

Locks and Key Systems

Course 374: Locks and Key Systems

Covers basic lock types: mortise, auxiliary or rim, tubular bolt, key-in-know, narrow stile, and unit lock. Explains how they operate, how to install, maintain, and adjust them. Also describes key control, master key systems, panic bars, and other accessories for building security.

TPC Training is accredited by IACET to offer **0.5 CEU** for this program.



Lesson 1: Commonly Used Doors and Locks

Topics

Terminology of Locks and Doors; Door Function and Operation; Door Construction and Material; Hinge Construction and Operation; Installing Hinges; Levels of Building Security; Mortise Lock; Auxiliary, or Rim, Lock; Tubular Bolt Lock; Key-in-Knob Lock; Unit Lock; Narrow-Stile Lock

Objectives

- Use standard lock and door terminology.
- Differentiate between right-hand and left-hand doors, and between hollow-core and solid-core doors.
- List four different types of hinges.
- Explain installation procedures for full-mortise, half-mortise, full-surface, and half-surface hinges.
- Identify the mortise lock, auxiliary lock, tubular bolt lock, key-in-knob lock, unit lock, and narrow-stile lock.

Lesson 2: How Locks Operate

Topics

Mortise Lock Mechanism; Mortise Lock Installation; Rim Spring-Bolt Locks; How Rim Bolt Locks Work; Jimmy-Resistant Lock Operation; Tubular Bolt Locks; Operation of Key-in-Knob Lock; Unit Lock Functions; How Narrow-Stile Locks Work

Objectives

- Describe how a mortise lock mechanism works.
- Tell what operations are involved in installing a mortise lock.
- Compare the functions of rim spring-bolt locks, rim bolt locks, and jimmy-resistant locks.
- Diagram the construction of a tubular bolt lock.
- Explain how key-in-knob locks, unit locks, and narrow-stile locks operate.

Lesson 3: Installing Locks

Topics

Care in Installation; Installing the Mortise Lock; Installing the Auxiliary Lock; Installing the Tubular Bolt Lock; Installing the Key-in-Knob Lock; Installing the Unit Lock; Installing the Narrow-Stile Lock; Care and Handling of Lock Tools

Objectives

- Explain how to position a mortise lock with the proper setback for installation.
- Describe installation procedures for an auxiliary lock, tubular bolt lock, key-in-knob lock, unit lock, and narrow-stile.
- List the tools needed to install locks.

Lesson 4: Maintaining and Adjusting Locks

Topics

How Lock Problems Develop; How to Disassemble Locks; Opening a Cylinder With a Key; Opening a Cylinder Without a Key; Cleaning Lock Mechanism; Lubrication and Lubricants; Malfunctions of Locks; Symptoms of Problems With Keys; Symptoms of Bolt and Latch Malfunctions; Problems Caused by Misalignment; Problems With Settling; Problems With Steel and Kalamein Doors

Objectives

- Describe how lock problems can develop.
- List preventive maintenance practices that promote good lock function.
- Describe the process of opening a cylinder both with and without a key.
- Tell how to clean and lubricate lock mechanisms.
- List common problems with bolts and latches and their remedies.

Lesson 5: Key Control and Master Key Systems

Topics

What Is Master Keying?; Master Key Systems; Advantages and Disadvantages; Alternatives to Master Keying; Key Control; Advanced Key Control; Importance of Record Keeping; Key Storage; Key Tagging Procedures; Check Existing Systems; Custom Systems; Other Access Control Systems

Objectives

- Describe how a master key system operates.
- List the advantages and disadvantages of master keying.
- Differentiate between the maison system, keyed-alike system, and sectional system.
- List the information that must be included in the security survey plan, key progression chart, and key issuance files.
- Identify other access control systems, such as card-key systems, electronic systems, and push-button locks.