



## **Product Alert – Counterfeit Tyco Fire Products - Automatic Fire Sprinklers (TY9223)**

**July 14, 2023**

### **Type of Notification: Counterfeit**

FM Approvals has been made aware of counterfeit automatic fire sprinklers found in Brazil bearing an FM Approvals mark. FM Approvals has neither tested nor certified these products.

**Company Identity:** Unknown

**Product Identity:** The sprinklers bear the sprinkler identification number (SIN) “TY9223” which is designated to Tyco Fire Products and the letters “TFP,” however, these were not made by Tyco Fire Products. The identity of the manufacturer is unknown.

**Description:** 1 inch NPT fusible type pendent style sprinkler

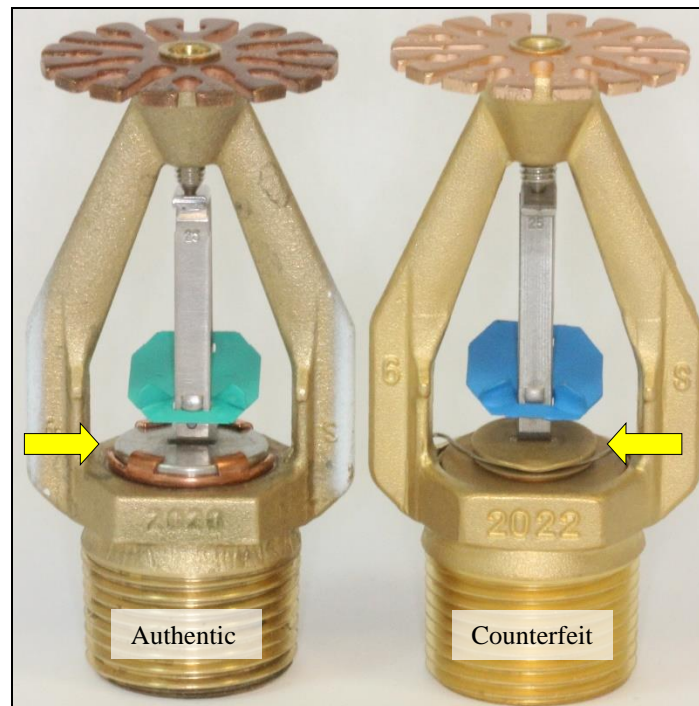
**FM Approval Status:** Not FM Approved.

**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, separation of the deflector, inadequate or excessive discharge rate, corrosive attack, failure to operate, failure to produce an adequate discharge pattern, etc.

If you suspect you are in possession of counterfeit TY9223 sprinklers bearing the FM Approvals certification marking or if you have any information relative to these referenced products, please bring that to the attention of:

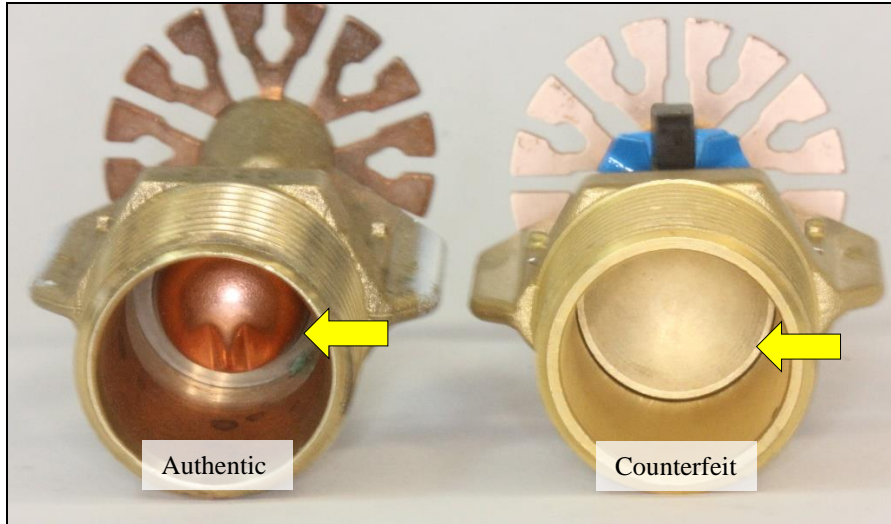
**Antonio L. Pires**  
**FM Approvals, Quality Department**  
**Norwood, MA, USA**  
**+1 (1)781 255 4825**  
**Email: [Antonio.pires@fmapprovals.com](mailto:Antonio.pires@fmapprovals.com)**

**Figure 1** shows a profile view of an authentic Tyco TY9223 next to one of the counterfeit sprinklers. The sprinklers appear very similar, and the most noticeable difference is the color and shape of the orifice cap (the part indicated by the yellow arrows). The cap assembly in the authentic sprinkler consists of a copper cap with a stainless-steel insert while the cap in the counterfeit appears to be solid brass. The counterfeit also includes a bent wire installed through a groove in the cap (typically known as an ejection spring or kick spring). Authentic TY9223 sprinklers do not use an ejection spring. The white paint on the frame arms of the authentic example indicates the intermediate temperature classification of this example. Authentic TY9223 sprinklers may also come without painted frame arms in the ordinary temperature range.



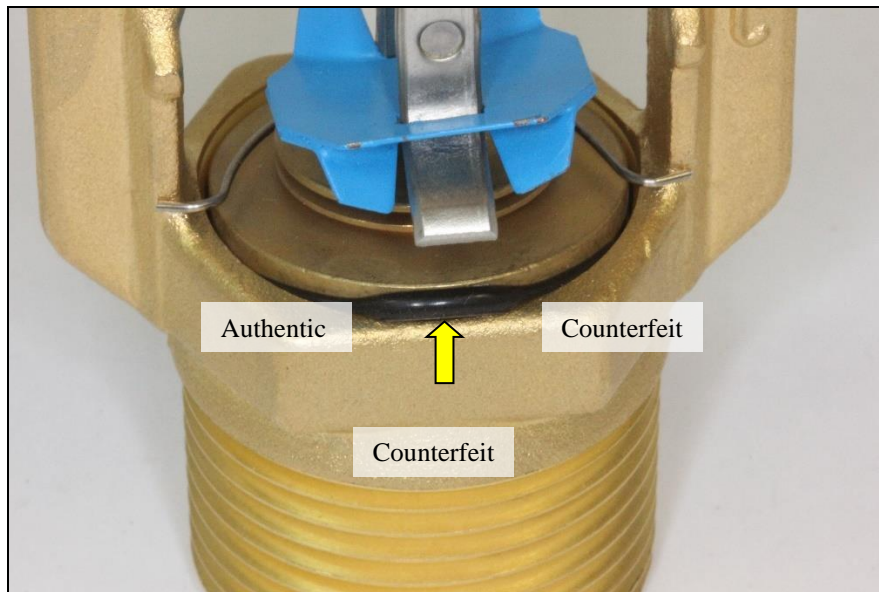
**Figure 1.** Comparison of one of the counterfeit TY9223 sprinklers (right) and an authentic Tyco TY9223 pendent sprinkler (left).

**Figure 2** on the next page shows the inlets of the authentic (left) and counterfeit (right) TY9223 sprinklers. The inlet side of the orifice cap in the authentic TY9223 is domed and made of copper while the counterfeit has a flat profile and appears to be brass. The PTFE-lined spring washer type seal is visible around the outside of the cap in the authentic sprinkler. The counterfeit sprinkler has no portion of the seal visible.



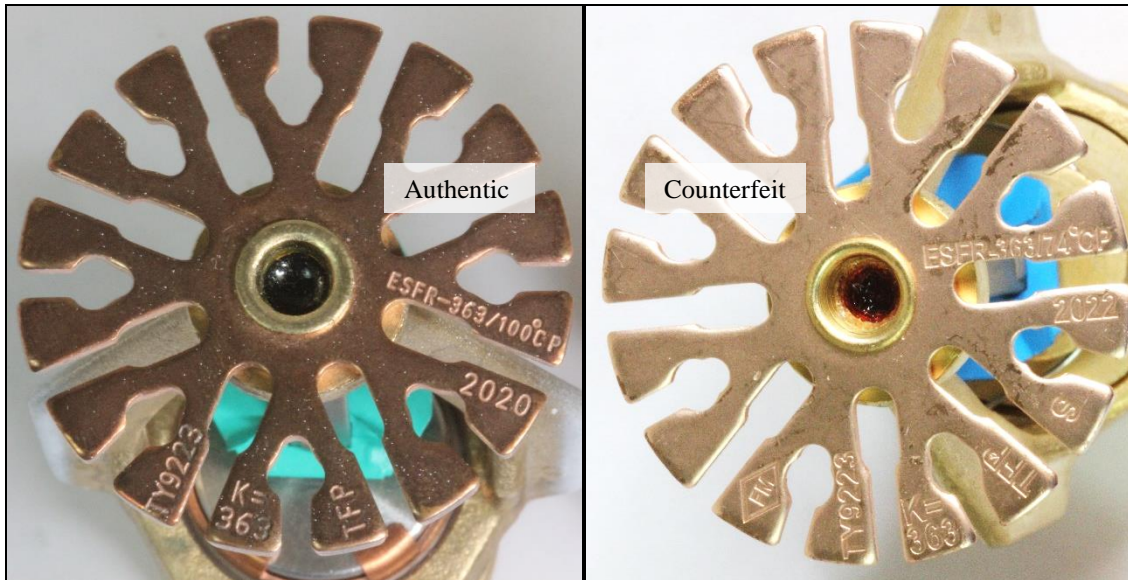
**Figure 2.** Authentic TY9223 (left) and a counterfeit TY9223 (right). The inlet side of the orifice caps differ in color and shape.

**Figure 3** on the next page shows close view of the orifice cap counterfeit sprinkler. Part of the seal is visible from this angle and is clear that it is an O-ring. O-ring type seals are not used in any current FM Approved sprinklers and have not generally been used since 2001 when the Consumer Product Safety Commission recalled some O-ring sprinklers after discovering they failed to operate after some time in service.



**Figure 3.** Counterfeit TY9223 sprinkler seal. The sealing element was partially dislodged from its seat and is clearly an O-ring.

**Figure 4** shows the deflectors of the authentic TY9223 and one of the counterfeit sprinklers. 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 (2020) it does not have the FM Approvals marking, however, 2021 and newer authentic versions do and in the same relative position as the counterfeit deflector.



**Figure 4.** Authentic TY9223 deflector (left) and counterfeit deflector (right).