

## GOING UP!

# Elevate How You Manage Your Vertical Transportation Equipment

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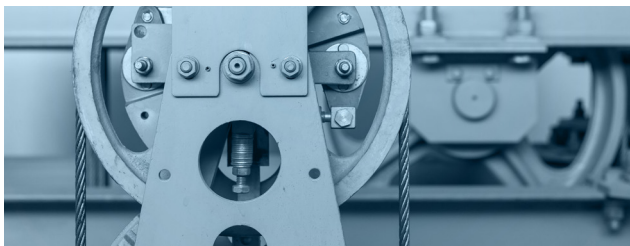
Every year, elevators, escalators, and other vertical transportation equipment safely transport over 100 billion passengers in North America—more than the total number of riders of all other forms of transportation, excluding automobiles. Compared to the number of daily passenger rides, elevator and escalator injuries are so rare that safety is often taken for granted; but elevators and escalators are complex machines, and occasional injuries do occur, usually as a result of unsafe riding practices.

To avoid unnecessary costs, downtime, and liability, it is important for facility managers to educate themselves about their existing elevator equipment, elevator maintenance contracts, and the owner's responsibility for safe operation.

### Understand Elevator Equipment Basics

To effectively manage elevator equipment and associated maintenance contracts, it is important for facility managers to have a basic knowledge of the equipment in their facilities, including:

- » Hydraulic elevators: in-ground; holeless; single and twin post
- » Traction elevators: geared; gearless; basement and adjacent
- » Suspension elevators: coated steel belts (CSR); Kevlar (aramids)
- » Escalators
- » Wheelchair lifts, limited use limited application (LULA) elevators and stairlifts
- » Theatrical and industrial equipment: stage lifts; freight elevators; freight powered or manual doors; dock levelers; truck levelers



### Key Takeaway Points:

- Review elevator maintenance contracts for key provisions, terms, and conditions.
- Verify that the facility's vertical transportation equipment has been inspected and tested in accordance with federal, state, and municipal codes, laws, and statutes.
- Inform co-workers of proper emergency operation, such as firefighter's service; emergency power; and suitable operating instructions, signage, and key activation devices.
- Discuss safe evacuation of passengers from stalled elevators with the objective of enabling them to have the proper instructions and procedures in place in the event of an emergency.

### Read the "Fine Print": Maintenance Contracts

It is also important for facility managers to understand the type of maintenance contract covering the equipment in the facility—whether it is a Limited Services Contract, Examination & Lubrication Services Contract, or Comprehensive Maintenance Services Contract—and coverage details, including:

- » Services and components: included/excluded
- » Repairs: included/excluded
- » Equipment prorated: existing conditions; wear vs. life expectancy
- » Callback services/hours and rates: regular time; overtime; weekend/holiday
- » Extra work hourly billing rates

Carefully review the contract to identify the frequency of preventive maintenance/service visits, included/excluded services and components, and included/excluded repairs. Because it may become necessary to call for additional services, due to an operational malfunction, for example, it is important to know in advance whether or not the contract includes regular time callbacks, overtime callbacks, and/or weekends/holidays, and if there will be additional charges.



## Understand the Owner's Responsibility for Safe Operation

National safety code places the responsibility on the owner for the safe operation and care of vertical transportation equipment—even when the owner has a maintenance contract with the elevator equipment manufacturer or a qualified local elevator maintenance provider. The national code standard is ASME A17.1, American National Standard Safety Code for Elevators and Escalators (2016 edition). Specific code requirements for a geographic area vary based on what the local jurisdiction, city or state adopted or changed.

### **Required Testing/Inspections.**

#### **ASME A17.1 requirements include:**

- » Annual and periodic testing/inspections for hydraulic elevators
- » Annual, periodic and five-year testing/inspections for traction elevators
- » Fulfilling specific testing/inspection requirements for escalators, machine room-less elevators (MRLs), wheelchair lifts and other equipment
- » Annual testing/inspection of smoke detectors in elevator lobbies and elevator equipment rooms; heat detectors, where there are sprinklers in the elevator equipment room; and hoistway, along with shunt trips
- » Annual testing/inspections of elevator standby power
- » Monthly firefighter operation test performed by the owner: activation of hall firefighter recall key switch and firefighter in-car operation key switch; recorded on a log sheet in elevator equipment room

Whereas U.S. Government codes require annual testing, EMCOR Government Services' Vertical Transportation Group recommends weekly owner testing of the in-car, two-way communications system in order to help ensure proper operation and its ongoing ability to announce elevator location and identification.

Testing/inspections required under ASME A17.1 may be performed by qualified elevator inspectors employed by the local jurisdiction, city or state, or qualified third-party independent inspectors. In areas that have not adopted an elevator code, the owner should arrange with the elevator maintenance provider to perform and document the national code requirements.

### **Response to Passenger Entrapment.**

In the event of passenger entrapment, ASME A17.4 and certified inspectors state that facility management personnel should not attempt a rescue unless they have been properly trained and certified. Instead, they should maintain communication with person(s) in the elevator, ask them to stay calm, and reassure them that qualified help is on the way. National code standard A17.4–2015, Guide for Emergency Personnel, gives the requirements for evacuation where an elevator is stalled above or below a landing, along with specific actions required of emergency personnel. It must be kept on site in the building, where it can be accessed by emergency personnel.

Through a greater knowledge of equipment, maintenance contracts, and the applicable requirements under safety code standards, facility managers can “elevate” the management of their vertical transportation equipment. This knowledge will not only help enable them to avoid unnecessary costs, downtime, and safety violations, it will help to ensure that they are providing a safe means of transportation to tenants and clients.



#### **About G. Alan Newton, QEI, CET**

Alan Newton has more than 45 years of experience in the vertical transportation industry, including: field operations management for installation, maintenance, modernization and repairs; cost accounting; procedural policies; and troubleshooting. He is a registered third-party code inspector for Washington, D.C., and Florida, and a National Association of Elevator Safety Authorities International professional member, qualified elevator inspector (QEI) and certified elevator technician (CET.)

EMCOR Government Services, a subsidiary of EMCOR Group, Inc. utilizes its Vertical Transportation Group (VTG) to manage the elevator maintenance performed on equipment that is part of its facilities management contracts with various federal agencies, military, space, and healthcare facilities across the U.S. The VTG also performs elevator management services for major repairs, upgrades, and complete modernization projects for all its facilities management contract clients. VTG also performs services for several commercial and residential clients in the greater Washington, DC, metropolitan area, including northern Virginia and Maryland.

EMCOR Government Services' VTG skilled employees have over one hundred years of cumulative experience in the elevator industry. All of its consultants are qualified elevator inspectors (QEI), as certified by the National Association of Elevator Safety Authorities International. All consultants are also licensed in various local jurisdictions, cities and states.