

Chapter 4

ELEVATOR OPERATIONS

Section 1—GENERAL INSTRUCTIONS

4.1.1 Purpose. The purpose of this part of manual is to provide procedures for safe, efficient, and courteous elevator service.

4.1.2 Personnel.

4.1.2.1 Qualifications.

(1) One week's training under the direction of a competent operator should be required before an inexperienced operator can operate and be in charge of any passenger elevator.

(2) Two days' training under the direction of a competent operator should be required before an inexperienced operator can operate and be in charge of any freight elevator.

(3) Operators should be free from serious physical or mental defects, shall be not less than eighteen (18) years of age.

(4) Operators should be selected with consideration for their ability to perform their duties in a careful and competent manner.

4.1.2.2 Appearance. Elevator operators should be clean and neatly dressed; clothes pressed; shoes shined; hair neatly brushed or combed. Male operators should be cleanly shaven. Operators should stand erect and present an alert and efficient appearance.

4.1.2.3 Relief. Operators should not leave elevators until relieved. During relief periods, operators shall not remain in cars or corridors and talk to operators on duty. They should return promptly when relief period is over.

4.1.2.4 Work Habits. Operators should keep cars tidy. They should stand facing

front of car at all times while car is in motion, or while passengers are in elevator. Operators should not engage in unnecessary conversation with passengers, or volunteer unnecessary information about building or occupants. Information as to location of rooms of officials and employees should be furnished upon request.

Section 2—OPERATION

4.2.1 Operating Instructions.

4.2.1.1 Putting Elevator in Service. Following rules should be observed when preparing to put elevator in service.

(1) Open hoistway and car doors when equipped for service key.

(2) Be certain car is at landing before stepping through doorway. Never assume car is where it was left.

(3) Use hall, lobby lights, or safety warning lights installed in some hoistways to determine if elevator is at landing.

(4) Enter car.

(5) Turn on lights.

(6) Turn on motor generator switch, if the elevator has one.

(7) Turn off "not running" lights or pick up "not running" signs, if provided.

(8) Close hoistway doors.

(9) Move car operating control to "start" position.

(10) Make trial inspection trip before carrying passengers. If any defect in equipment, performance, or any unusual noise is detected, facts should be reported immediately to the person in charge. Car is then taken out of service and not operated except

on instructions from elevator mechanic or supervisor.

4.2.1.2 Operation of Elevator Controls:

(1) Car Switch Control—Manual Leveling.

(a) Movement of switch toward car gate causes elevator to go down. Movement of switch away from gate causes elevator to go up. Speed of car can usually be controlled by amount of movement of car switch.

(b) Operator should move car switch slowly in desired direction until full speed is attained. In stopping, car switch is brought slowly toward center position. Operation of switch in this manner prevents sudden starts and stops which are uncomfortable to passengers. Move control mechanism to the stop position on approaching a terminal landing, without waiting for the terminal stopping device to come into action.

(c) Operator should learn by practice to stop car level with floor. Making several attempts to level car with floor is hard on car and uncomfortable to passengers.

(d) Reversing of car switch should be done carefully. Before reversing direction, operator should bring car to complete stop.

(e) The slightest pressure of a floor button registers a call and the button becomes illuminated, thereby indicating to all subsequent passengers whether or not a call for a particular floor has been registered. This helps speed elevator service by eliminating the need of a passenger pressing the same button. The buttons remain illuminated until the car arrives at the terminal and parks or reverses its travel in answer to other calls. The controls also include a red emergency switch, an alarm button and a door open button which are readily accessible to the passenger. Where required, in addition to the above normal requirements, a switch to place the system in attendant operation may be included.

(2) Car Switch Control—Automatic Leveling. Operation is similar to that of manual control. However, operator needs to bring car only within leveling zone before centering switch. Zone is approximately 18

inches above and below floor level. When switch is centered within zone, car is brought automatically to the floor level and stopped.

4.2.1.3 Automatic Operation. To operate this type of elevator, it is necessary to press button of floor desired. Elevator will then start automatically, and stop at proper landing. Elevator also operates in response to signals from floor landings. Some elevators of this type have manual doors and gates. In these cases, doors and gates must be closed before pushing floor buttons.

4.2.1.4 Dual Operation.. Figure 25 shows control panel for dual operation elevator. An elevator of this type may be operated either manually or automatically. Usually, change-over is made by means of a key-operated switch. Manual operation is generally the same as operation with car switch control. If elevator has no car switch control, floor landing buttons are used in same manner as for automatic operation. When this is done, car can no longer be stopped by pressing landing buttons at floors, but they do indicate to operator that car is desired at certain landings.

4.2.1.5 Signal Control. To operate this type of elevator (fig. 25), operator presses buttons corresponding to floors desired by passengers. When all passengers are in car, operator moves controls to "start" position. This closes doors and starts car automatically. When car is in motion, operating control is returned to normal position. Car will stop at each floor for which button is pressed, and open doors automatically. Car will also stop in response to buttons pressed at floor landings.

4.2.2 Standard Operating Expressions. Expressions given below have been standardized for convenience of passengers, and to help operators provide uniform, courteous service.

4.2.2.1 Entering Elevator. As passengers enter elevator operator should:

(1) Say, "Going up" or "Going down," when doors open.

(2) Say, "Floors, please?" This is done before doors are closed. Repeat floor

by supervisor, or prevented by automatic dispatching systems.

(11) Emergency exits in either side or top of car must be closed when in motion.

(12) Before opening or closing doors, operator should extend arm across door opening and hold that position while doors are in motion. This action insures passengers are clear of gate or doors.

(13) Under no circumstance should operators attempt to repair, adjust, block open, or otherwise make inoperative hoistway door interlocks, car door or gate contacts, or emergency release.

(14) Operators should never open hoistway doors by emergency key.

(15) Unless specifically directed by supervisor, operators never allow material to be placed on top of elevator, or suspended beneath the car.

(16) Do not carry passengers or freight while inspections, repairs, or adjustments are in progress, and operate the elevator only in response to directions from the inspector or person in charge. Do not move the car when anyone is in the pit or on top of the elevator **EXCEPT AS THEY MAY DIRECT!**

4.2.3.2 Operation of Passenger Elevators:

(1) Operators should know maximum number of passengers allowed in car, and never allow the limit to be exceeded.

(2) Freight should not be carried in passenger elevators, except under specific instructions of supervisor. If freight is to be carried, elevator should be protected from damage.

4.2.3.3 Operation of Service Elevators.

Service elevators can carry either passengers or freight. They should contain safety devices required on passenger elevators. Under no conditions should maximum load be exceeded.

4.2.3.4 Operation of Freight Elevators:

(1) Do not allow overloading of elevators.

(2) Except by special permission of supervisor, only persons handling freight are allowed in cars.

(3) Extreme care should be taken when leveling cars at landing sill. This is to avoid tripping hazard and allow easy loading or unloading of cars.

(4) Car operating controls should be centered before attempting to move freight.

(a) On elevator controlled by hand rope, cable lock must be set before attempting to move freight.

(b) On automatic elevators, emergency switch should be opened before loading or unloading.

(5) When carrying loads which extend beyond top of elevator, either supervisor or mechanic should accompany the load, or it should be carried in accordance with their instructions.

(6) Following rules apply to handling loads greater than elevator capacity:

(a) Elevator mechanic is notified and his instructions are followed.

(b) If "safe lift" device is provided, mechanic should make adjustments.

(c) When unusually heavy loads are carried, mechanic operates elevator from machine room. Do not ride in the elevator, nor allow others to ride.

(7) Hoisting doors or gates shall always be closed and locked before the elevator is started. The elevator shall be brought to a stop at the landing level before the hoistway door or gate is opened.

4.2.3.5 Operation of Hydraulic Elevators:

(1) Elevator should be stopped gradually to avoid unnecessary wear and strain on equipment. Reverse cars only when necessary. Bring cars to full stop before reversing.

(2) Elevators of this type are left unattended only at lowest landing, resting on bumpers, with operating lever set in lowest position.

(3) Some elevators have no automatic braking device, so operators approaching top or bottom landings should slow cars in same manner as at other landings.

(4) Any tendency of cars to "creep," i.e., move up or down slightly after control switch is centered, should be reported immediately to supervisor.

4.2.4 Emergency Procedures

4.2.4.1 *General.* Operator should remain calm under all conditions. In cases of emergency, he should assure passengers there is no cause for alarm, equipment has safeguards, and is well maintained by mechanics on duty and immediately available.

4.2.4.2 *Emergency Devices:*

(1) *Emergency Stop Switch.* If operating switch control fails to stop car, emergency stop switch is thrown to “off” position. This cuts off power and applies brakes.

(2) *Emergency Release.* This button or switch, when pressed or thrown, permits operation of car even though hoistway or car doors are open. Safety codes demand this button or switch be placed under glass cover.

(a) Emergency release is used only under instructions of elevator mechanic or supervisor.

(b) Elevator is not to be operated unless glass cover is in place over emergency release button.

(c) Operator should report to his supervisor immediately if he finds emergency release cover broken.

(3) *Telephones in Emergencies.* If telephone is installed, emergencies are reported by calling number listed on certificate of inspection.

(4) *Emergency Communication Without Telephone.* Rap on doors and call for attention. Instruct person summoned to inform supervisor of need of assistance.

4.2.4.3 *Types of Emergencies:*

(1) *Excessive Car Speed.* If excessive car speed is reached, operators should perform the following steps:

(a) Control switch should be moved to stop position.

(b) If car fails to stop, emergency switch is thrown to “off” position. Safety device will set, stop and hold car, or slowdown devices at top and bottom of hoistway will stop car.

(c) Do not jump, or allow passengers to jump, from car when in motion.

(2) *Car Stalled Away From Landing.* If at any time elevator stops suddenly due to

power failure, application of undercar safety device, etc, operator should perform following steps:

(a) Move operating control to stop position.

(b) Throw emergency stop switch to “off” position.

(c) Turn off motor generator set and leveling switch, if any.

(d) Notify supervisor’s office immediately.

(e) Operator can remove passengers from stalled elevator only under following conditions:

1. If operator can open hoistway doors immediately and safely.

2. Car is in leveling zone, and passengers can step easily from car to corridor. Passengers should be warned of low head clearances when leaving car.

CAUTION: Side or top emergency exits may be used only on instructions from elevator mechanic or supervisor.

(3) *Car Striking Obstruction.* Car should be stopped by centering operating control switch, and throwing emergency stop switch. Supervisor is then notified.

(4) *Person Caught Between Car and Hoistway.* Car is stopped by emergency methods. Rescue is made only under instructions by supervisor and mechanic.

(5) *Fire Alarm or Panic.* Unless specifically instructed otherwise, operator should run car nonstop to street level. Operator should call the Fire Department, report to designated official, and await further instructions.

4.2.4.4 *Reports:*

(1) *Report of Accident.* If the car stalls or a passenger becomes sick or is injured, names and addresses of persons involved and witnesses, along with report of facts pertaining to incident, should be reported to supervisor.

(2) *Report of Emergency Service.* In instances where passengers are being trapped in stalled car, operator should report to supervisor. Car is put back in service only on instructions from supervisor or elevator mechanic.

4.2.5 Repairs to Elevators.

4.2.5.1 General. Supervisors should be informed of routine inspections and repair of elevators. If operators are needed during repair periods, they take orders from chief elevator mechanic. Supervisor should be notified when car is ready for service.

4.2.5.2 During Repairs. Under no circumstances will an operator leave car under repair unless specifically instructed to do so by elevator mechanic.

4.2.6 Taking Elevator Out of Service.

4.2.6.1 Parking. Elevator should be parked and taken out of service at regular parking landing.

4.2.6.2 Procedure. After parking, the following steps should be performed:

(1) Place operating control in stop or locked position.

(2) Shut off motor generator set and remove key, and close elevator gate. If shut down is for short period only, throw emergency stop or safety switch in "off" position.

(3) Turn on "not running" lights or position "not running" signs, as required by supervisor.

(4) Turn off fan.

(5) Turn out lights.

(6) Shut car gate.

(7) Shut hoistway door if car is equipped with service key.