of 50,000 psi (345 MPa), the material shall resist for 5 minutes an attempt to make a 6 square inch (38.7 cm^2) opening entirely through the material using the tools specified for a TL-30 rating, for equivalent or greater amount of time than that of an attack on a 1-inch (25.4-mm) 50,000 psi (345 MPa) construction.

6.1.6 The door and jamb shall be constructed so that no direct access is provided through the door and jamb.

6.1.7 One hole, not exceeding 1/4 inch (6.4 mm) in diameter, may be provided in the top, side, bottom, or back of the safe body to permit insertion of electrical conductors. It shall be arranged so as not to permit a direct view of the door or locking mechanism.

6.2 Locks

6.2.1 The safe shall be provided with a combination lock complying with either Group 1, 1R, or 2M requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks.

6.2.2 The safe may be provided with an auxiliary lock complying with either Group 1, 1R, or 2M requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks, or a key operated lock meeting security container Type 2 requirements in the Standard for Key Locks, UL 437.

7 Class TL-15X6

7.1 General

7.1.1 The safe shall weigh at least 750 pounds (340 kg), or shall be equipped with anchors and instructions for anchoring the safe in a larger safe, in concrete blocks, or to the premises in which the safe is to be located.

7.1.2 One hole, not exceeding 1/4 inch (6.4 mm) in diameter, may be provided in the top, side, bottom, or back of the safe body to permit insertion of electrical conductors. It shall be arranged so as not to permit a direct view of the door or locking mechanism.

7.2 Locks

7.2.1 The safe shall be provided with a combination lock complying with either Group 1, 1R, or 2M requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks.

7.2.2 The safe may be provided with an auxiliary lock complying with either Group 1, 1R, or 2M requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks, or a key operated lock meeting security container Type 2 requirements in the Standard for Key Locks, UL 437.

8 Class TL-30X6

8.1 General

8.1.1 The safe shall weigh at least 750 pounds (340 kg), or shall be equipped with anchors and instructions for anchoring the safe in a larger safe, in concrete blocks, or to the premises in which the safe is to be located.

8.1.2 The door and jamb shall be constructed so that no direct access is provided through the door and jamb.

8.1.3 One hole, not exceeding 1/4 inch (6.4 mm) in diameter, may be provided in the top, side, bottom, or back of the safe body for insertion of electrical conductors. It shall be arranged so as not to provide a direct view of the door or locking mechanism.

8.2 Locks

8.2.1 The safe shall be provided with a combination lock complying with either Group 1, 1R, or 2M requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks.

8.2.2 The safe may be provided with an auxiliary lock complying with either Group 1, 1R, or 2M requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks, or a key operated lock meeting security container Type 2 requirements in the Standard for Key Locks, UL 437.

9 Class TRTL-30

9.1 General

9.1.1 The safe shall weigh at least 750 pounds (340 kg).

9.1.2 The body of the safe shall be constructed of solid metal encased in reinforced concrete. The metal in the body shall be:

a) Equivalent to solid open-hearth steel at least 1 inch (25.4 mm) thick, having an ultimate tensile strength of 50,000 psi (345 MPa);

b) Either cast or fabricated; and

c) Fastened in a manner equivalent to a continuous 1/4-inch (6.4-mm) penetration weld of open-hearth steel having an ultimate tensile strength of 50,000 psi.

The reinforced concrete encasement shall be a minimum of 3 inches (76 mm) thick and shall have a minimum compressive strength of 4000 psi (27.6 MPa). The concrete encasement shall be made at the manufacturing location.

9.1.3 Materials other than solid metal encased in concrete may be used for the body construction if attack tests using the tools specified in Table 14.1 and 20.1.1 indicate that the material has the resistance to attack at least equal to 1-inch (25.4-mm) thick open-hearth steel having a tensile strength of 50,000 psi (345 MPa) that is encased in 3 inches (76.2 mm) of reinforced concrete having a compressive strength of 4000 psi (27.6 MPa).

9.1.4 In place of 1-inch (25.4-mm) thick steel having an ultimate tensile strength of 50,000 psi (345 MPa), 3/4-inch (19.1-mm) thick steel alloy having an ultimate tensile strength of 75,000 psi (518 MPa), or 1/2-inch (12.7-mm) thick steel alloy having an ultimate tensile strength of 100,000 psi (690 MPa) may be used. Steel alloy less than 1/2 inch thick shall comply with the requirement in 9.1.5 for material other than solid metal.

9.1.5 In order to establish if other materials are equivalent to 1-inch (25.4-mm) thick steel having an ultimate tensile strength of 50,000 psi (345 MPa) encased in 3-inch (76.2-mm) thick reinforced concrete having a minimum compressive strength of 4000 psi (27.6 MPa), the material shall resist for 5 minutes an attempt to make a 2 square inch (12.9 cm^2) opening entirely through the material using the tools specified for this rating.

9.1.6 The door and jamb shall be constructed so that no direct access is provided through the door and jamb.

9.1.7 One hole not exceeding 1/4 inch (6.4 mm) diameter may be provided in the top, side, bottom, or back of the safe body for insertion of electrical conductors. It shall be arranged so as not to provide a direct view of the door or locking mechanism.

9.2 Locks

9.2.1 The safe shall be provided with a combination lock complying with either Group 1 or 1R requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks.

9.2.2 The safe may be provided with an auxiliary lock complying with either Group 1 or 1R requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks, or a key operated lock meeting security container Type 1 requirements in the Standard for Key Locks, UL 437.

10 Classes TRTL-15X6, TRTL-30X6, and TRTL-60X6

10.1 General

10.1.1 The safe shall weigh at least 750 pounds (340 kg).

10.1.2 The door and jamb shall be constructed so that no direct access is provided through the door and jamb.

10.1.3 One hole, not exceeding 1/4 inch (6.4 mm) in diameter, may be provided in the top, side, bottom, or back of the safe body to permit insertion of electrical conductors. It shall be arranged so as not to permit a direct view of the door or locking mechanism.

10.2 Locks

10.2.1 The safe shall be provided with a combination lock complying with either Group 1 or 1R requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks.

10.2.2 The safe may be provided with an auxiliary lock complying with either Group 1 or 1R requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks, or a key operated lock meeting security container Type 1 requirements in the Standard for Key Locks, UL 437.

11 Class TXTL-60X6

11.1 The safe shall weigh at least 1000 pounds (454 kg).

11.2 The safe shall be provided with a combination lock complying with either Group 1 or 1R requirements in the Standard for Combination Locks, UL 768, or a high-security electronic lock, Type 1, complying with the requirements for high-security electronic locks.

PERFORMANCE

12 General

12.1 Compliance

12.1.1 In addition to specific requirements for each class, all safes shall comply with 12.2.1 – 12.7.1.

12.2 Samples

12.2.1 The selection of the test sample is to be determined by a study of carefully prepared drawings with dimensions of the construction and schedule of sizes.

12.2.2 The door clearances of the test sample are to represent the maximum to which the manufacturer desires to work in production of subsequent products.

12.2.3 A single sample, shown to be fully representative of a series of safes of similar design, size and construction, is to be submitted for test.

12.2.4 In addition, complete drawings of the construction, together with specifications of the steel and drill- and torch-resistant metal or materials are to be furnished.

12.2.5 Any or all of the methods of attack specified in 12.3.1 – 12.7.1 may be used at the option of the testing party (see 3.19). Other methods of attack may be used.

12.3 Combination drifting and drilling

12.3.1 An attempt is to be made to knock off the combination dial, punch or drill the spindle, and then release the lock mechanism by means of picking tools.

12.4 Drilling lock mechanism

12.4.1 An attempt is to be made to drill through the door (or safe body if allowed) to the lock box, lug, carrying bar, or other parts of the mechanism, then release the boltwork by punching, prying, or picking.

12.5 Handle forcing

12.5.1 An attempt is to be made to force the bolt-operating lever by means of:

a) A wrench or pipe applied to rotate the bolt handle or

b) Punching the bolt handle so as to free the lock connection.

12.6 Door sledging and wedging

12.6.1 An attempt is to be made to destroy or pierce the door by means of wedges, chisels, and sledges so as to give access to the contents of the safe.

12.7 Drilling of an opening

12.7.1 A drilling attack is to consist of an attempt to cut an opening in the safe by drilling a series of holes in close proximity and then breaking out the section of metal with a sledge hammer.

13 Net Working Time

13.1 As the object of the investigation is to arrive at conclusions as to the resistance of a safe to expert attack, the testing party (defined in 3.19) may select a number of attacks within the scope of the test procedure and attempt each attack for the full allotted time. The product is considered to comply with the requirements if it resists the method or combination of methods applied to a given point or area for the net working time specified.

13.2 The net working time is to be only the period during which an attack is actively in progress on the sample and is to be exclusive of preparations for test, time required for safety precautions, and delays that cannot be anticipated.

14 Attack Resistance

14.1 Burglary-resistant safes are to resist entry as defined in 3.7 when attacked using the tools outlined in Table 14.1 for the net working time indicated.

Table 14.1
Burglary classification of safes and allowed tool complement

Burglary classification	Sections	Tool complement	Net working time, minutes
TL-15	5, 15	Common hand tools, picking tools, portable mechanical and electric tools, grinding points, high-speed and carbide drills not exceeding 1/2 inch (12.7 mm) diameter, and pressure-applying devices or mechanisms	15
Deposit Safe	5, 16	Common hand tools, picking tools, portable mechanical and electric tools, grinding points, high-speed and carbide drills not exceeding 1/2 inch diameter, pressure-applying devices or mechanisms, and fishing and trapping devices or mechanisms	15
TL-30	6, 17	Common hand tools, picking tools, portable mechanical and electric tools, grinding points, high-speed and carbide drills not exceeding 1/2 inch diameter, pressure-applying devices or mechanisms, abrasive cutting wheels, and power saws	30
TL-15X6	7, 18	Common hand tools, picking tools, portable mechanical and electric tools, grinding points, high-speed and carbide drills not exceeding 1/2 inch diameter, pressure-applying devices or mechanisms, abrasive cutting wheels, and power saws	15

Table 14.1 Continued on Next Page

Table 14.1 Continued

Burglary classification	Sections	Tool complement	Net working time, minutes
TL-30X6	8, 19	Common hand tools, picking tools, portable mechanical and electric tools, grinding points, high-speed and carbide drills not exceeding 1/2 inch diameter, pressure-applying devices or mechanisms, abrasive cutting wheels, and power saws	30
TRTL-30	9, 20	Common hand tools, picking tools, portable mechanical and electric tools, grinding points, high-speed and carbide drills not exceeding 1/2 inch diameter, pressure-applying devices or mechanisms, abrasive cutting wheels, power saws, and a cutting torch	30
TRTL-15X6	10, 21	Common hand tools, picking tools, portable mechanical and electric tools, grinding points, high-speed and carbide drills not exceeding 1/2 inch diameter, pressure-applying devices or mechanisms, abrasive cutting wheels, power saws, impact tools, and a cutting torch	15
TRTL-30X6	10, 22	Common hand tools, picking tools, portable mechanical and electric tools, grinding points, high-speed and carbide drills not exceeding 1/2 inch diameter, pressure-applying devices or mechanisms, abrasive cutting wheels, power saws, impact tools, and a cutting torch	30
TRTL-60X6	10, 23	Common hand tools, picking tools, portable mechanical and electric tools, grinding points, high-speed and carbide drills not exceeding 1/2 inch diameter, pressure-applying devices or mechanisms, abrasive cutting wheels, power saws, impact tools, and a cutting torch	60
TXTL-60X6	11, 24	Common hand tools, picking tools, portable mechanical and electric tools, grinding points, high-speed and carbide drills not exceeding 1/2 inch diameter, pressure-applying devices or mechanisms, abrasive cutting wheels, power saws, impact tools, a cutting torch, and nitroglycerine or other high explosives	60

NOTE – For those classifications that allow the use of a cutting torch, the quantity of gas consumed in any one test is to be limited to 1000 cubic feet (28.3 m^3), combined total of oxygen and fuel gas.

15 Class TL-15

15.1 Performance test

15.1.1 The safe shall resist entry when attacked using the tools outlined in 15.2.1 for a net working time of 15 minutes.

15.2 Test equipment

15.2.1 The test equipment may include:

a) Any common hand tools;

b) Picking tools;

c) Portable mechanical and electric tools;

d) Grinding points;

e) High-speed and carbide drills not exceeding 1/2 inch (12.7 mm) diameter; and

f) Pressure-applying devices or mechanisms.

16 Class Deposit Safes

16.1 Performance test

16.1.1 The safe shall resist entry when attacked using the tools outlined in 16.2.1 for a net working time of 15 minutes.

16.1.2 Fishing and trapping attempts are to be limited to 15 minutes for each method.

16.1.3 For the envelope fishing attempt, the deposit safe is to be loaded with 12 sealed No. 10 size business envelopes that are filled with flat sheets of paper so that each sealed envelope is 1/4 to 1/2 inch (6.4 to 12.7 mm) thick.

16.1.4 For the deposit bag fishing attempt, the deposit safe is to be loaded with six canvas deposit bags that are filled with paper so as to be 1-1/2 to 2-1/2 inches (38 to 64 mm) thick. The bags are to be:

a) Standard deposit bags measuring 6 to 9 inches (152 to 229 mm) wide by 8 to 12 inches (203 to 305 mm) long or

b) Specifically designed for the deposit safe being tested.

16.1.5 The envelopes and bags described in 16.1.3 and 16.1.4 are to be used in the trapping attempts.

16.2 Test equipment

16.2.1 The test equipment may include:

a) Any common hand tools;

b) Picking tools;

c) Portable mechanical and electric tools;

d) Grinding points;

e) High-speed and carbide drills not exceeding 1/2 inch (12.7 mm) diameter;

f) Pressure-applying devices or mechanisms; and

g) Fishing and trapping devices or mechanisms.

17 Class TL-30

17.1 Performance test

17.1.1 The safe shall resist entry when attacked using the tools specified in 17.2.1 for a net working time of 30 minutes.

17.2 Test equipment

17.2.1 The test equipment may include:

a) Any common hand tools;

b) Picking tools;

c) Portable mechanical and electric tools;

d) Grinding points;

e) High-speed and carbide drills not exceeding 1/2 inch (12.7 mm) diameter;

f) Pressure-applying devices or mechanisms;

g) Abrasive cutting wheels; and

h) Power saws.

18 Class TL-15X6

18.1 Performance test

18.1.1 The safe shall resist entry when attacked using the tools specified in 18.2.1 for a net working time of 15 minutes.

18.2 Test equipment

18.2.1 The test equipment may include:

a) Any common hand tools;

b) Picking tools;

c) Portable mechanical and electric tools;

d) Grinding points;

e) High-speed and carbide drills not exceeding 1/2 inch (12.7 mm) diameter;

f) Pressure-applying devices or mechanisms;

g) Abrasive cutting wheels; and

h) Power saws.

19 Class TL-30X6

19.1 Performance test

19.1.1 The safe shall resist entry when attacked using the tools outlined in 19.2.1 for a net working time of 30 minutes.

19.2 Test equipment

19.2.1 The test equipment may include:

a) Any common hand tools;

b) Picking tools;

c) Portable mechanical and electric tools;

d) Grinding points;

e) High-speed and carbide drills not exceeding 1/2 inch (12.7 mm) diameter;

f) Pressure-applying devices or mechanisms;

g) Abrasive cutting wheels; and

h) Power saws.