# $CO_2$ Component Description

**Discharge Head, Grooved-Nut and Plain-Nut**

Kidde Fire Systems
A UTC Fire & Security Company

Effective: March 2007
**K-81-9130**

## *FEATURES*

- ***Grooved-Nut Discharge Head (P/N 872442)***
- ***Plain-Nut Discharge Head (P/N 872450)***
- ***Plain-Nut Discharge Head is used on each cylinder of a Multiple-Cylinder System***
- ***Grooved-Nut Discharge Head is used for Single $CO_2$ cylinders that are connected to Single Main and Reserve Systems***
- ***See Data Sheets K-1060, K-1070, and K-1071 for more information***

## *DESCRIPTION*

Each $CO_2$ cylinder and valve assembly must be equipped with a Discharge Head at installation to actuate the cylinder valve. The Discharge Head is assembled to the top of the cylinder valve and contains a spring-loaded piston, which, when actuated by $CO_2$ pressure, is designed to depress the main check in the valve and discharge the contents of the cylinder. The piston provides the necessary mechanical advantage to open the main check on the valve. The transfer outlet is designed to mate with the swivel adapter on the 1/2-inch and 3/4-inch Flexible Discharge Hoses (P/Ns 252184 and 251821 respectively). The Discharge Head also contains an integral Stop Check whose function is to automatically prevent the loss of $CO_2$ during system discharge in the event that a cylinder is removed from the distribution piping.

The Grooved-Nut Discharge Head will allow discharge of $CO_2$ when the I-Valve is actuated by a control head. Pressure entering the outlet will not actuate the cylinder. Pressure actuation is isolated only to that single cylinder.

The Plain-Nut Discharge Head offers two means of actuation: the contents of the cylinder can be discharged by pressure entering the outlet from the pressure in the manifold being discharged from a master cylinder, or, when the I-Valve is actuated by a control head. The Plain-Nut Discharge Head is used on each cylinder of a multiple-cylinder system.

## *INSTALLATION*

1. Wipe off the cylinder valve sealing surface.
2. Verify that the O-Rings are installed in the mating surface grooves at the bottom of the swivel nut cavity. O-rings must be free of dirt and other contaminants. The o-rings are pre-greased at the factory and should not require further greasing.
3. Ensure that the pilot orifice located between the inner and outer o-ring is unobstructed.
4. Ensure that the discharge port is clean and unobstructed.
5. Install the discharge head on the cylinder valve. Tighten securely.


**Note:** The $CO_2$ cylinder must be permanently connected into the system piping. Never attach the discharge head to the cylinder valves until the cylinders are secured in brackets or racking. Under no circumstances is the discharge head to remain attached to the cylinder valve after removal from service, during shipment, handling, storage or during filling.

## *MAINTENANCE*

### MONTHLY

Inspect the $CO_2$ Discharge Head for cracks, corrosion, grime, etc. Ensure that the discharge head is tightly secured to the $CO_2$ cylinder valve and connected to the agent cylinder with the 1/2-inch or 3/4-inch Discharge Hose. If any defects are found during the monthly inspection, immediately contact Kidde Distributor to service the systems.

## *SPECIFICATIONS*

- Body: Brass
- O-Rings: Rubber
- Spring: Stainless Steel
- Stop Check: Brass
- Weight: 4.0 lb. (1.8 kg)

## *DIMENSIONS*

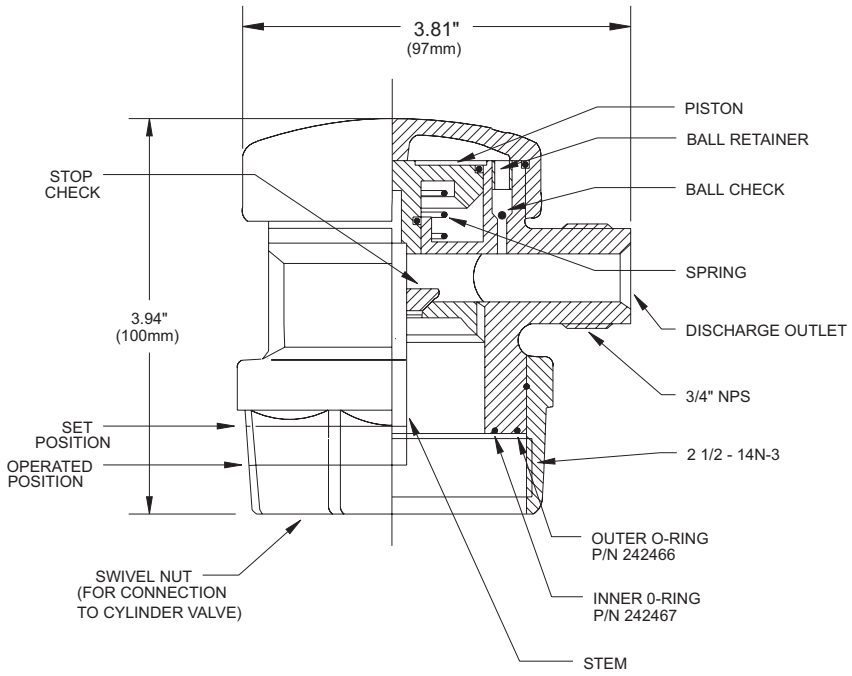


Figure 1. Discharge Head, Plain-Nut

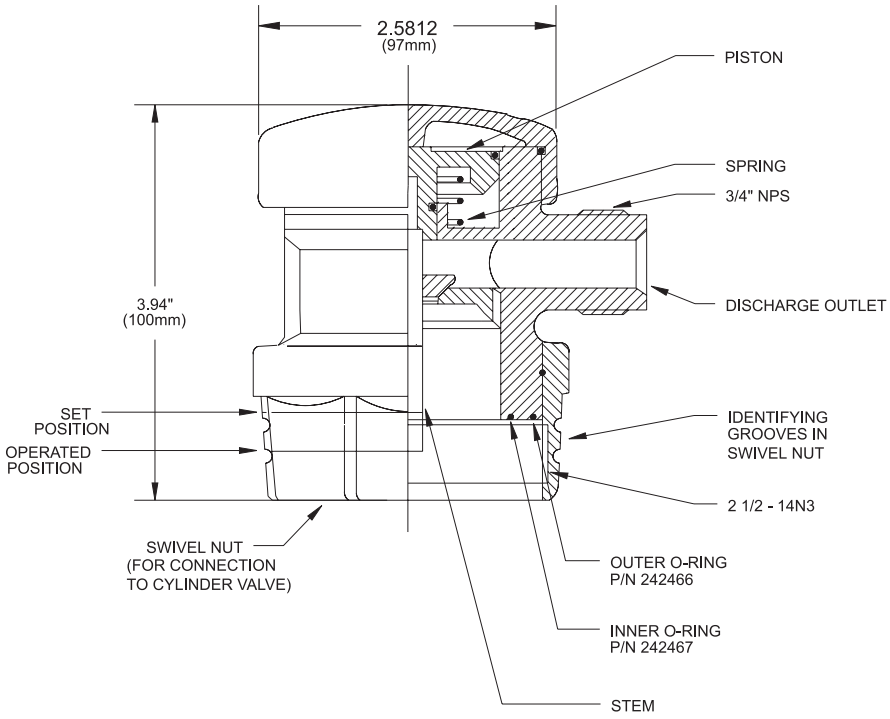


Figure 2. Discharge Head, Grooved-Nut



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