

## 524: BOARD OF ELEVATOR REGULATIONS

### 524 CMR 8.00: PRACTICAL TESTS AND INSPECTIONS

#### Section

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#### 8.01: Practical Tests and Inspections

A practical test of all equipment governed by 524 CMR as required by M.G.L. c. 143, § 64, shall consist of the following:

- (1) The initial “Acceptance Test” and subsequent annual tests and/or inspections shall be made of all equipment under the supervision of the state elevator inspector. Such tests shall conform to the following Acceptance Test: A contract load test at governing tripping speed where applicable shall be made for all new installations.
- (2) Prior to returning to service any equipment which has undergone a major alteration, material change, or which has been placed out of service due to non-use, accident or a cause of injury, or at the discretion of the state elevator inspector.
- (3) Subsequent Tests: A safety test with no contract-load shall be made in the presence of the state elevator inspector, once a year, or as otherwise specified by other sections of 524CMR or M.G.L. c. 143, § 64 of all safety devices and equipment to determine that they function as required by the applicable codes. It is further required that every fifth year a full-load safety test be conducted in the presence of the state elevator inspector. (Refer to 524 CMR 11.00 for elevators placed out of service.)
- (4) Car and counterweight safeties and governors shall be tested as follows: Governor operated instantaneous type safeties or sliding type safeties of elevators shall be tested at rated speed by tripping the governor by hand. The governor shall be separately tested for tripping speed.
- (5) Each governor shall be sealed directly after testing by the state elevator inspector conducting the test. No person other than a state elevator inspector, shall break or remove the seal.
- (6) The application of a safety having no speed governor shall be obtained by a free drop test which may be made without detaching the ropes.
- (7) Car and counterweight oil buffers, if any, shall be tested annually with no load on the platform at rated car speed, and with a full contract load every fifth year.
- (8) Contract load test for hydraulic elevators: A contract load test under the supervision of the state elevator inspector shall be made of every hydraulic elevator or dumbwaiter before the equipment is placed in regular service.
  - (a) The test shall be made with no load and a test with full rated load on the car in order to determine the car speed under each specified condition of loading in both the up and down directions.
  - (b) A test check of the working pressure including, in case of pressure tanks, a check of the accuracy of the tank pressure gauge.
  - (c) A test of the relief valve by-pass pressure shall be made in accordance 524 CMR 17.23(6).
  - (d) After the test of the relief valve setting and system pressure test, the following test shall be performed and witnessed by a Massachusetts licensed elevator inspector employed by the Department of Public Safety. Cylinders that are not exposed shall be tested as follows:
    1. Note the amount of oil in the pit and seal leak collection container.
    2. Park the elevator at a convenient location and open the main line disconnect.
    3. Mark the level of the oil in the tank.
    4. Wait at least 15 minutes and measure the amount that the car has moved down.

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### 8.01: continued

5. Compute the volume of oil loss as a result of the car movement as follows:  
 $V = 3.1416 \times R^2 \times L$   
Where:  
    V = volume of oil in cubic inches  
    R = radius of plunger (in.)  
    L = movement of car (in.)
6. Compare this to the change in volume in the pit seal collection container and the tank.  
    Example:  $1 = 7''$ , Plunger diameter =  $6''$   
     $V = 3.1416 \times 9 \times 7 = 198 \text{ in}^3$   
    (Note:  $231 \text{ in}^3 = 1 \text{ U.S. gallon}$ )
7. If necessary, continue the test to verify the source of the leak.
8. If it is determined that a leak exists underground, the unit should immediately be taken out of service.

(9) All private residence elevators governed by 524 CMR 23.00 and 35.00 shall be tested and inspected every five years. A test with a capacity load will be performed during each test.

(10) All escalators will be tested with contract load at the time of acceptance and will have a brake data plate installed. All escalators with brake data plates may be tested thereafter by verifying the brake torque. If the environment in which a unit is operating makes the stopping capability of the brake questionable, a weight test will be used to reconfirm the torque setting of the brake.

(11) All existing escalators without brake data plates or units with more than one driving machine will be tested with contract load at five year intervals and whenever the stopping capability of the brake is questionable.

(12) All escalators will require annually a step/skirt performance index test complying with A17.1-2000 Section 8.6.8.3, and will have up to one year from the date of the citation to be in compliance.

### 8.02: Unsafe or Non-compliant Conditions

If upon inspection any equipment covered by 524 CMR is found in an unsafe condition, or not in accordance with the provisions of 524 CMR in effect at the time of its installation, or not in compliance with any of the standards referenced in 524 CMR 7.03, the state elevator inspector shall thereupon serve a written notice upon the building owner or lessee, or his or her designee, citing the section of 524 CMR or other referenced standard of which said equipment is in violation, stating the action required to bring the equipment into compliance, and the date when recommended repairs or changes shall be completed. After the service of such notice, it shall be the duty of the owner to proceed within the time allowed to make such repairs as are necessary to place the equipment in a safe and compliant condition. It shall be unlawful to operate such equipment after the date stated in the notice unless such recommended repairs or changes have been made and the equipment has been approved, or unless an extension of time has been secured from the state elevator inspector in writing. The state elevator inspector may withhold issuance of the inspection certificate until such time as the equipment is brought into compliance with all outstanding orders. Appeals from any order based on the standards referenced in 524 CMR 7.03 shall be to the authority having jurisdiction.

### 8.03: Power to Seal Equipment

The state elevator inspector in addition to any other penalties herein provided, shall have the power to seal out of service any device or equipment under his jurisdiction, covered by 524 CMR when in the case of emergency in the opinion of the state elevator inspector, such device is in a condition to render it unsafe for operation; or for willful failure to comply with 524 CMR.

### 8.04: Notice of Sealing Out of Service

Before sealing any device out of service, the state elevator inspector, except in the case of emergency, shall serve written notice upon the building owner or lessee stating intention to seal the equipment out of service and the reasons therefore.

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### 8.05: Unlawful to Remove Seal

Any device sealed out of service by the state elevator inspector shall be plainly marked with a sign or tag indicating the reason for such sealing. Any tampering with, concealing, defacing, or removal of the sign tag or seal without approval of the state elevator inspector shall constitute a violation 524 CMR.

### 8.06: Matters Not Provided For

If upon inspection by a state elevator inspector, any equipment covered by 524 CMR is determined to be in an unsafe or atypical state due to a condition not specifically provided for in 524 CMR or ASME A17.1, the inspector may, in their discretion take whatever action is deemed necessary in the interest of public safety. If any action is taken pursuant to 524 CMR 8.06, the inspector shall provide written notice to the owner or the person in charge of the equipment clearly describing the malady and otherwise follow the requirements of M.G.L. c.143, § 65. The inspector shall notify the Board of any action taken pursuant to 524 CMR 8.06 within 48 hours.

## REGULATORY AUTHORITY

524 CMR 8.00: M.G.L. c. 143, § 69.

NON-TEXT PAGE