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TOPIC #2 FIRE HYDRANTS

The fire hydrant is an essential part of the water distribution system. It is the main source of water supply at the time of a fire emergency. Therefore, it is necessary that all fire fighters know the location of the fire hydrants in their company's "First-in" running area, especially in areas where the scarcity of hydrants requires special procedures to provide adequate water supply.

The following is a list of the types of fire hydrants in use in the Cincinnati Fire Division.




SINGLE HYDRANT

Discharge: (1) – (3") inch discharge (front center)
Bonnet: Ribbed
Type: Bourbon
Turns On: Clockwise
Turns on with water pressure (easy to turn)
Traffic Model: No



DOUBLE HYDRANT

Discharge: (2) – (3") inch discharges (center front)
Bonnet: Ribbed
Type: Bourbon
Turns On: Clockwise
Turns on with water pressure (easy to turn)
Traffic Model: No

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STEAMER HYDRANT

Discharge: (1) – (4-1/2") inch discharge (center front)
Bonnet: Ribbed
Type: Bourbon
Turns On: Clockwise
Turns on with water pressure (easy to turn)
Traffic Model: No



HOUSTON HYDRANT

Discharge: (1) – (4-1/2") inch discharge (center front)
(2) – (2-1/2") discharges below steamer
Bonnet: Ribbed
Type: Bourbon
Turns On: Clockwise
Turns on with water pressure (easy to turn)
Traffic Model: No



BOX TYPE

3-way


Discharge: (1) – (4-1/2") inch discharge (center front)
(2) – (3") discharges around barrel

BOX TYPE

4-way

Discharge: (1) – (4-1/2") inch discharge (center front)
(3) – (3") discharges around barrel

Bonnet: Ribbed
Type: Bourbon
Turns On: Clockwise
Turns on with water pressure (easy to turn)
Traffic Model: No

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KENNEDY HYDRANT

Discharge: (2) – (3”) discharges
Bonnet: Smooth
Type: Kennedy
Turns On: Counter-Clockwise
Turns on with against water pressure (hard to turn)
Traffic Model: No

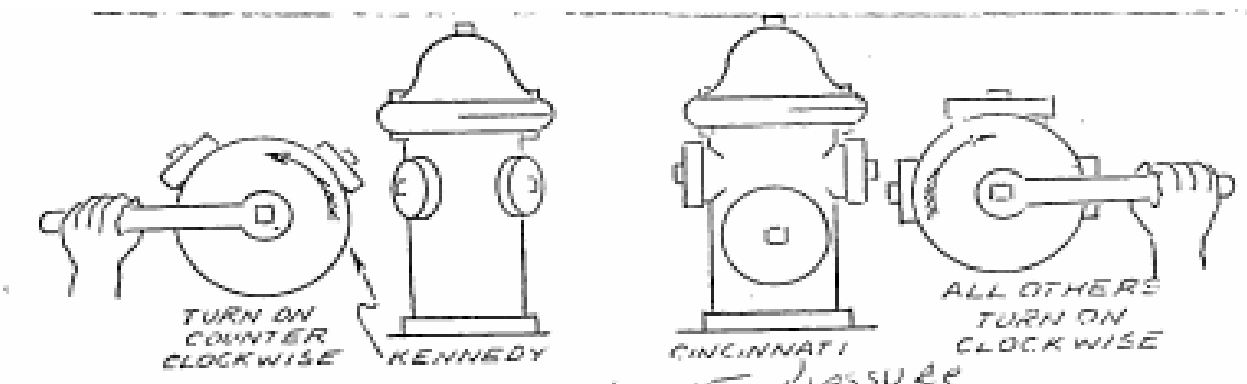



CINCINNATI HYDRANT

Discharge: (1) – (4-1/2”) discharge
(2) – (2-1/2”) discharges to left & right
Bonnet: Smooth
Type: Kennedy
Turns On: Clockwise
Turns on with against water pressure (hard to turn)
Traffic Model: Depends upon model of Cincinnati Hydrant
(see models for description)

***All fire hydrants in use for the Cincinnati Fire Division turn on clockwise, with the exception of the Kennedy hydrant, which turns on counter clockwise.**

IF IN DOUBT – FOLLOW THE ARROW ON THE TOP OF THE HYDRANT



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HYDRANT CLASSIFICATION AND MARKINGS

BOURBON TYPE-

Includes single, double, box type, houston and steamer. This type turns on with the water pressure. Since it turns on with the water pressure, this hydrant type is much easier to turn on. These hydrants can be identified by their “ribbed” upper bonnet.

KENNEDY TYPE-

Includes both the Kennedy and Cincinnati models of fire hydrants. This type of hydrant turns on against the water pressure. Since it turns on against water pressure, it makes it much harder to turn the stem. These hydrants can be identified by their “smooth” upper bonnet.

TRAFFIC MODELS-


Some Cincinnati hydrants are designed to break off at ground level, when struck, to prevent further damage to the barrel.

YELLOW BONNET-

Denotes static pressure less than 100 psi.

BLACK BONNET-

Denotes static pressure 100 psi. or greater.

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CINCINNATI HYDRANTS

These hydrants are custom made to our specifications. Over the years this hydrant design has been revised several times to take advantage of new technology, etc. We now find ourselves with seven basic models of the Cincinnati fire hydrants. Identifications of the various models is occasionally necessary, due to a need for maintenance, repair or inventory. The following is a brief description of the various models.

1. CINCINNATI “H” TYPE:


This hydrant can be identified by its one-piece design. It can be seen that there is no flange or joint for separation at the ground line. This was the first Cincinnati model which was used.



2. CINCINNATI “H T” TYPE: (“T” stands for Traffic model)

This hydrant is exactly like the “H” type, except that a breakaway coupling can be found at the ground line. This coupling is designed to break upon impact and thereby saves the hydrant from underground damage. This hydrant also has a two piece stem with a breakaway coupling at the ground line.



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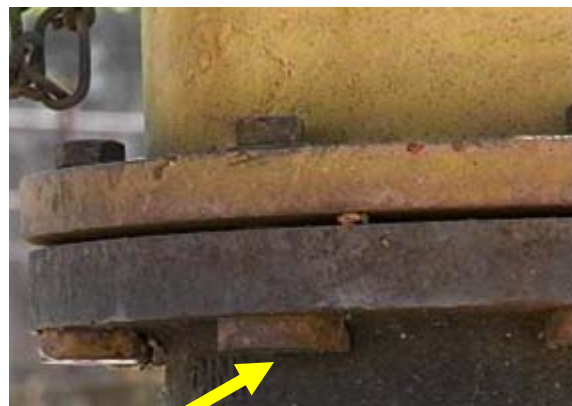
3. CINCINNATI "V" TYPE:

This is a two-piece hydrant with a bolted flange at the ground line. The easiest way to identify this type is to check the bolts and nuts at the ground line flange. If they are regular steel bolts and nuts, then it is a "V" type. This hydrant is not designed to break away upon impact.




4. CINCINNATI "L" TYPE:

This is the same basic type of hydrant as the "V", except it is a traffic model and is designed to break away at the ground line flange upon impact. The easiest way to identify this hydrant is by noting the presence of powdered-zinc breaking nuts under the ground line flange. These nuts are easily distinguished from the regular octagonal steel nuts which can be found on the "V" type. This hydrant also has a two-piece stem with a breakable coupling.



ZINC NUTS

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5. CINCINNATI "L D" TYPE:

This hydrant is the same as the "L" type except, that it is a "Dry Top" model. This means that water does not enter the area in the top of the hydrant where the operational mechanism is located. This keeps the lubricant in place and allows for easier operation of the hydrant. The easiest way to tell this hydrant from the "L" type is by noting the date on the rear of the hydrant. If the date is 1979 or later the hydrant will be an "L D" type.




6. CINCINNATI "W" TYPE:

One of the newest fire hydrants in our water system. The Cincinnati "W" hydrant is a breakaway design. The discharges are the same size as other Cincinnati type hydrants, except they are in line with each other. These hydrants are equipped with a weather shield around the top nut. This protects their exposed operating area from dirt and freezing rain.

ALL DISCHARGES ARE ALIGNED AND HAS A ROUND TOP



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7. MUELLER TYPE

A newer style hydrant has appeared on some mains in the city. It is called the Mueller Hydrant. It has (1) – (4-1/2") and (2) – (2-1/2") discharges and looks very similar to the Cincinnati "W" hydrant, except for the fact that it has a ribbed upper bonnet. It's grease fitting is on the side of the bonnet as depicted below. This hydrant is also a traffic model and turns on by following the arrow on top of the hydrant (clockwise).

