Elevator Recall – Fire Alarm Integration

FireAlarmGuy.net | Educational Life-Safety Overview

Summary

Elevator recall is a required life-safety function that automatically removes elevators from normal service and sends them to a designated safe floor when a fire alarm condition is detected. This prevents occupants from unknowingly using elevators during a fire event and ensures firefighters can locate and control elevators safely.

What Is Elevator Recall?

Elevator recall is a coordinated safety function between the fire alarm system, the elevator controller, and required smoke detection. When specific initiating devices activate, the fire alarm system sends control signals that cause the elevator controller to automatically recall elevators.

Why Elevator Recall Is Required

Elevator shafts can act as chimneys for smoke and heat, exposing occupants to dangerous conditions. Without recall, elevators may stop at a fire floor or become inoperable. Elevator recall reduces these risks and is required by modern building and fire codes.

How Elevator Recall Works

Phase I – Emergency Recall (Automatic)
Activation of a required smoke detector causes elevators to return to the primary recall floor, open doors, and disable normal service. If smoke is detected on the primary recall floor, elevators are sent to an alternate recall floor.

Phase II – Emergency In-Car Operation (Firefighter Service)
After Phase I recall, firefighters can manually control elevators using keyed switches inside the cab. Phase II operation is controlled by the elevator system but depends on proper Phase I activation.

Role of the Fire Alarm System

The fire alarm system monitors elevator-related initiating devices, sends recall signals, supervises control circuits, and annunciates recall conditions and troubles. The fire alarm system does not directly control elevator movement.

Typical Elevator Recall Interfaces

- Control relays
- Supervised monitor modules
- Dedicated elevator controller inputs

Each elevator typically requires both primary and alternate recall signals.

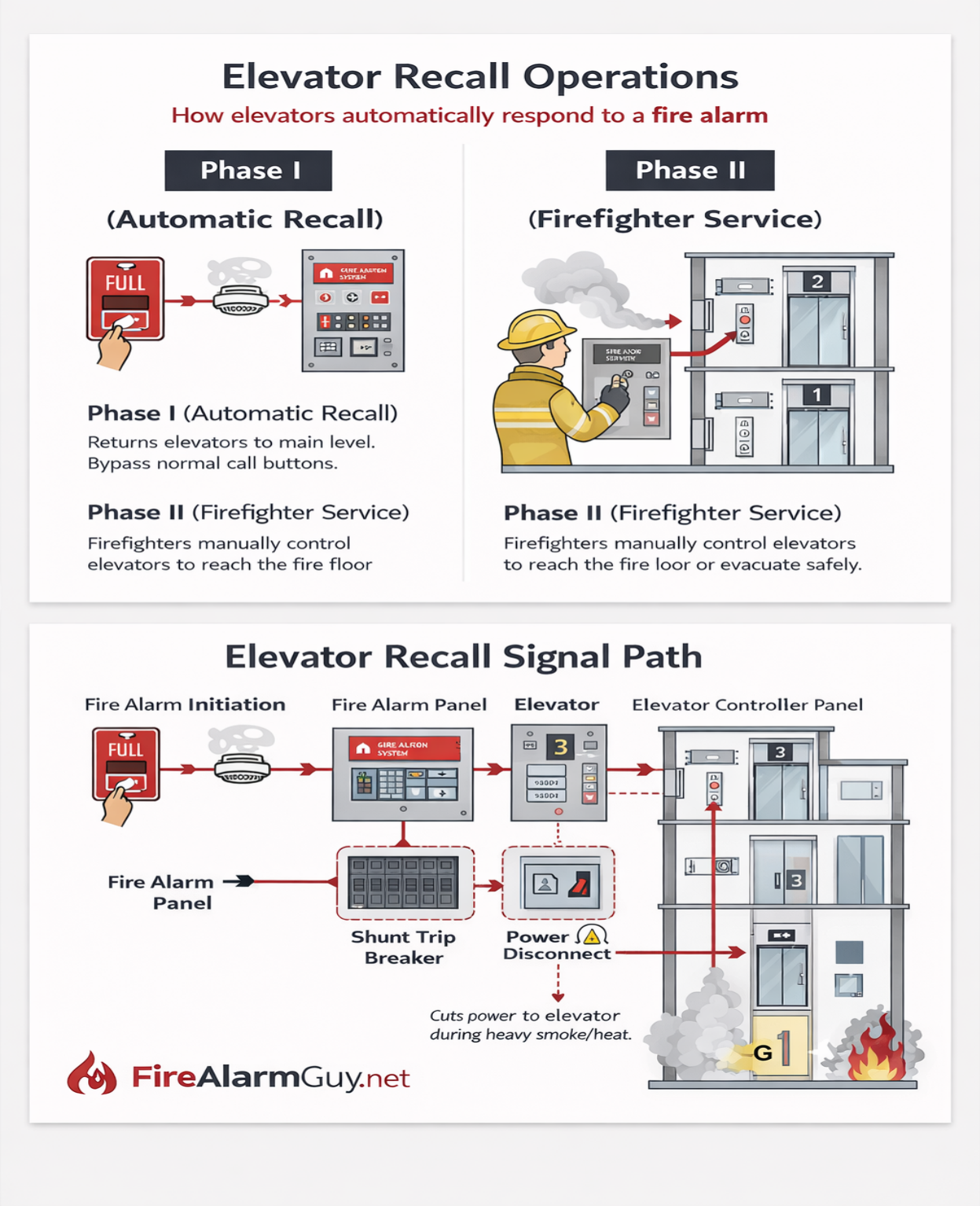
Shunt Trip and Elevator Recall

In sprinklered elevator spaces, elevator power may be disconnected using a shunt trip breaker. Smoke detection must activate before sprinkler waterflow. Improper sequencing can result in unsafe conditions or failed inspections.

Testing and Inspection Requirements

Elevator recall is tested during acceptance testing, annual fire alarm inspections, and elevator inspections. Testing verifies recall floor operation, alternate recall functionality, annunciation, and elevator response.

Elevator Recall Diagrams



Common Field Issues

• Smoke detectors installed in incorrect locations
• Recall signals not supervised
• Incorrect recall floor programming
• Missing or mislabeled relay modules
• Poor coordination between trades

Troubleshooting Checklist

• Verify correct initiating devices
• Confirm recall floor programming
• Check relay supervision
• Verify elevator controller response
• Confirm shunt trip sequencing

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