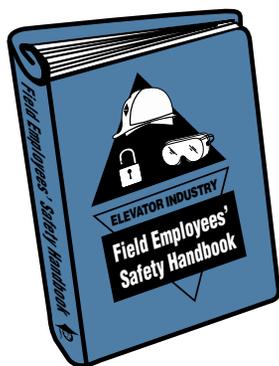


# Changes in the 2015 *Elevator Industry Field Employees' Safety Handbook*

Updates in new edition listed

by Ricia Sturgeon-Hendrick, liaison to the NEII Field Safety Committee

At its fall 2014 meeting, The National Elevator Industry, Inc. (NEII®) Field Safety Committee reviewed the 2010 *Elevator Industry Field Employees' Safety Handbook*. A number of important changes were made at that meeting, in a February 2015 teleconference and at a June 16 meeting. The old green-colored handbooks are now phased out with new blue-colored ones. The guidelines in the new handbook went into effect on June 30. Many editorial changes were made; primary corrections/additions (in italics) are as follows.



## Section 1 – General Safety

- ◆ Mechanics arriving at a location to perform services or repairs are urged to *alert the resident route mechanic* in addition to the management.
- ◆ Mechanics are urged to *use communication devices with caution around controllers* as they can affect the operation of the elevator.
- ◆ When accessing the hoistway everyone is urged to follow the “6 inch rule” which is: *Do not open the hoistway door more than 6 inches until you determine the car is located in a safe position for access.*

## Section 2 – Safety Inspections

*Unsafe conditions created by others* were added to the reasons for normal inspections.

## Section 3 – Personal Protective Equipment

- ◆ Employees have the responsibility to *maintain, store and inspect* PPE each time before use.
- ◆ Employers are required to provide suitable eye and face protection *based on anticipated hazards.*
- ◆ Employees are urged not to wear gloves *in close proximity* to moving machinery.

## Section 4 – Fall Protection

- ◆ Fall protection is required when a worker is exposed to a fall hazard (working more than 6 ft. above a lower level and an opening more than 12 in. by 12 in.) and work activity is within 6 ft. of the opening.
- ◆ *When a guardrail is removed to perform a job, a personal fall-arrest system must be utilized when a fall hazard is present.*
- ◆ *Some cartops are equipped with guardrail systems. Employees should never climb over or stand on guardrails. They should be aware of pinch hazards and the risk of being caught between guardrail and hoistway equipment.*

## Section 5 – Electrical Safety

### 5.1 General Precautions

- (a) When power is not required to perform the task, lockout/tagout procedures must be followed. Testing and troubleshooting may be done live, but repairs can only be done when the system has been properly de-energized or circuits isolated, *preventing the release of harmful energy.*

(b) *The following steps should be considered:*

- Whenever possible, de-energize the circuit*
- Guard the energized circuit with effective insulation*
- Use safe electrical work practices*

(c) THE FOLLOWING PERSONAL PROTECTIVE EQUIPMENT SHALL BE WORN WHEN TROUBLESHOOTING

Continued

*(PERFORMING DIAGNOSTICS AND TESTING) ON LIVE ELECTRICAL CIRCUITS.*

- ◆ For arc flash protection long-sleeved natural-fiber or FR-rated shirt and pants, *or* long-sleeved FR rated coveralls or other company-approved arc flash hazard protection.
- ◆ For arc-flash protection, clean leather gloves or arc rated gloves when working on or near electrical components energized.
- ◆ Voltage rated gloves with leather protectors may be required when working on energized components when there is a risk of contact with energized components above 150V and if safe-working practices cannot abate the risk.
- ◆ Nonconductive safety glasses
- ◆ Eh-rated footwear or rubber mats
- (d) Always use a *test instrument* on each circuit to confirm the circuit is de-energized
- (g) Never troubleshoot circuits when standing or kneeling on metal, wet surfaces or in water. *This includes situations where your body comes into contact with another grounded surface during the test and verify step of lockout tagout.*
- (i) To prevent shocks, take precautions to:
  - (1) Keep metal objects from touching or being exposed to any parts that are known to be live or have not yet been confirmed to be dead moving machine parts or connections.
  - (2) Do not wear tool belts and do not carry tools in your pockets.
- (o) All temporary wiring shall comply with the NEC and OSHA 1910.305 for general industry and 29 CFR 1926 403 and 404 for

construction (where you will find most temporary wiring) *and company policy*. When temporary wiring is used, locate wiring in such a manner that no one can trip over it. Take precautions to protect temporary wiring from sharp edges and mechanical damage and do not support it with nails or wires.

(p) All 110-volt, 15- or 20-amp circuits shall be grounded. Do not wire outlet receptacles into lighting circuits unless they are grounded.

(Renummer rest)

(u) Do not cut live wires. Verify zero energy and be aware that there may be voltage due to interconnections from other elevator units and/or the building.

(v) Before working on circuits containing capacitors, always be sure to discharge or take precautions by installing guard(s) to protect against accidental contact.

### 5.2 Meter Usage Safety Checklist

- ◆ Use Category III 1000V multimeters.
- ◆ The meter used must meet accepted safety standards for the environment in which it will be used.
- ◆ Where work is performed on electrical circuits located in dark areas, use adequate, non-conducting auxiliary lighting.

### 5.3 Energized Circuit Troubleshooting Checklist

- ◆ For arc-flash protection, clean leather gloves or arc rated gloves when working on or near energized electrical components.
- ◆ Voltage rated gloves with leather protectors may be required when working within 12 inches on energized components above 150V when there is a risk of contact and if safe working practices cannot abate the risk.

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- ◆ For arc-flash protection long-sleeved natural-fiber or FR-rated shirts and pants, or long-sleeved FR-rated coveralls or other company-approved arc-flash-hazard protection.

### Section 7 – Lockout and Tagout

- ◆ Under procedures CAUTION was strengthened: it is *likely* to have electrical energy on a controller that has had the mainline disconnect switch deactivated. After initiating lockout and tagout, the lighting circuit may still be energized, *battery backup may still be energized, and group controllers cross connects may still be live.*
- ◆ Under MRLs the following was added: *Some MRLs with controllers in the hoistway have multiple lockout locations. Prior to performing lockout/tagout, determine the best location to de-energize the equipment you will be working on. Refer to manufacturer's documentation for further information.*

### Section 8 – Hoistways and Machine Rooms

- ◆ When arriving on the site, notify owner, place “out of service” signage and place barricades to protect public as applicable.
- ◆ Insert proper door wedge tool to mechanically hold the door(s) in the open position, *bump the car down and then up using the key switch to test the brake, stay clear from the entrance and lower the car to a safe height by using the hoistway access switch to run the car in the down direction.*
- ◆ Verify cartop inspection station switches work properly by first running down, then up, then proceed with tasks. . .
- ◆ Do not leave parts, lubricants, cleaning equipment, etc. in the pit. This is a violation of the ASME A17.1/CSA B44 Code. Pipe stands may be properly stored in the pit, *not on the floor (hydraulic elevators).*

### Section 9 – Tools

Editorial changes only

### Section 10 – Portable Ladders and Scaffolds

- ◆ When used, wooden or synthetic planks shall *be marked as scaffold grade.*
- ◆ *Scaffolding shall be inspected for damage and proper assembly each day before use.*

### Section 11 – Moving Work Platforms

- ◆ *Counterweights (on Moving Platforms) shall be secured from bouncing or being lifted out of the frame.*

### Section 12 – Material Handling

- ◆ Do not permit material storage within 6 ft. of escalator wellways or elevator hoistways.
- ◆ *Confirm with your Supervisor the hoisting beam is rated to carry the maximum load to be hoisted. Do not load the lower flange to more than 50% of the beam's capacity.*

### Section 14 – Hazard Communication (HAZCOM)

- ◆ MSDS (Material Safety Data Sheets) was changed to SDS (Safety Data Sheets) throughout the chapter and the book.

### Section 17 – Dumbwaiters

- ◆ Check turnbuckles on cars and counterweight ropes to be sure they are double nutted *and cotter keyed.* Wire rope has a tendency to twist when operating over sheaves and will spin nuts off turnbuckles if they are not secured *with a cotter key.*
- ◆ *When troubleshooting be aware slack rope in the system can cause unintended movement of the car.* 🌐

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