

## 10.6 ELEVATOR RESCUE OPERATIONS

10.6.1 Elevator rescue operations include all aspects of removing a person or persons from elevator cars, pits, hoist-ways, or other related components of an elevator, dumbwaiter, or lifting device. Applicability of the procedures herein shall include any other fire department activity involving elevators, dumbwaiters, and other lifting devices.

10.6.2 Fire department members should be familiar with the following major system components of an elevator, dumbwaiter, or other lifting device:

- Car — The passenger compartment of an elevator.
- Car Door — The door directly attached to the elevator car, the internal door.
- Controller — The electronic "brains" that operate the elevator.
- Hoist-way — The space in which an elevator car travels.
- Hydraulic Elevator — An elevator that is lifted by a hydraulic driven
  - piston
- Landing Door — The exterior door located at each floor or landing where an elevator may arrive
- Machine Room – The room usually located directly above the hoist-way (traction elevators) or in the near vicinity of the lowest operating floor level (hydraulic elevators) containing the major operating components of an elevator including; the Main disconnect, Secondary power supply, the controller, the hydraulic reservoir, drive motor, etc.
- Main Disconnect Switch – A 480 volt breaker or switching device that controls the electrical power to the drive motor, pump , and controller.
- Manual Release Valve – A manually operated valve located on or near the manifold of a hydraulic elevator used to release pressure to the hydraulic cylinder, lowering a car.
- Safety Brakes – Mechanical brakes located on the car that engage on the “T” rail inside the hoist-way.
- Stop Switch – The red switch that secures the controller designed for maintenance to enter an elevator pit.
- Secondary or Traveling Circuit or Life Safety Circuit – The 120 volt breaker or switching device that supplies life safety power to an elevator car including lights, phone, fans, etc.
- Traction Elevator – An elevator that is lifted by cables and a hoisting machine and is counter balanced by a large counterweight.

10.6.3 The incident commander shall ensure an assessment has been made that includes the following basic information prior to initiating any action:

- Determine type of elevator or lifting device.
- Determine the approximate number of occupants.

- Determine if all occupants are "OK".
- Determine the approximate location of the car.
- Locate the elevator machine room, the main disconnect switch, and the elevator door key.

10.6.4 Accepted common methods of completing an uncomplicated elevator rescue may include the following:

- Simple recall of the car to the main floor.
- Opening of the landing and car doors to facilitate extrication.
- Removing occupants through the roof hatch.
- Lowering the car by operating the manual release valve.

10.6.5 Complex extrication from elevators where entrapment exists between the car and the hoist-way or the landing door requires the IC to consider many factors not normally encountered in other rescue scenarios. At no time should any attempts be made to move an elevator car vertically utilizing power equipment such as the HURST tool or other devices as failure of the elevator car's safety systems may occur causing uncontrolled vertical movement of the car.

10.6.5 The incident commander shall ensure that prior to opening any elevator door by a door key or gaining access to the hoist-way, the **MAIN DISCONNECT SWITCH SHALL BE TURNED OFF (OPENED)**. The main disconnect switch should be secured in some manner to prevent the switch from being re-energized without authorization and a member of the fire department shall be posted at the switch while any rescue operations are in progress.

10.6.6 The minimum fire fighter PPE necessary in performing any elevator rescue evolution shall include gloves and a helmet with chinstrap secured.

10.6.7 Whenever elevator-landing doors are being opened, a safety-man shall maintain direct contact with the fire fighter operating the door to prevent the fire fighter from falling into the hoist-way.

10.6.8 Ladders and other climbing devices may be used to extricate occupants of an elevator. Should the circumstances require using such devices, the devices shall be secured prior to placing civilians on them, and measures shall be taken to ensure civilians do not fall while climbing.

10.6.9 When extricating occupants through an elevator roof hatch, the IC shall consider safety measures related to electrical and other hoist-way hazards.

10.6.10 The IC shall document when the extrication is complete by reporting to the communications center.

10.6.11 When terminating the incident, the fire department shall leave the main

disconnect switch in the off (open) position and advise the building owner to ensure an elevator repair service is contacted prior to restoring the elevator to service.