

Firefighter Review: Forcible Entry

Instructor Guide

Session Reference: 1

Topic: Forcible Entry

Level of Instruction:

Time Required: Three Hours

Materials:

- Acquired structure or forcible entry props
- Various hand and power tools

References:

- Truck Company Fireground Operations, Second Edition, Chapters 6 and 7
- Essentials of Fire Fighting, Fourth Edition, IFSTA, Chapters 6 And 8

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PREPARATION:

Motivation:

Objective (SPO): The student will demonstrate a basic understanding of forcible entry tools and techniques by applying the material in a practical setting.

Overview:

Forcible Entry

- Tools
- Hoisting tools
- Forcible entry through doors
- Forcible entry through windows
- Forcible entry through doors and windows practical

Session 1

Forcible Entry

- SPO The student will demonstrate a basic understanding of forcible entry tools and techniques by applying the material in a practical setting.
- EO 1-1 Describe the general categories of tools used in forcible entry.
- EO 1-2 Demonstrate the hoisting of selected hand tools using generally-accepted knots and practices.
- EO 1-3 Demonstrate the proper use of various hand and power tools to force entry through various wood and metal doors (NFPA 1001 (1997) 3-3.3).
- EO 1-4 Demonstrate the proper use of various hand and power tools to force entry through various windows (NFPA 1001 (1997) 3-3.3).
- EO 1-5 Demonstrate the proper use of various hand and power tools to force entry through various doors and windows (NFPA 1001 (1997) 3-3.3).

I. Tools (1-1)**A. Forcible Entry Implies Speed**

NOTE: Instructor should stress the concept of “try before you pry”

1. Forcible entry operations should be carried out quickly as possible
2. Forcible entry should create as little damage as possible
3. Both speed and minimal damage are achieved through proficiency with tools
4. Personal safety must be emphasized

B. Cutting Tools

1. Tools most often used are axes, bolt cutters, power saws, and air and hydraulic cutters
2. Chisel end of halligan or kelly bar can be used for cutting

C. Prying and Forcing Tools

1. Tools are halligan tool, claw tool, kelly too, pry axe, hux bar, and similar devices
2. Flathead axe often used
3. For heavy work, maul or hammerhead pick can be used
4. Hydraulic- and air-powered tools available in various sizes and types
5. Power tools should be used where heavy or barred doors common
6. Battering ram effective for breaking through heavy doors and walls

D. Lock Pullers

1. Designed to remove cylinder locks
2. Driven onto locked cylinder and then pulled with halligan or similar tool

II. Hoisting Hand Tools (1-2)

- A. Review the basic knots covered in Firefighter I, i.e., bowline, clove hitch, figure eight on a bight, and figure eight reweave.
- B. Review the used of basic knots to tie an axe, pike pole, halligan bar, ground ladder, and smoke ejector for hoisting using a portion of the hoisting rope as a tag line.
- C. Have students demonstrate use of knots by hoisting selected tools and equipment from a height of at least 20 feet.

III. Forcible Entry Through Doors (1-3)

- A. Commercial Occupancies: Front
 - 1. Almost easier to force entry through front door than rear
 - a. In older buildings, front door might be constructed of wood or wood frame with ordinary glass
 - b. In modern structures, front door made of tempered glass or heavy plate glass in strong frame
 - c. Rear doors usually made of steel or reinforced with steel
 - d. Front door protected by metal shutters, accordion-type barred grating, or similar devices
 - 2. Tempered-glass doors
 - a. For all practical purposes tempered glass cannot be broken
 - b. Attack at lock or find some other means of entry
 - c. Locks usually cylinder type located at middle or both of door
 - d. Double tempered door locks located in middle
 - e. Use lock puller to remove lock
 - f. If lock puller not available, drive chisel end of pry bar between lock and frame or between two sections to force open

- g. Alternative method is to drive bar into space above lock and then dive down to destroy locking pins
- h. For bottom locks, drive tool under door to displace keeper
- i. Hydraulic tools can be used to force apart double doors or raise lock at bottom
- j. Quickest way may be to force plate glass window near tempered glass door
- k. If tempered glass door must be broken, strike at lower corner of door with pick end of axe

3. Heavy plate-glass doors

- a. Treat same as tempered-glass doors
- b. Usually has bar across center or lower center of door
- c. Better to remove or force lock or enter nearby plate glass window

4. Wooden doors

- a. May or may not have cylinder locks
- b. Usually has bolts that engage keepers at top or bottom of door or both
- c. Double doors can be bolted to each other; pulling or forcing lock does not guarantee entry
- d. May have center panels which can be broken out for entry or opening door

B. Commercial Occupancies: Rear

1. Steel doors

- a. Before attempting to force, checked for exposed locks or hinges
- b. If lock can be seen, drive pry tool between door and frame and force open
- c. If hinges exposed, pull hinge pins or drive tool between hinge and door facing
- d. Doors with neither lock nor hinges exposed cannot be forced with standard tools

- e. Doors may be secured with a steel bar or fox lock
- f. Door that cannot be forced can be cut open with power saw
- g. Heavy steel door can be opened with battering ram
- h. Door with fox lock practically impossible to force - look for alternative entry
- i. If door with fox lock must be forced, use explosive charge

2. Roll-up doors

- a. Doors opening upward might be locked in several ways
- b. Some, usually wood, locked with modified fox lock - open by knocking out panel and reaching in to rotate handle
- c. Wooden door might be secured with pins from sides of door to track - door should be pried at bottom
- d. Ring on door may be padlocked to ring set into floor - force with tool under door against ring
- e. Wood doors can be cut with power saw or axe
- f. Metal doors do not usually have built-in locks - can be padlocked to floor or locked into their rails
- g. Manually operated doors often locked through raising chain
- h. Motorized door rigidly connected to operating mechanism
- i. First step in forcing metal doors to pry it up at both sides
- j. Force doors locked with pins or through chain by prying
- k. If door must be opened, cut hole in door with power saw

3. Light doors

- a. In many older buildings, rear doors made of wood or light metal, reinforced with bars or fitted with several locks
- b. Main lock should be forced first
- c. Additional bolts or clocks can usually be forced with hand tools
- d. If door has glass pane without bars, best to remove glass and attempt to open lock from inside

C. Dwellings and Apartments

1. Locked residential structures more easily entered than commercial structures
 - a. Front and rear doors usually same type and of light construction
 - b. Often have one or more glass panes
 - c. Multiple-unit street doors at front often unlocked
 - d. Lobby door may be secured by electric lock
2. Apartment doors
 - a. Might have to open individual doors
 - b. In older buildings, doors made of wood - cylinder locks may have been added
 - c. Frames of doors usually strong enough to support pry tool
 - d. In modern buildings, doors made of steel or wood covered with steel - secured with cylinder locks and possibly one or more bolt-type locks
 - e. In some cases, hydraulic type smoke ejector hanger can be used to force door
 - f. If door frame constructed of light metal, might not support pry tool
3. Balcony doors
 - a. Sliding glass with cylinder locks or some bolting arrangement holding at top and bottom

- b. Bolts should be forced with available tools
- c. If door particularly tough to force, drive pry tool between door and framing
- d. Two doors locked to each other can also be opened by driving pry tool between doors
- e. Avoid straining glass enough to break it
- f. Break glass for entry only for immediate rescue or when glass already stained or damaged by heat or smoke
- g. When bar or rod holds sliding section, glass will have to be broken

D. Office Buildings

- 1. Presents same problems as apartment house units
- 2. Age of building determines type of inside office door, unless remodeled extensively
- 3. Most buildings open to street during day
- 4. Outside entrances usually similar to those found in stores of same general age

E. Other Occupancies

- 1. Warehouses and factories
 - a. Usually have roll-up doors at loading platforms and heavy wooden or steel pedestrian doors
 - b. Windows on lower floors may be barred
 - c. Usually surrounded by chain-link fences - may require forcing padlock
 - d. Some occupancies protected at night by guard dogs
- 2. Combination occupancies - may present double entry problem with forcing first into building and then into individual units

IV. Forcible Entry Through Windows (1-4)

A. Double-Hung Windows

- 1. Window that allows simplest and quickest access to building

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- a. Forced by prying up bottom section at center of window
 - b. If top section made of small panes, pane nearest lock can be removed and window unlocked
 2. If must be used for entry and cannot be forced quickly, it should be completely knocked out
 - a. If at ground level, use axe or other appropriate tool
 - b. Above ground situations may be not be discovered until window is reached
 - c. Remove all splinters of glass before going through
 3. Position ladders upwind from windows
 4. When time and/or fire does not permit use of tool, knock out window with ladder
 5. Glass panes may be replaced with unbreakable plastic panes
 - a. May be cut with power saw
 - b. With other than steel frame, knock out entire window frame
 - c. May have knock out panel which can be removed by striking corner with pick of axe
- B. Casement Windows
1. Window hinged vertically with moving part of window attached to crank
 - a. Window crank usually light
 - b. Window lock located in middle or bottom of window
 2. Best way to open window is break out pane of glass, reach in and unlock window, and force it open with pry tool
 3. If heat not intense, remove second pane to operate crank
 4. Many casement windows too narrow to allow entry

5. Narrow windows often located at sides of large glass picture window

C. Other Windows

1. Design of some windows prevents use for quick access
 - a. Very heavy metal frames
 - b. Wire within glass
 - c. Horizontally hinged sections that swing out when window is opened
 - d. Center swing-out sections surrounded by stationary glass
2. Some windows simply too small to allow entry
3. Large double-pane windows expensive to replace
4. Storm windows or screens must be removed before built-in windows can be opened

V. Forcible Entry Through Doors And Windows Practical (1-5)

- A. Full protective clothing including eye protection is required for this session.

NOTE: This session should be an opportunity to practice previously learned skills at the Firefighter I level, rather than a session where new skills are learned.

- B. It may be appropriate to review the handling, use, and operation of the tools to be used prior to any student demonstrations.
- C. Demonstrate the proper use of various hand and power tools to force entry through wood and metal doors
- D. Demonstrate the proper use of various hand and power tools to force entry through various windows

SUMMARY:

Review:

Forcible Entry

- Tools
- Hoisting tools
- Forcible entry through doors
- Forcible entry through windows
- Forcible entry through doors and windows practical

Remotivation:

Assignment:

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EVALUATION: