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Product Alert - Counterfeit Tyco Sprinklers   October 22, 2019

Type of Notification: Counterfeit

FM Approvals has been made aware of counterfeit automatic fire sprinklers found in Tanauan City in the Batangas province of the Philippines bearing an FM Approvals mark. FM Approvals has neither tested nor certified these products.

Product Identity: The sprinklers bear the sprinkler identification number (SIN) "TY7226" which is designated to Tyco Fire Products, however, the identity of the manufacturer is unknown.

Description: 3/4" NPT fusible type quick response storage (formerly ESFR) pendent style sprinklers

FM Approval status: **Not FM Approved**

Hazard involved: These automatic sprinklers cannot be relied upon to react to or control a fire. Failure by any of the following mechanisms is possible: failure of the thermal element, orifice leakage, premature or delayed operation, ejection of the deflector, inadequate or excessive discharge rate, corrosive attack, failure to operate, failure to produce an adequate discharge pattern, etc.

The sprinklers were not produced by Tyco Fire Products.

If you suspect you are in possession of counterfeit sprinklers bearing the FM Approvals certification marking, please bring that to the attention of:

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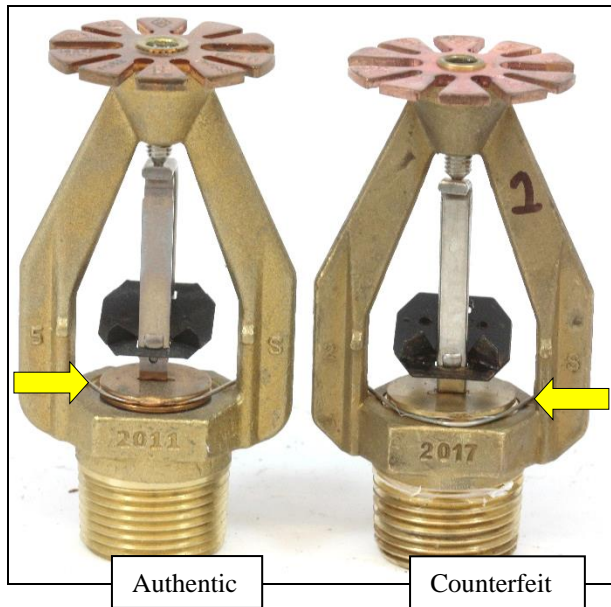
F 900/Rev. 0

Figure 1. Comparison of a sprinkler found bearing the counterfeit FM Approvals mark and what appears to be a pendent style deflector (right) and an authentic Tyco TY7226 pendent sprinkler (left). The sprinklers appear very similar in profile, and the most noticeable difference is the color and shape of the orifice cap (the part indicated by the yellow arrows). The cap in the authentic sprinkler has a coppery color, while the cap in the counterfeit sample is a yellower, brass like color. The bent wire ejection spring is pinched into a groove on the cap in the authentic sprinkler to retain the spring with the cap and avoid it lodging on the deflector. The ejection spring in the counterfeit sprinkler is not attached to the cap.
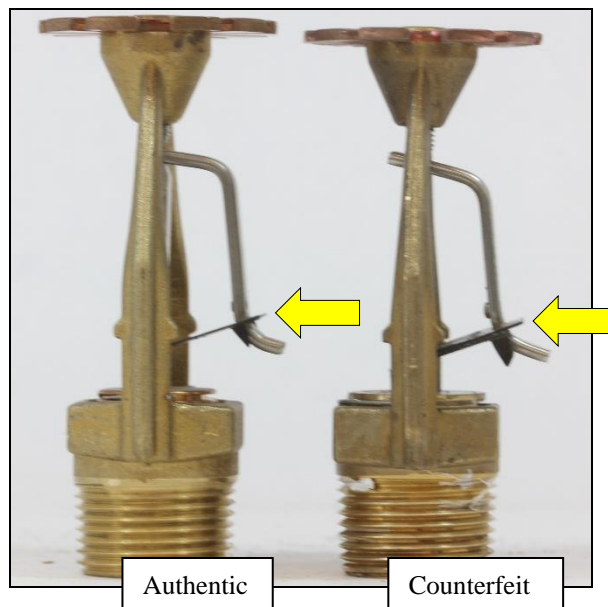

Figure 2. Authentic TY7226 (left) and a counterfeit sprinkler (right), with arrows indicating the fusible links, with noticeable difference in thickness. The fusible link in the authentic TY7226 is made from stock that is almost five times thinner than what is used in the counterfeit sprinkler (0.005 in. thick vs. 0.024 in. thick). The thinner link in the authentic sprinkler will likely result in a much lower response time index (RTI) value than the one used in the counterfeit sprinklers. A low RTI is crucial for the intended performance of a quick response storage type sprinkler.
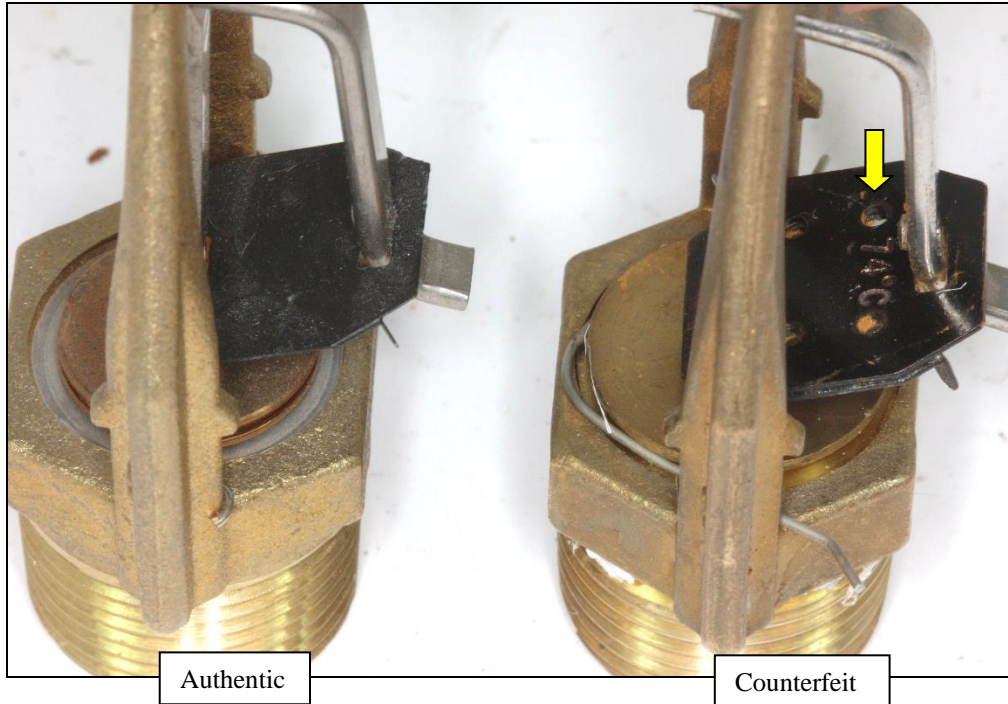
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Figure 3. Authentic TY7226 (left) with no holes in the fusible element and a counterfeit sprinkler (right) with four holes punched through both sides of the element, indicated by the yellow arrow. The authentic fusible element (left) has small dimples in the link used to align the two halves during soldering. Rather than dimples, the link in the counterfeit sprinkler (right) has four holes punched through the link assembly indicated by the yellow arrow. The counterfeit sprinklers also have the nominal operating temperature "74°C" stamped into the surface of the link while authentic links only have a stamping of the manufacturer's initials "TFP" (Tyco Fire Products).
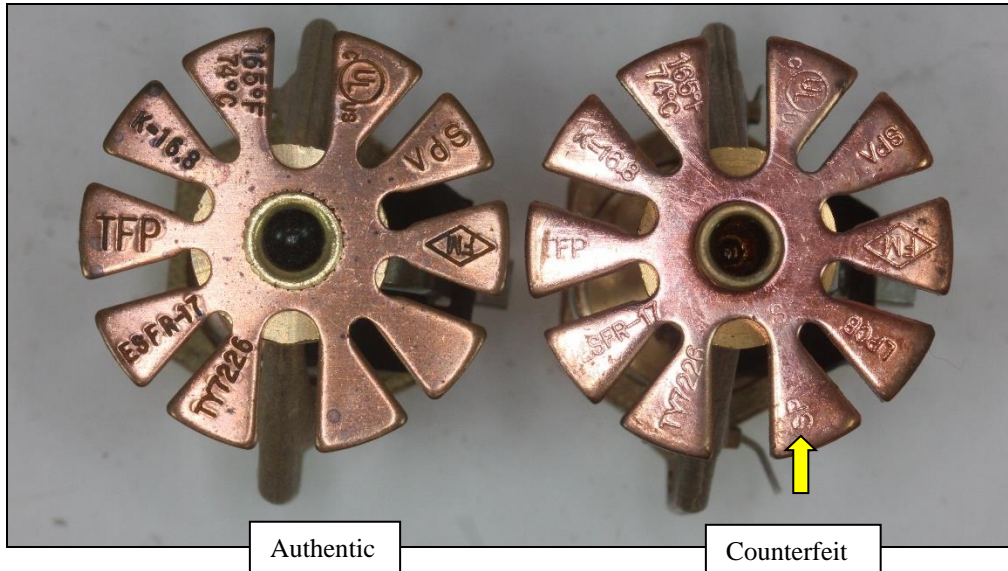
Figure 4. Authentic TY7226 sprinkler deflector (left) and a counterfeit deflector (right). The stampings on the deflectors are nearly identical and in the same relative positions but are quite a bit shallower on the counterfeit deflector. The deflector materials are different but look very similar to the eye. Because the authentic sprinkler is a slightly older year of manufacture (2011) it does not have the LPCB marking, however, newer authentic versions do have that marking. None of the authentic sprinklers, however, will have the "SP" marking that appears on the counterfeit sprinklers (indicated by the yellow arrow).