



Product Alert

March 24, 2014

Type of Notification: Counterfeit

FM Approvals has been made aware of an automatic fire sprinkler bearing a counterfeit FM Approvals mark. FM Approvals has neither tested nor certified this product.

Product Identity: The sprinkler bears the markings “TYCO” and “UL” on the wrench boss but the identity of the manufacturer is unknown. The product is similar in appearance to the Tyco Fire Products TY3251 sprinkler.

Description: ½” NPT frangible bulb type automatic sprinkler

FM Approval status: Not FM Approved, never tested

Geographic area: Mumbai, India

Hazard involved: There is no evidence these products have ever been tested to the requirements of any testing and certification organization, including FM Approvals. As such, 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, bulb strutting (incomplete fracture), ejection of the deflector, inadequate or excessive discharge rate, corrosive attack, failure to operate, failure to produce an adequate discharge pattern, etc. Of further note is the suspected use of an o-ring type orifice seal, a design which has historically been proven to be unreliable and possibly dangerous. Some o-ring type sprinklers have been subject to mandatory recall per the U.S. Consumer Product Safety Commission.

The sprinkler was not produced by Tyco Fire Products.

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

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All photographs contained in this document are courtesy of Tyco Fire Products.

Figure 1 below shows an authentic Tyco TY3251 K5.6 standard spray pendent type sprinkler on the left and the counterfeit sprinkler on the right. The shape of the counterfeit sprinkler frame is quite different from the authentic version. Both bear the mark “TYCO” on the wrench boss, however the counterfeit sprinkler uses raised lettering while the authentic version is recessed. The bulb seats, identified by the arrow, are very different in appearance. The authentic sprinkler uses a stamped copper seat while the counterfeit appears to be machined brass. Additionally, the inlet threads on the authentic sprinkler are bare brass as they were machined after the chrome plated finish was applied. The counterfeit sprinkler appears to have been plated after being machined as the inlet threads have plating on them.

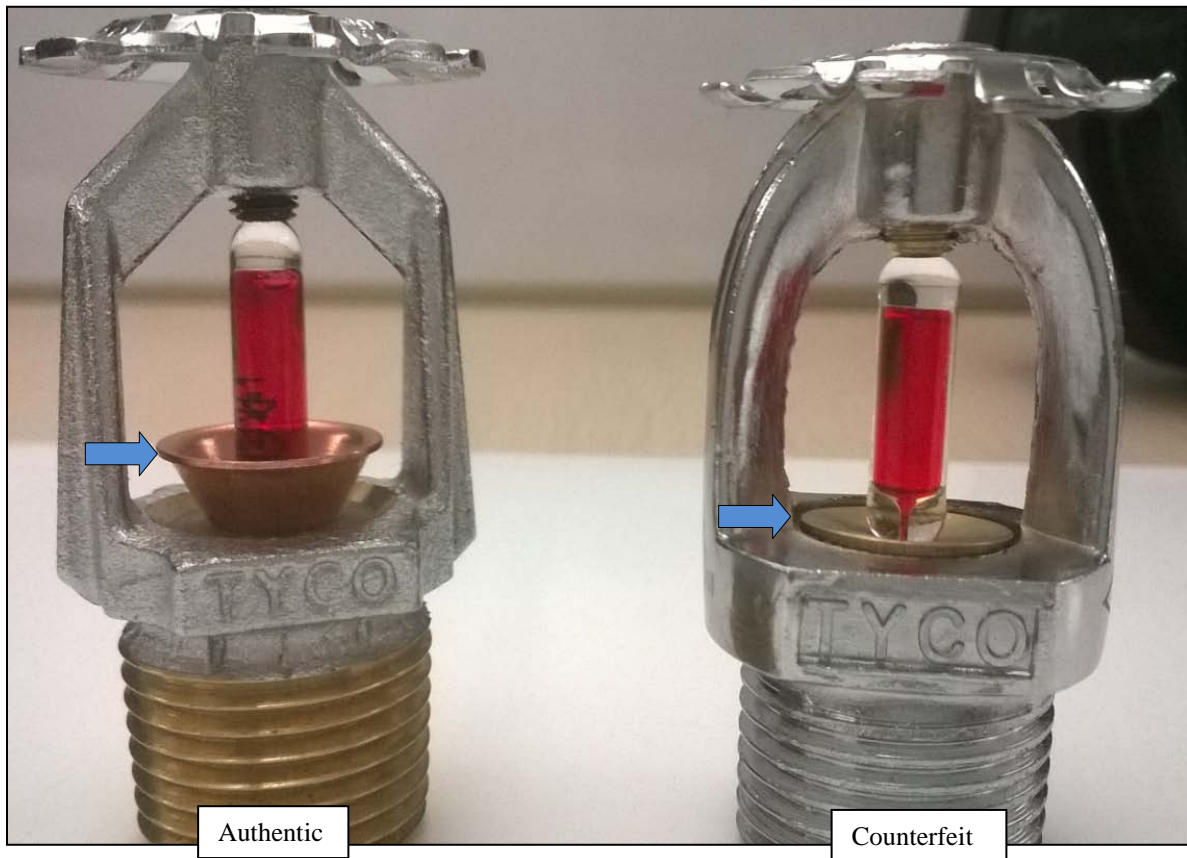


Figure 1 – Profile view of an authentic Tyco TY3251 sprinkler (left) and the sprinkler identified as counterfeit (right)

Figure 2 below shows a close view of the deflectors of an authentic Tyco TY3251 sprinkler (left) and the counterfeit sprinkler (right). The deflector designation on the authentic sprinkler reads “SP” while the counterfeit sprinkler uses “SSP.” Both sprinklers bear the “LPC” agency marking as well as the letter “S,” which in the case of the authentic sprinkler designates its manufacturing location as Stockport, UK. The authentic TY3251 also carries the VdS marking, the nominal operating temperature in Fahrenheit “155°F,” and the UL Listed and FM Approved markings. The only temperature marking on the counterfeit sprinkler is in Celsius and the other counterfeit agency markings appear on the frame arms (shown in Figures 3 and 4 on the following page).



Figure 2 – Deflector and deflector markings on an authentic Tyco TY3251 sprinkler (left) and on the counterfeit sprinkler (right)

Figures 3 and 4 below show side views of the counterfeit sprinkler and an authentic TY3251 sprinkler. The frame arms on the counterfeit sprinkler are ground smooth and do not have a stiffening ridge of material like the authentic sprinkler. Also visible in Figure 3 is the counterfeit FM Approvals marking, shown by the arrow. A counterfeit UL Listed marking is applied on the opposite side of the frame and is visible in Figure 4 below.

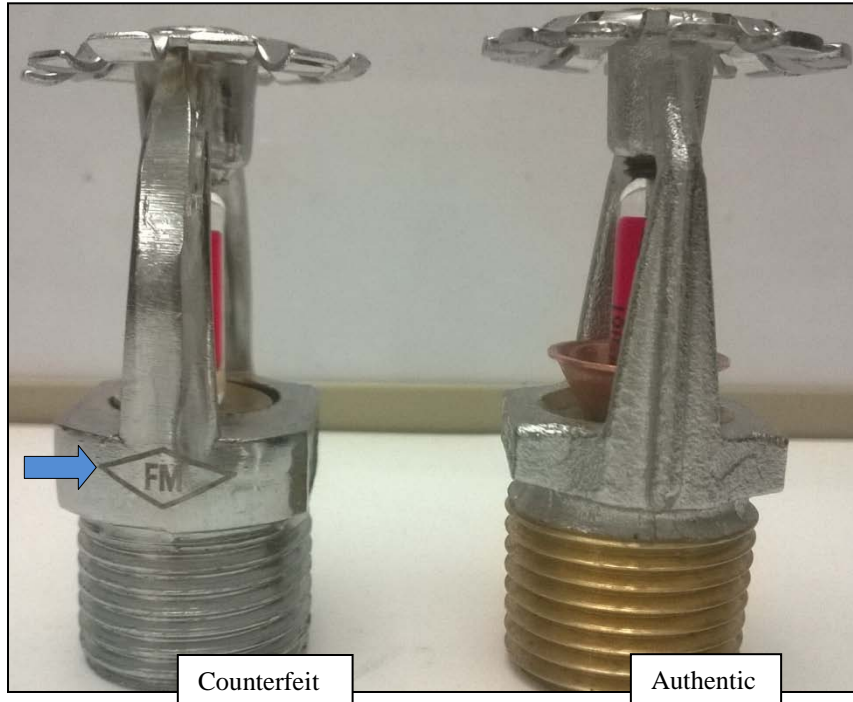


Figure 3 – Side view of the counterfeit sprinkler (left) and an authentic Tyco TY3251 sprinkler (right)

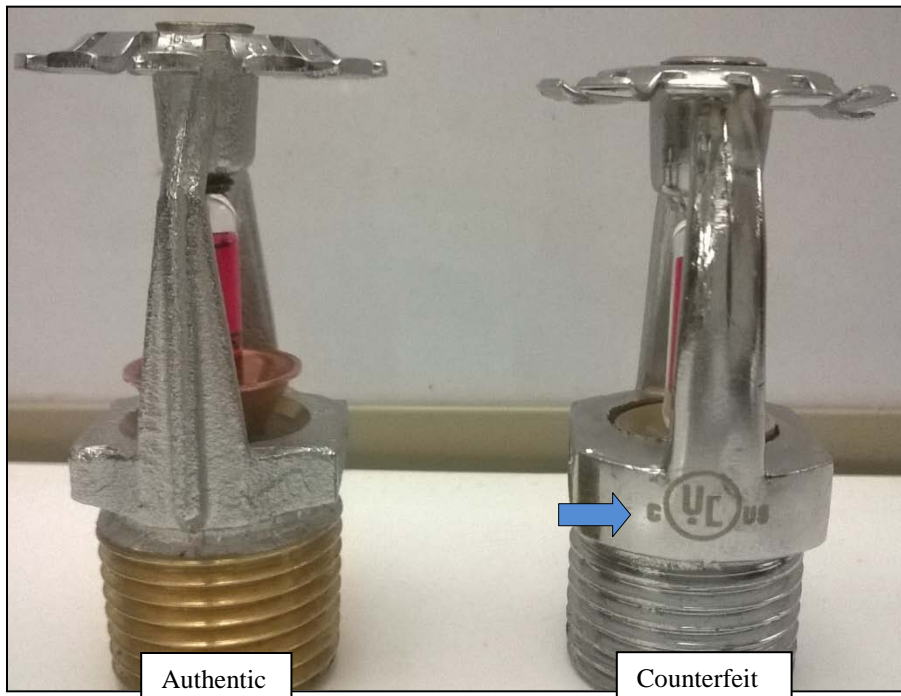


Figure 4 - Side view of an authentic Tyco TY3251 sprinkler (left) and counterfeit sprinkler (right)

Figure 5 below shows the inlets of an authentic TY3251 sprinkler (left) and the sprinkler identified as counterfeit (right). The arrows indicate the protrusions of the bulb seats. The counterfeit bulb seat is different in color and shape, and has visible tool marks from machining while the authentic version has a smooth finish as it was stamped rather than machined.



Figure 5 – Inlets of an authentic Tyco TY3251 sprinkler (left) and counterfeit sprinkler (right)