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Centralized Services Division

COURSE OUTLINE

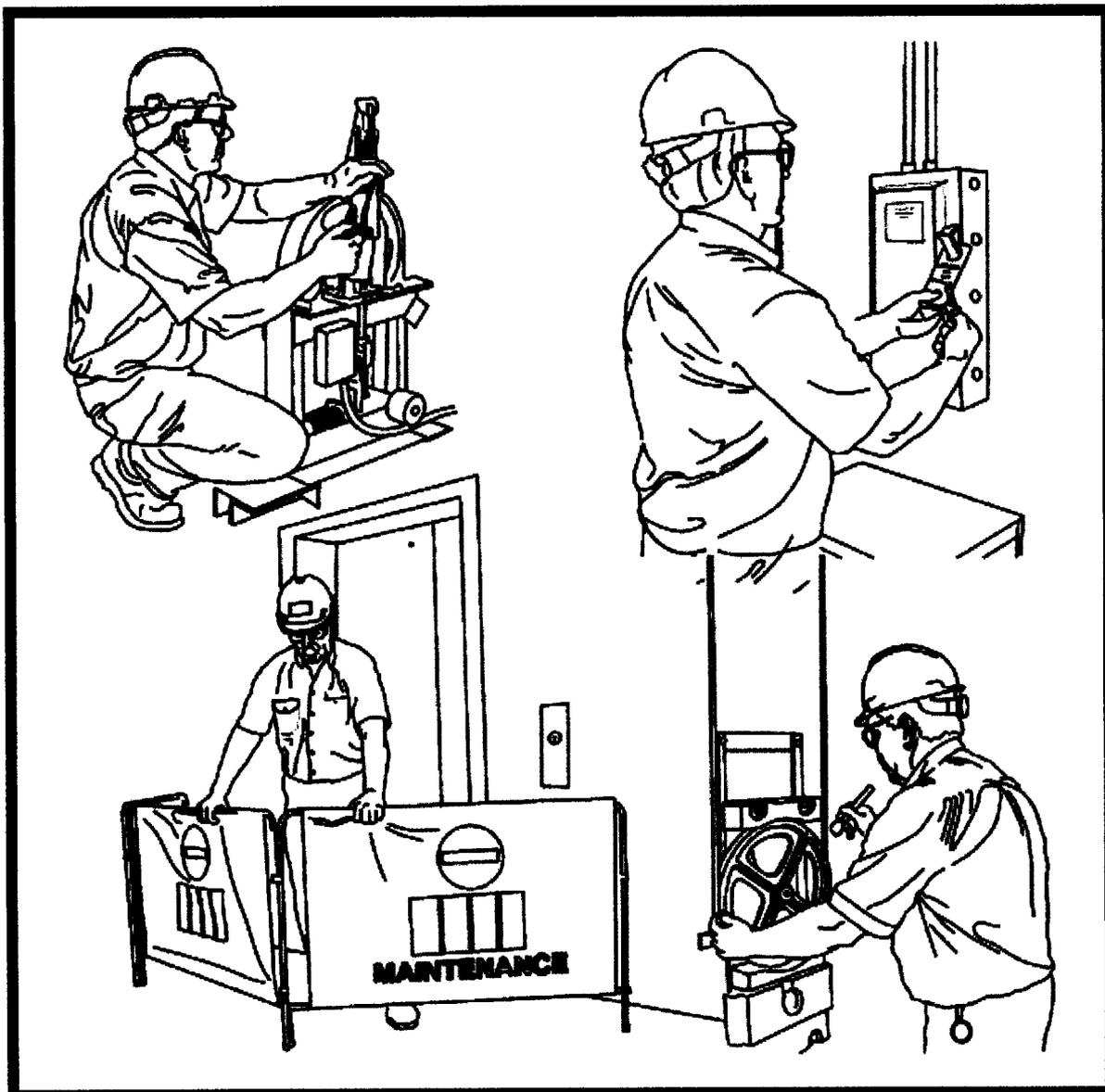


CONTINUING EDUCATION

Elevator Maintenance

CE

Hydraulic Elevator Maintenance



NEIEP CONTINUING EDUCATION SERIES
Hydraulic Elevator Maintenance
COURSE OUTLINE

COURSE TITLE: Hydraulic Elevator Maintenance

PROGRAM: National Elevator Industry Educational Program Continuing Education

DIVISION: Licensing Renewal

COURSE CONTACT HOURS: 8

CATALOG DESCRIPTION:

The course material addresses common maintenance items and problem areas associated with this type of equipment. These areas include motor starting and protection systems, noise reduction, belt maintenance, and valve and solenoid care. The course then looks at the area of the pit and discusses safety issues of the jack, pit shut-off valve and hydraulic piping. It also discusses the operation of plunger grippers to arrest uncontrolled descent.

Recent changes in the industry have created new interest in hole-less hydraulic installations having no underground equipment. Configurations of roped hydraulics and short-rise direct action above ground systems are too numerous to mention here. Special considerations for some of these types as well as testing requirements for traditional direct action types are included.

GENERAL COURSE OBJECTIVES:

Upon successful completion of this course the student will be expected to:

1. Learn and exercise skillful and safe work habits with hydraulic elevators in occupied buildings.
2. Describe the common and periodic maintenance items for hydraulic elevators.
3. Demonstrate familiarity with hydraulic valves and other components found within hydraulic elevator hoistways and pits.
4. Demonstrate familiarity with line starters, noise reduction, pump unit maintenance, oil temperature control, and reverse phase protection with hydraulic elevators.

COURSE CONTENT:

- Machine Room Safety
- Introduction
- Line Starters
 - Soft Start Converters
- Noise Reduction
 - Mufflers
- Pump Unit Maintenance
- Oil Temperature Control
- Low Oil Timer
- Reverse Phase Protection
- Hydraulic Valve
 - Valve Adjustments

- Filters and Screens
- Valve Solenoids
- Hydraulic Elevator Hoistway and Pit
 - Hydraulic Piping
 - Hydraulic Jack Head Packing
 - Plunger Grippers
 - Roped-Hydraulic Elevators
 - Jack Packing Replacement
 - Periodic Testing Hydraulic Elevators
- Appendix A – ASME A17.1 Code

SPECIFIC COURSE OBJECTIVES:

- Student will be able to describe safety hazards of hydraulic elevator maintenance.
- Student will explain maintenance procedures for packing replacement and pump unit.
- Students will describe how to perform hydraulic testing.
- Students will explain how to safely work in the pit and proper tools to use.
- Students should have an understanding of different testing periods for hydraulic elevator and repeat the periods of testing.
- Students can describe the tests in detail.