

CHAPTER II Operations
SUBJECT 3 Emergency Operations
TOPIC 5 Elevator/Escalator Emergencies

Rev. 3/91

A. SCOPE

This subject covers rescue of persons trapped in elevators, elevator safety in burning buildings, and fires in elevator installations.

B. PRIORITIES

1. To safely affect rescues from elevators.
2. To teach fire personnel safe procedures when using elevators in burning buildings.
3. To safely extinguish fires in elevator installations.

C. SAFETY

1. When using elevators in buildings on fire:
 - a. Never use an elevator for fires below the fourth floor, use stairs.
 - b. Never take an elevator to the fire floor.
 - c. Never pass the fire floor, use stairs.
 - d. Don't return in an up elevator except on Fire Department service.
 - e. Place all elevators in hoistway on Fire Department service.
 - f. Activate stop switch when escaping.
 - g. Bring forcible entry tools and S.C.B.A.'s.

C. SAFETY (CONT)

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- h. Don't overcrowd elevator.
- I. Use elevators whose hoistway terminates below fire floor whenever possible.
- j. Use elevator in another area of building away from the fire if possible, preferably in an area separated by fire walls and fire doors.
- k. Never take the word of building occupants as to the fire floor. Make every attempt to determine exact fire location before ascending. This can be accomplished by:
 - Counting floors from the exterior (there may be a mezzanine or no 13th floor) or, opening the top escape door and looking up the elevator shaft.
- l. The elevator shall be stopped at an intermediate floor, to check floor layout (stair locations, etc.) and verify that the elevator can be stopped.

D. ELEVATOR RESCUES

Any elevator that stops for other than normal reasons is potentially dangerous. Elevator service mechanics can usually correct elevator failures and get the car running. Expert help and communications are two important needs that shall be taken care of immediately when passengers are trapped in elevators. Fire Fighters should be sure a service mechanic is on the way. At the same time they should communicate with the trapped occupants to reassure them of their safety. Elevator mechanics can either correct the malfunction or guide Fire Fighters in the safest and least damaging method of rescue.

- 1. Methods of communication with occupants of stalled elevators are: Intercom between elevator car and lobby, telephone in elevator car to lobby, or some other area of building, and direct voice contact with trapped occupants.

D. ELEVATOR RESCUES (CON'T)

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2. Locate position of stuck elevator.
 - a. Ask people at the scene; building management, person who called the fire department, etc.
 - b. Check the main lobby position indicator above elevator doors to determine position of car (sometimes these readings can be inaccurate).
 - c. Force open hoistway doors or use elevator keys and look up shaft.

E. RESCUE

If elevator mechanic is not immediately available and rescue must be made:

1. Proper preparation for rescue is necessary for the safety of both trapped passengers and Fire Fighters.
2. Organize rescue, have proper tools at scene.
3. Always disconnect the main power circuit to the driving motor. This switch is usually in the machine room or near the door to the machine room. Send one Fire Fighter with a portable radio to throw this main switch. The Fire Fighter should remain at this switch throughout the rescue to insure power is not accidentally turned back on.
4. The emergency stop switch in the stalled car should be activated as further security against accidental movement of stalled car. Passengers must be instructed to activate this switch.
5. If the elevator rescue is due to a bound door, the first act should be to see if the hoistway door can be opened by hand from the hallway or lobby side. Binding doors are not uncommon and can generally be forced open by hand. A hard rap on the door panels may dislodge whatever caused the bind. Always warn passengers before hitting door. Sometimes the interlock switch on the stalled car can be reached from the adjacent elevator car and tripped with a ceiling hook, this will usually open the door of stuck car.

E. RESCUE (CON'T)

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6. If elevator is stalled and you cannot wait for elevator mechanic, attempt rescue from adjacent car, if available, by gaining access to stalled elevator through side emergency exit opening. Multiple hoistway elevators usually have side exits in addition to the exit out of the top. Side openings line up between adjacent elevators. A person can pass from car to car when elevators are level with each other. Side exit panels have electric contacts that prevent the movement of an elevator with a side panel open.
7. If electric power is off and you must force hoistway doors open, only pry at the top, as near to the interlocks as possible. Interlocks are usually located on the header of the entrance frame in passenger elevators.
8. Top exit rescue from elevator car, may be required when trapped passengers cannot be moved through doors and the fire officer decides he cannot wait for an elevator mechanic. Top exit rescue is the alternative when an elevator stalls in a single hoistway. Top exit rescue involves three steps: entering the car, securing the passengers, and removing the passengers.

F. FIRES IN ELEVATOR INSTALLATIONS

1. There is potential for fire at any of the three basic divisions of elevator installations: the machine room, the car, and the pit.
 - a. Machine Room - treat as any other electric fire. Electric power should be removed from the affected equipment by its main disconnect before attacking the fire.
 - b. The Car - these fires are usually electrical. E.G. shorted fan motors and shorted ballasts of fluorescent lights.
 - c. Pit Fires - access can be gained through pit access door or the lower hoistway door. Fires are usually minor and confined to trash and oily residue. Move elevator cars to upper floors to gain entry to pit area. Remove all occupants from elevator cars, and shut off all electrical power to cars before allowing Fire Fighters to enter pit.

G. ESCALATOR EMERGENCIES

When necessary, power to escalator can be shut off with red emergency stop switch located at top and bottom of escalator.

Older installations also have a disconnect switch under top landing plate.