

Public Information Bulletin

DEFENDING FIRE PROTECTION EQUIPMENT FROM THEFT

April 2008

GENERAL

In an effort to protect life safety equipment, the Clark County and City of Vancouver Fire Department fire marshal's offices have jointly developed this bulletin. Its purpose is share methods that fire protection contractors have used to deter metal thieves from stealing fire protection equipment. These methods include adding mechanical fasteners or modified installation methods which increase the time it takes to remove the appliances. By increasing the amount of time it takes to disassemble and remove fire protection equipment, it increases the odds that a metal thief will abandon the theft, or that a passerby will see the thief and alert law enforcement.



Fire protection equipment most often stolen includes Fire Department Connections (FDCs), the FDC piping, brass gate valves on standpipes and fire test headers, plus caps used on fire hydrants. When repairing systems that have been tampered with, fire protection contractors need to follow the steps below when returning a system to service.

Returning Systems to Service

If a FDC is missing, back flush the system or conduct an internal pipe inspection in accordance with NFPA Standards

1. Install the new FDC and protective caps
2. Secure the FDC using any method or combination of methods listed below
3. Submit a copy of the service report indicating the system was returned to service to the proper Fire Marshal's Office

Following are some methods that can be considered to keep this important life safety equipment from being stolen.

THEFT PREVENTION METHODS

Securing FDCs or Gate Valves to Piping

Method 1 – Embedded Screws

Once the FDC is threaded onto the appropriate pipe (wall or post mount) connection, drill two or more holes through the threaded connection points. Thread the appropriate-sized screw into the drilled holes so the threads pass through both the FDC appliance and the pipe. Removing the FDC will require

removal of the small screws first; thus increasing the time and effort to remove the FDC.

Note: Tamper resistant or torx style screws will make it more difficult and time consuming for unauthorized personnel to remove the FDC as they may not have the appropriate screwdrivers readily available. Also be sure that the length of the screws does not impede operation of installed clapper valves.



Method 2 – Pinning Threaded Connections

In the same manner as Method 1, drill the appropriate sized holes through the threaded connection points, and insert a pin.



Method 3 – Thread Compound

Several contractors have identified the use of various thread compounds. This method is anecdotal at best as there has been no validation of effectiveness. Loc-Tite brand carries several product lines in which the technical data sheets provide evidence of additional bonding strength between metal threads. The disassembly instructions even suggest the need for an applied heat source to break the bond when conventional tools don't work.

Securing FDC Supply Pipes

While the removal of FDCs appears to be the most common theft, metal thieves have also removed the attached pipes. It isn't known if they were interested in the entire pipe or whether the connection between the pipe and FDC just had a stronger thread connection allowing the opposite pipe connection to break free when unscrewed.

Method 1 – Securing of Pipes – Non-grooved Pipe Connections

In situations where grooved pipe connections cannot be utilized, consider the placement of a riser clamp or other pipe clamp device on the underside of the vault or inside the building. In the event that the FDC and piping are unscrewed, the pipe will not be able to be removed without removing the clamp behind the wall or within the vault.



Method 2 – Securing of Pipes – Grooved Pipe Connection

To keep the piping between the FDC and sprinkler check valve from being unthreaded, consider the use of a grooved fitting connection within the bottom of the vault or in the building. In this situation, if the FDC is adequately secured to the pipe, any rotation of the FDC will only spin the pipe at the next fitting. It will prevent the pipe from unthreading and being removed. Please be sure that all connections meet the requirements of NFPA 13, Section 6.5.3 and/or 10.3.3.

Securing Gate Valves to Pump Test Headers

While the life safety need for gate valves on fire pump test headers is not as high as gate valves on standpipe connections, similar techniques can be employed. Using tamper resistant screws or pinned connections drilled and secured through the thread bases of the connection or some type of thread compound may be effective.



In situations where theft becomes frequent or repeated, a third alternative is to submit a written appeal to the respective Fire Marshal's Office asking to remove the valves and possibly the test header during non-use periods. The appeal should include a

description of the location where the necessary equipment will be stored on site, and an owner's acknowledgement of the potential added cost to the yearly servicing to reinstall the hardware to complete the flow test. It is the owner's decision to determine the most cost-effective approach but any removal of equipment must be approved in writing.



Locking FDC Caps

Fire agencies in Clark County are now outfitted with keys to use locking FDC caps available through Knox Company. One method FDC metal thieves may be practicing is the use of a metal 'cheater' bar inserted into open hose connections to unthread the FDC for quick removal without the need for a large pipe wrench. The use of locking FDC caps may prevent this from happening.



The installation of locking FDC caps is an option to business owners. Contractors may suggest them to customers in the event of frequent service visits as resulting from missing or broken caps due to tampering.



Business owners will need to purchase the locking FDC caps directly from Knox Company by obtaining the proper order form from the local fire agency or via their website (<http://www.knoxbox.com>). Fire protection contractors can purchase the keys needed to install/remove locking FDC caps directly from Knox Company eliminating the need for the local fire agency to visit the site to assist with the installation or removal for required testing schedules. It is a requirement to notify the local fire agency whenever locking FDC caps are installed so that the locations can be tracked.

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