



Product Alert

April 10, 2017

Type of Notification: Counterfeit

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

Product Identity: The sprinklers bear the marking “TYCO” or “GLOBE” on the wrench boss, however, the identity of the manufacturer is unknown. (See “Identification of Counterfeit Sprinklers” attached)

The sprinklers were not produced by Tyco Fire Products or Globe Fire Sprinkler Corporation.

Description: ½” NPT frangible bulb type automatic pendent 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, 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.

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

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Identification of Counterfeit Sprinklers

Figure 1 below shows a comparison between the counterfeit pendent style sprinkler (left) with an authentic Tyco TY3251 sprinkler (middle and right). The sprinkler on the left uses a glass bulb marked “ATOP Ø5” while authentic Tyco TY3251 sprinklers use only the Job model G5 glass bulb or Geissler 5 mm bulb (shown in Figure 2 below). The orifice cap used in the sprinkler of the left (which also supports the pip end of the glass bulb, referred to as the “button” by Tyco) appears to be machined from brass, while authentic Tyco TY3251 sprinklers only use buttons formed from copper. Additionally, the machining of the authentic Tyco sprinkler frame is completed after plating (which includes the inlet threads, the waterway, and the orifice seal seat) leaving bare brass showing in these areas. The counterfeit appears to have been plated last, showing no exposed brass.

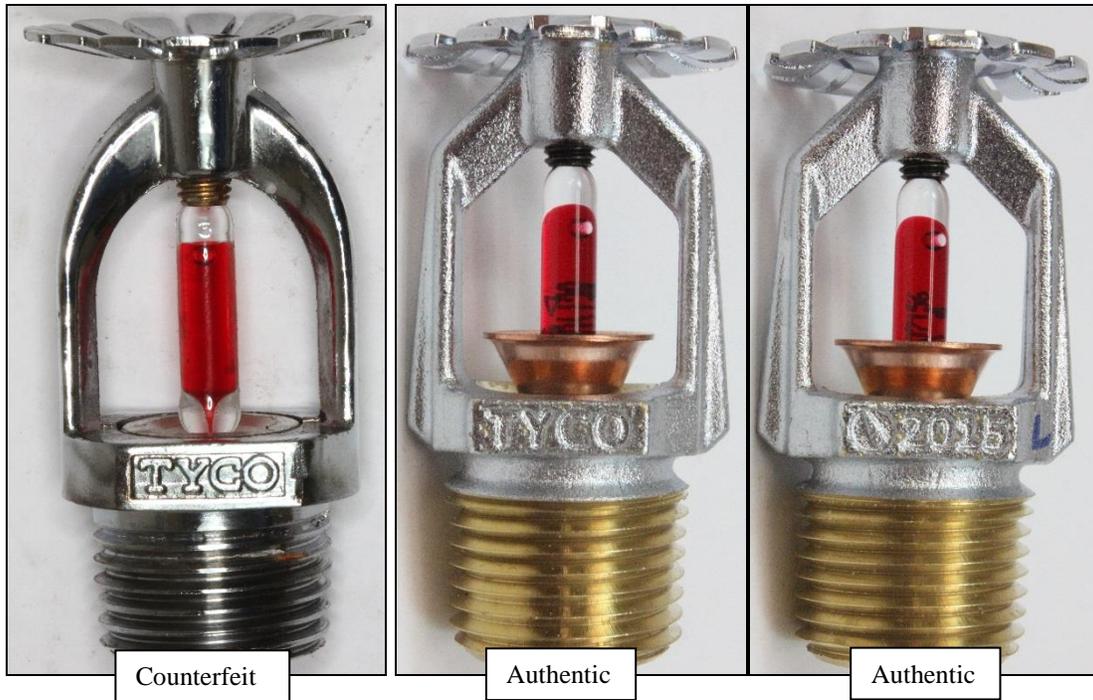


Figure 1. Comparison of a sprinkler found bearing the counterfeit FM Approvals mark and what appears to be a pendent style deflector (left) and an authentic Tyco TY3251 (middle and right)

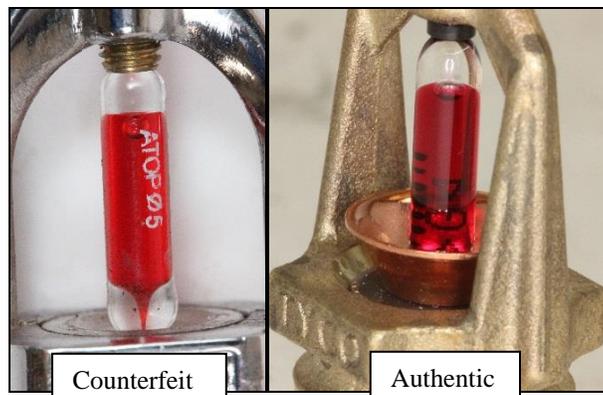


Figure 2. Geissler marking on the glass bulb of an authentic Tyco TY3251 sprinkler (right) next to an example of the counterfeit with the bulb marked “ATOP Ø5” (left)

Figure 3 below shows a comparison of the deflector markings on the counterfeit pendent style sprinkler (left) and an authentic TY3251 (right). The counterfeit also has the CCCF sprinkler designator “T-ZSTX15-68°C”. In contrast the authentic TY3251 is marked with an authentic FM Approvals mark as well as the nominal operating temperature in both Fahrenheit and Celsius, the sprinkler identification number (SIN) “TY3251,” and the spray pendent designation “SP”. Additionally, the deflector of the counterfeit sprinkler has noticeably thinner tines which are bend away from the frame, whereas the authentic sprinkler deflector uses tines with a compound bend towards the sprinkler frame.

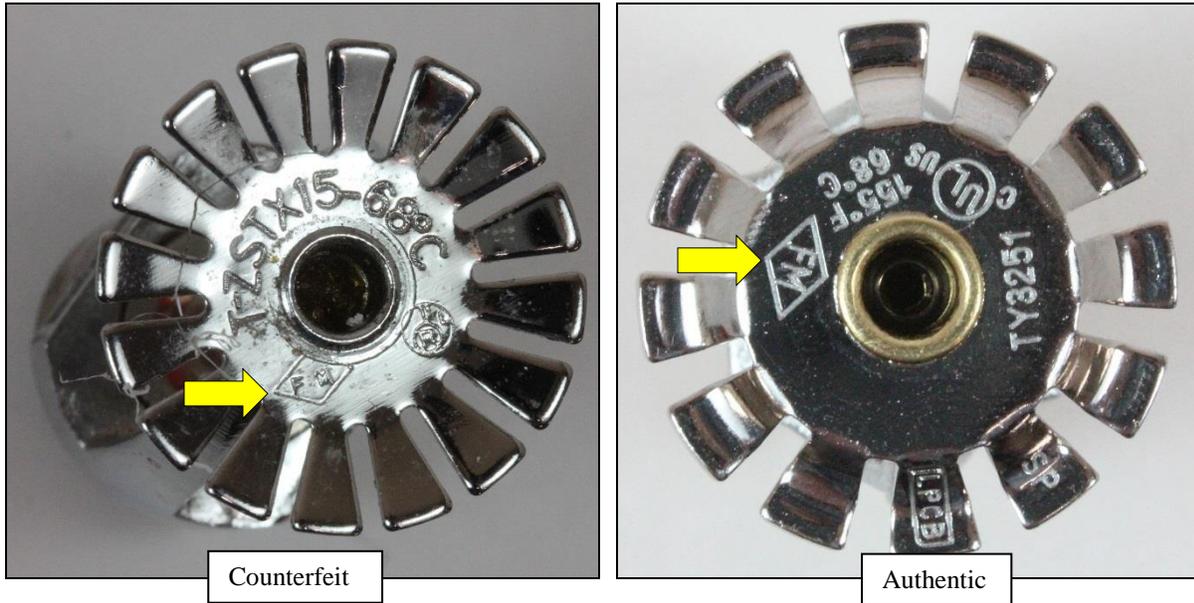


Figure 3. The counterfeit FM Approvals mark (left) and an authentic FM Approvals mark on a Tyco TY3251 (right).

Figure 4 below shows the counterfeit pendent style sprinkler found bearing a counterfeit FM Approvals mark (left) as well as the marking “GLOBE” on the wrench boss and an authentic Globe GL5651 pendent sprinkler (right).

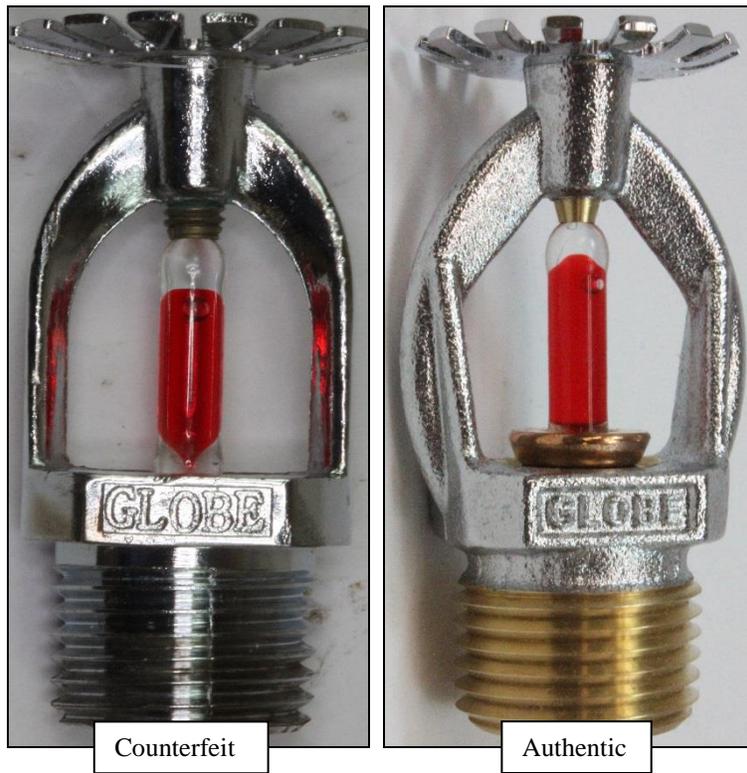


Figure 4. Comparison of a sprinkler found bearing the counterfeit FM Approvals mark and what appears to be a pendent style deflector (left) and an authentic Globe GL5651 (right).

Figure 5 below shows the pendent style deflector bearing the counterfeit FM Approvals mark (left) and an authentic Globe GL5651 (right). The markings on the counterfeit sprinkler are the same as those seen on the counterfeit Tyco sprinkler shown in Figure 3. The deflector of the authentic Globe sprinkler is marked with similar information as the authentic Tyco sprinklers, as well as the year of manufacture “2016” (the year of manufacture appears on the wrench boss of authentic Globe sprinklers).

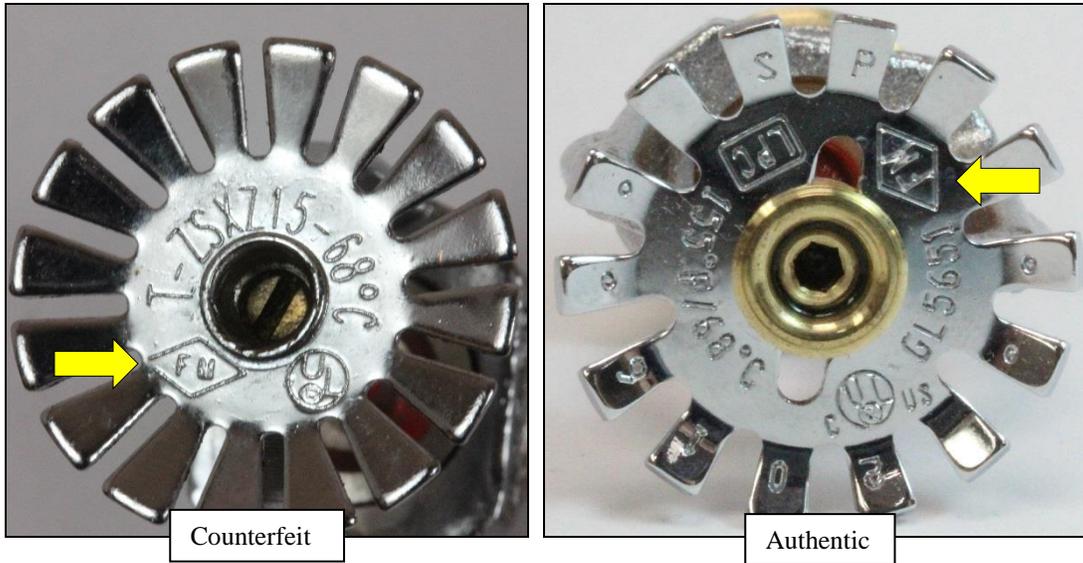


Figure 5. Counterfeit FM Approvals mark on the pendent style sprinkler (left) and the authentic FM Approvals mark on an authentic Globe GL5651 sprinkler (right).

Figure 6 below shows the markings on the different frangible glass bulbs used in the counterfeit Globe sprinklers (left) and authentic Globe sprinklers (right). The bulb in the counterfeit sprinkler is marked with the characters “YD φ5” while the authentic Globe sprinkler uses a bulb made by Job Thermo Bulb model G5.

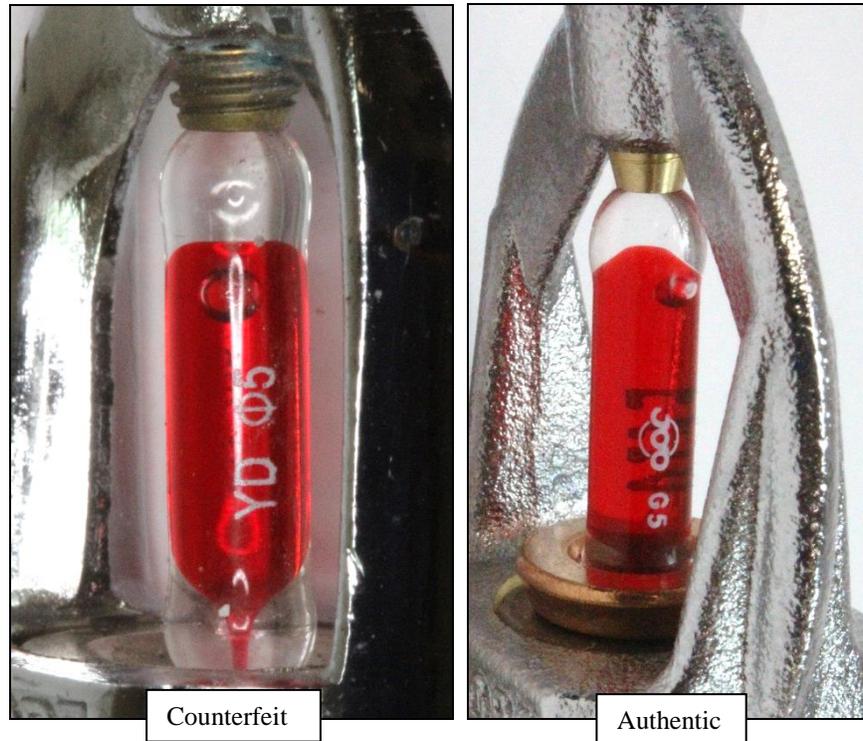


Figure 6. The different bulbs used in the counterfeit Globe sprinklers (left) and authentic Globe sprinklers (right)

Figure 7 below shows a comparison of the water side of the orifice seal caps used in the counterfeit sprinklers (left) authentic Tyco TY3251 sprinklers (middle) and authentic Globe GL5651 sprinklers (left). Both authentic sprinklers use caps cold formed from copper while the counterfeit sprinkler uses a solid machined cap of unknown material. Further, the counterfeit sprinkler uses an o-ring seal which is not visible from either side of the sprinkler while both authentic sprinklers use PTFE coated Belleville washer seals, which are visible from both sides of the sprinklers.

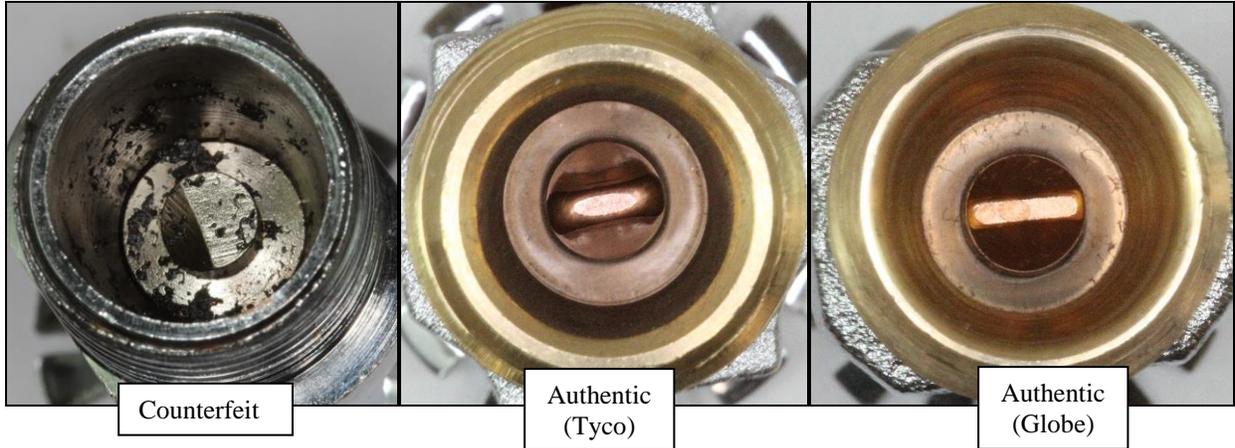


Figure 7. Differences in appearance of the water side of the orifice caps and seals of one of the counterfeit sprinklers (left) and authentic Tyco and Globe sprinklers (middle and right, respectively).