

U.S. Fire Administration / National Fire Academy

Coffee Break Training

Topic: Fusible Link Placement in Range Hood Suppression Systems

Learning objective: The student shall be able to describe the correct fusible link placement for releasing commercial kitchen fire suppression systems.

Automatic fire protection systems installed in commercial kitchen hood and duct assemblies generally are operated by fusible links installed in strategic locations in the exhaust air flow. These locations vary by manufacturer and cooking line arrangement, but generally include releasing mechanisms in the exhaust duct, plenum, and above specific appliances.

The releasing mechanism usually is operated by a stainless steel cable that is stretched taut (under tension) connecting all of the fusible links and the suppression system control head. When a link melts and the cable slackens, the control head releases the fire suppression agent through the system.

One of the leading causes of suppression system failures is improper link placement. The link must be free to travel toward the control head without hanging up on its bracket or the conduit through which the cable passes.



In this illustration, this fusible element is called the “terminal” link; it is the farthest link from the agent control head on the discharge control cable. Notice how the fusible link is on the right-hand side of the bracket. When it releases, it is free to travel several inches to the left. If it were too far to the left, it might hang up on the bracket and not allow the fire suppression agent to be released.

Always refer to the manufacturer’s installation manual for specific link placement.