FM Approvals

Member of the FM Global Group

Product Alert

Type of Notification: Counterfeit Automatic Sprinklers

FM Approvals has been made aware of the discovery of two counterfeit automatic sprinklers manufactured to resemble the products described below:

Company Identity: Reliable
Name: The Reliable Automatic Sprinkler Company
Address: 1470 Smith Grove Road
Contact information: Mr. Paul Sasser, psasser@reliablesprinkler.com

Product Identity: R1715
Description: Standard spray pendent, standard response, bulb type, K5.6 automatic sprinkler
Make/Model: F1
Nameplate data: [no nameplate]
FM Approval status: Previously FM Approved, delisted in 2010

Product Identity: R1725
Description: Standard spray upright, standard response, bulb type, K5.6 automatic sprinkler
Make/Model: F1
Nameplate data: [no nameplate]
FM Approval status: Currently FM Approved

Hazard involved:

There is no evidence these counterfeit products have ever been tested to the rigorous requirements of any testing and certification organization, including FM Approvals, and we advise that use of these products present a serious safety concern for the user. These concerns may include (but are not limited to) the following: failure of the thermal element, orifice leakage, early operation, late operation, bulb strutting (incomplete fracture), deflector blow off, 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 R1715 or R1725 sprinkler bearing the FM Approvals certification marking, please bring that to the attention of:

Thomas G. McCarty
FM Approvals, Quality Department
Norwood, MA, USA
+1 (1)781 255 4802
Email: thomas.mccarty@fmapprovals.com

All photographs were furnished by the Reliable Automatic Sprinkler Company and are reprinted with permission.

R1715

Figure 1

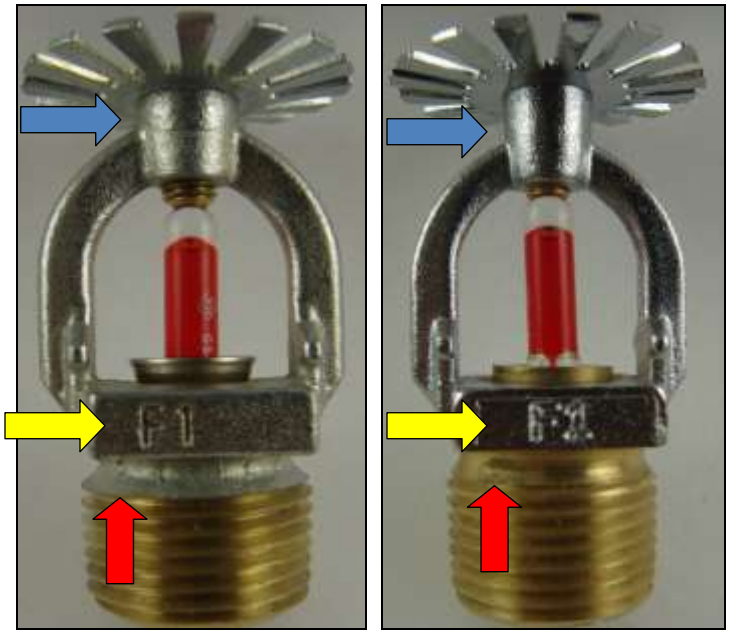


Figure 1 above shows an authentic Reliable R1715 on the left and the counterfeit version on the right. The blue arrow indicates the difference in standoff distance between the deflector and the top of the frame arms. This distance is much greater on the counterfeit version.

The yellow arrow indicates the difference in model series casting marks. The "F1" cast into the authentic frame is offset left while the counterfeit mark is centered. The fonts used are also different.

The red arrow indicates the difference in inlet machining. The authentic sprinkler has no machined undercut beneath the frame base. The counterfeit sprinkler is machined from the top of the threads to the underside of the frame base, exposing the brass beneath the chrome plating.

Figure 2

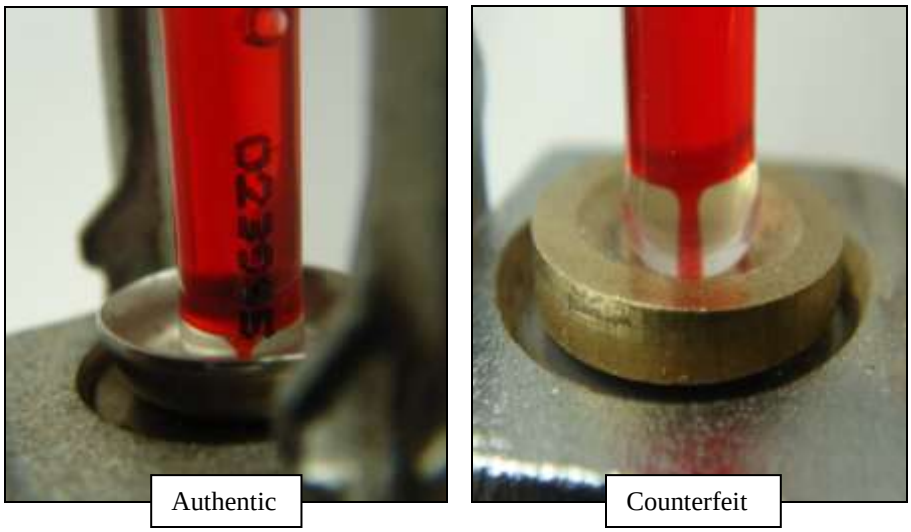
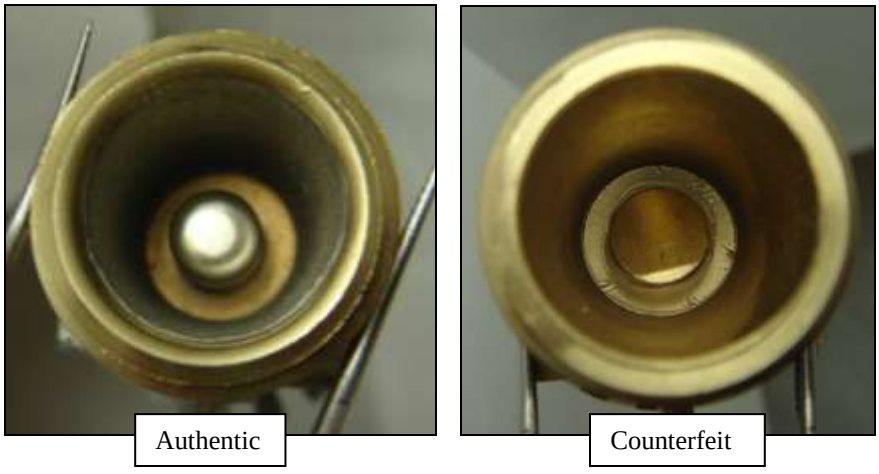


Figure 2 above shows the difference in the orifice seal cap (referred to as a "cup" by Reliable). The authentic sprinkler utilizes a cup that is drawn (similar to an extrusion) while the counterfeit sprinkler utilizes one machined from a solid piece of material. Figure 3 below shows the difference in appearance of the underside of this piece, as viewed through the sprinkler inlets.

Figure 3



Also notable in Figure 3 is the lack of chrome plating on the walls of the inlet in the counterfeit version due to machining. The authentic sprinkler retains the chrome from the plating process as Reliable utilizes an "as-cast" waterway.

Figure 4

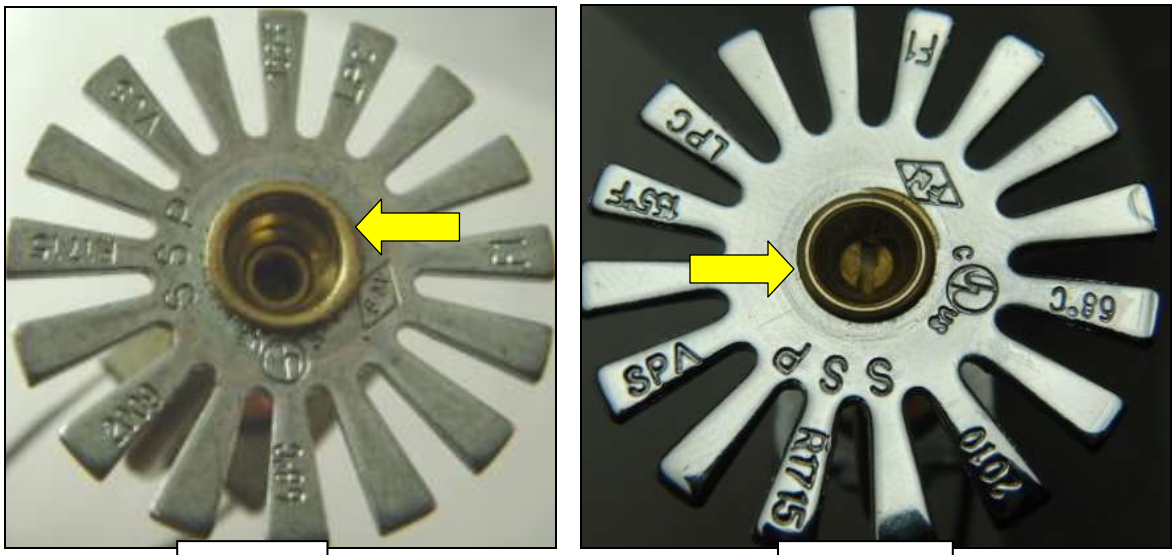


Figure 4 above shows the deflectors of the authentic and counterfeit sprinklers in detail. The deflectors themselves are nearly identical. A noticeable lack of stamping quality can be observed in particular for the FM Approvals marking on the counterfeit sprinkler. The most noticeable difference is the deflector attachment (rollover) which is wider and more substantial on the authentic sprinkler than on the counterfeit sprinkler. The load screws used, the driven end of which can be seen within the bounds of the rollover, are different as well. Both use headless type screws, however the authentic sprinkler is a socket hex drive screw while the counterfeit is a slotted type.

Figure 5

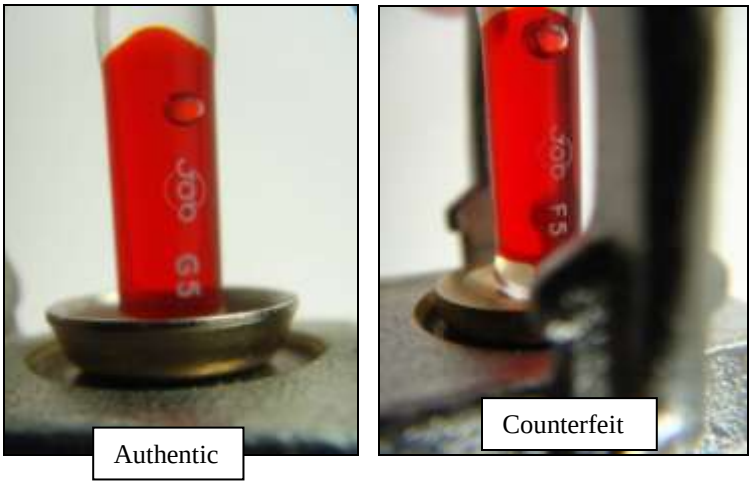


Figure 5 above shows close views of the glass bulbs used as the thermal activation element in both sprinklers. The authentic sprinkler utilizes the Job model G5 (5 mm) bulb while the counterfeit sprinkler utilizes the Job model F5.

Figure 6

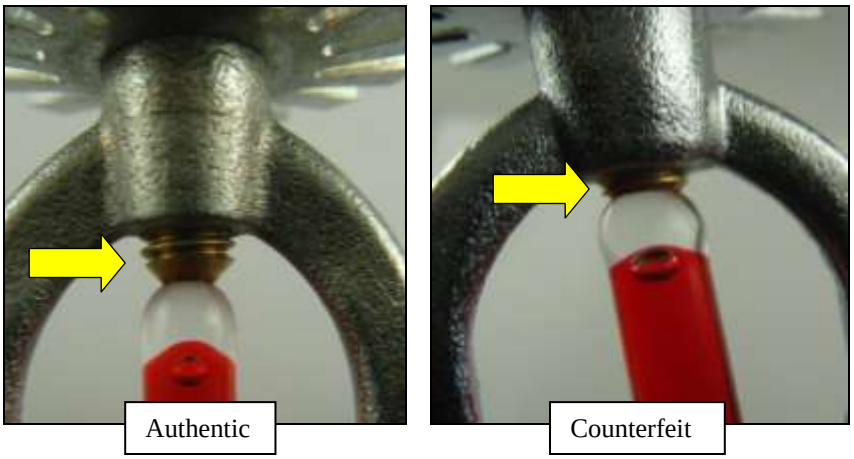


Figure 6 above shows the differences in appearance of the bulb end of the load screw. In the authentic version, more of the screw protrudes from the frame boss, and the screw tip is machined to a taper. The counterfeit sprinkler does not have as much screw protruding and the screw is threaded to the tip, and lacks the taper of the authentic version.

Figure 7

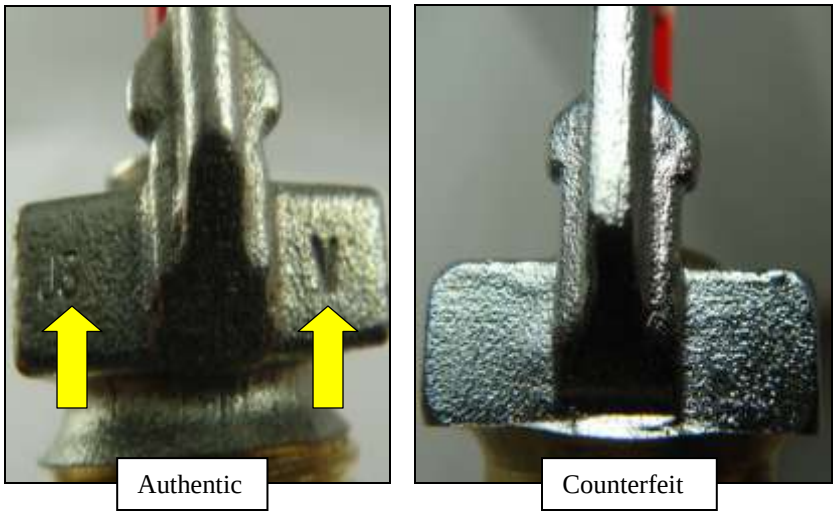


Figure 7 above shows the side of the frame base on the authentic and counterfeit sprinklers. The authentic sprinkler has two manufacturing codes stamped into the frame base while the counterfeit sprinkler has no such codes.

R1725

Figure 8

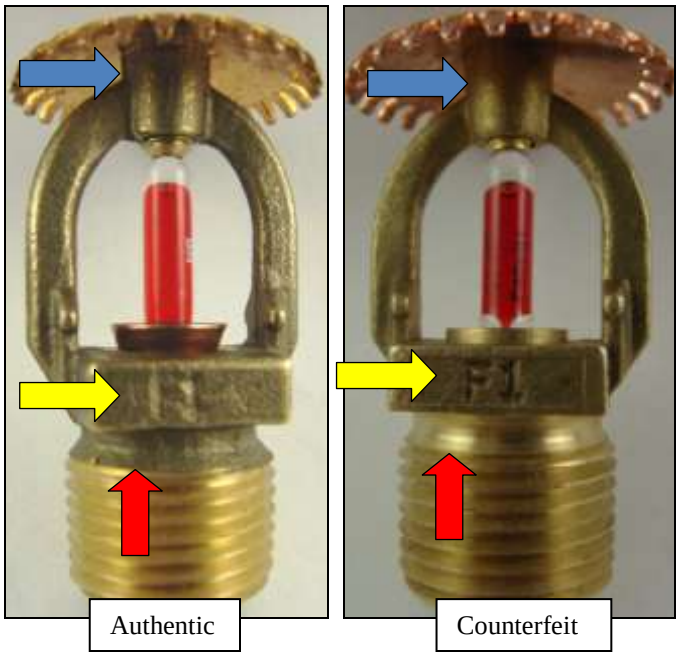


Figure 8 above shows an authentic Reliable R1725 on the left and the counterfeit version on the right. The blue arrow indicates the difference in standoff distance between the deflector and the top of the frame arms. This distance is much greater on the counterfeit version.

The yellow arrow indicates the difference in model series casting marks. The "F1" cast into the authentic frame is offset left while the counterfeit mark is centered. The fonts used are also different.

The red arrow indicates the difference in inlet machining. The authentic sprinkler has no machined undercut beneath the frame base. The counterfeit sprinkler is machined from the top of the threads to the underside of the frame base, creating a higher sheen than the rougher, casting finish.

Figure 9

Figure 9 above shows a close view of the thermal activation elements and cups used in the authentic and counterfeit sprinklers. Like the counterfeit pendent sprinkler, the counterfeit upright uses a cup machined from solid material and a Job model F5 bulb. The authentic sprinkler has a drawn cup and utilizes a model N5 bulb manufactured by Norbulb.

Figure 10

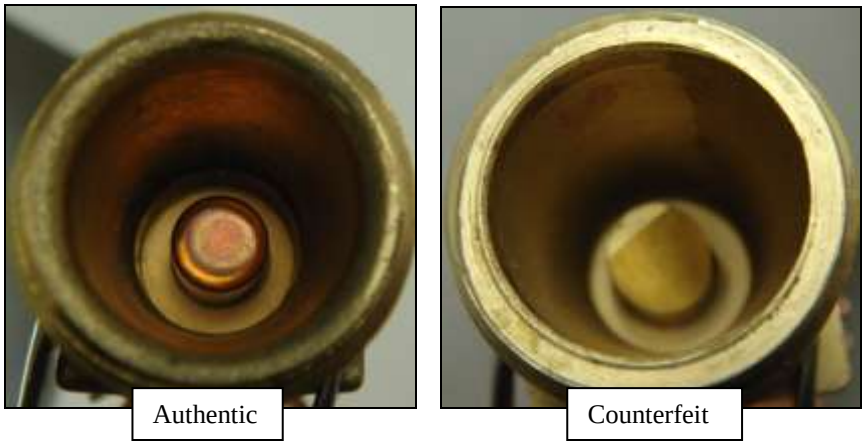


Figure 10 above shows the waterways of the authentic and counterfeit sprinklers. The bottom of the cup is visible for each. The bottom of the authentic cup is flat with a rounded edge while the machined counterfeit cup has an angled bottom with sharp edges.

Figure 11

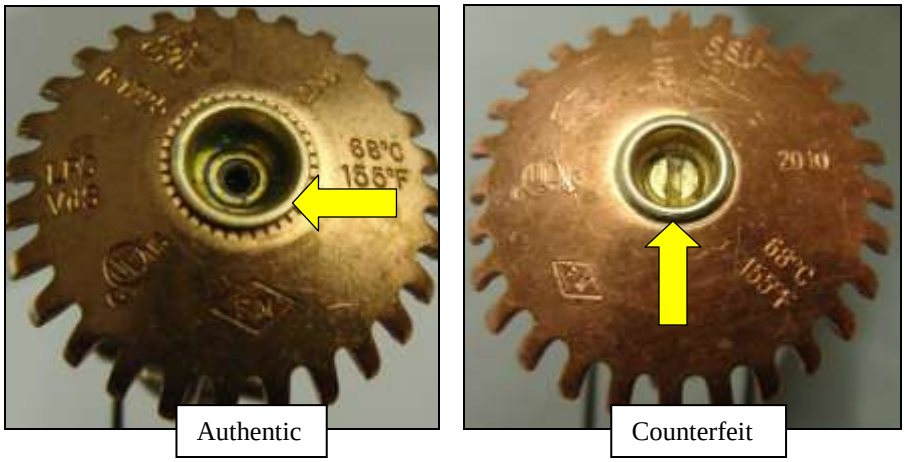


Figure 11 above shows the deflectors of the authentic and counterfeit sprinklers in detail. The deflectors themselves are nearly identical. The most noticeable difference is the deflector attachment (rollover) which is wider and more substantial on the authentic sprinkler than on the counterfeit sprinkler. The load screws used, the driven end of which can be seen within the bounds of the rollover, are different as well. Both use headless type screws, however the authentic sprinkler is a socket hex drive screw while the counterfeit is a slotted type.

Figure 12

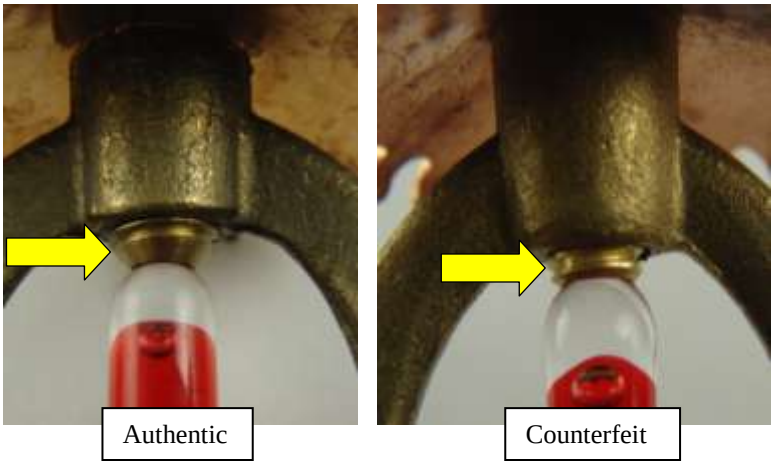


Figure 6 above shows the differences in appearance of the bulb end of the load screw. In the authentic version, more of the screw protrudes from the frame boss, and the screw tip is machined to a taper. The counterfeit sprinkler does not have as much screw protruding and the screw is threaded to the tip, and lacks the taper of the authentic version.

Figure 13

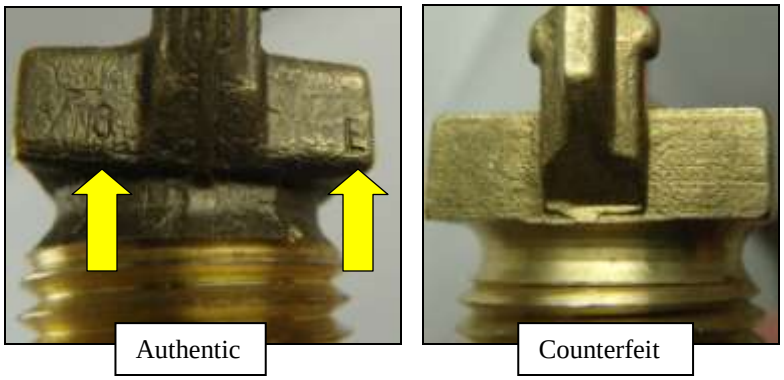


Figure 13 above shows the side of the frame base on the authentic and counterfeit sprinklers. The authentic sprinkler has two manufacturing codes stamped into the frame base while the counterfeit sprinkler has no such codes.