MUELLER® A-20808/A-20809 NON-ADJUSTABLE VERTICAL INDICATOR POST

INSTALLATION INSTRUCTIONS

STARTING YEAR DATE 2011

GENERAL DESCRIPTION

Vertical Indicator Posts (Ref. Figure A) are designed to operate non-rising stem (inside screw) gate valves, which are used to control an underground water supply to automatic sprinkler, water spray deluge, foam-water deluge, or standpipe fire protection systems. They permit operation of underground valves while providing an above ground visual indication as to whether the valves are open or shut, in addition to a means for locking the valves in a particular position. Indicator posts provide for valve operation from outside of the protected property and, therefore, the opportunity for more prompt valve operation in an emergency situation.

A-20808 Indicator Posts will accommodate 4 through 14 inch size post indicator valves (PIV) requiring 14 to 43 turns to open and that are listed or approved for fire protection system service. A-20809 Indicator Posts will accommodate 16 through 24 inch size post indicator valves requiring 49 to 75 turns to open.

Indicator Posts are provided “standard order” for use with left hand opening valves; however, they may be “special ordered” for use with right hand opening valves or converted in the field for use with a right hand opening valve by changing the left hand opening Post Head to a right hand opening Post Head.

Indicator Posts accept direct attachment of a 1/2 inch NPT mounting electric supervisory switching device which can be used by proprietary and central stations to monitor the open position of the Indicator Post. Detailed information on attaching a UL/FM approved Supervisory Control Valve Switch (supplied by customer) is given in the Technical Data section.

APPROVALS AND STANDARDS

Model A-20808/A-20809 Indicator Posts are listed by Underwriters Laboratories Inc. (UL) Model A-20808 Indicator Posts are approved by Factory Mutual Research Corporation.

The Model A-20808/A-20809 Indicator Posts described herein must be installed and maintained in compliance with this document, as well as with the applicable standards of the National Fire Protection Association, in addition to the standards of any other authorities having jurisdiction. Failure to do so may impair the integrity of these devices.

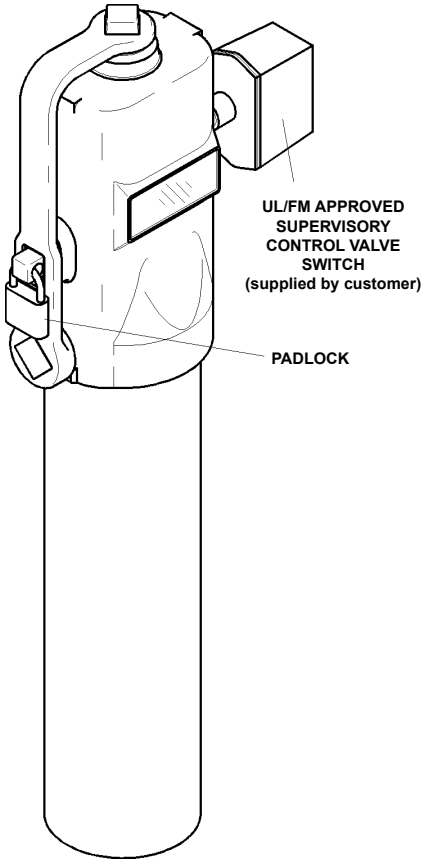

Fig. A

TYPICAL INSTALLATION OF:
A-20808 - 4”-14” POST INDICATOR VALVES
A-20809 - 16”-24” POST INDICATOR VALVES

⚠ WARNING ⚠

The owner is responsible for maintaining their fire protection system and devices in proper operating condition. The installing contractor or manufacturer should be contacted relative to any questions.

Removing or disabling the tamper resistant feature of the special key wrench screw used to secure the cover of the Supervisory Control Valve Switch will void its listings and approval.

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TECHNICAL DATA

Indicator Posts:

The A-20808/A-20809 Indicator Post bolts directly onto the stuffing box flange of 4 through 24 inch post indicator valves (PIV) employing 2 inch operating nuts. The Bell attaches to a PIV mounting flange having four bolt holes spaced at 90° on a 101/2 inch diameter bolt circle. The Bell has 3/4 inch clearance holes for the mounting bolts.

The A-20808 Indicator Post has a Threaded Sleeve which can readily accommodate field positioning of the "OPEN" and "SHUT" Targets for 4 through 14 inch PIVs requiring 14 to 43 turns to open. The A-20809 Indicator Post has a Threaded Sleeve for 16 through 24 inch PIVs requiring 49 to 75 turns to open.

The A-20808/A-20809 Indicator Post is available in three different "Order Lengths." Each "Order Length" provides for adjustment of dimension "D" in Figure B, as indicated in Table 3. The Stem requires no field cutting within the indicated adjustment range of each "Order Length."

Table 4 indicates the nominal trench depths which can be accommodated by each "Order Length," for the 4 through 24 inch Mueller® Resilient Wedge PIVs based on the typical diameter of underground pipe. For PIVs with different 'B' dimensions, the minimum and maximum trench depths which will be accommodated by each "Order Length" can be calculated from the relationships given in Figure B.

"Standard order" Posts are factory set with the "OPEN" and "SHUT" Targets positioned for use with left hand (counter-clockwise) opening valves. An arrow on the Post Head indicates the left hand direction of opening. The position of the Targets may be reversed in the field in order to accommodate a right hand opening valve, provided that the Post Head is changed to one indicating right hand opening.

The Post Head is ASTM A126 Class B gray iron; Operating Nut, Bell and A-20808 Wrench are ASTM A536 ductile iron. The Cap is polypropylene. The Windows are made from plexiglass. The Barrel, Upper Stem, Lower Stem, Coupling, Coupling Insert, and A-20809 Wrench are carbon steel. The Targets for both posts are Nylon. The A-20808 Threaded Sleeve is Nylon; the A-20809 Threaded Sleeve is Aluminum. The Post Head, Barrel, and Wrench are painted red.

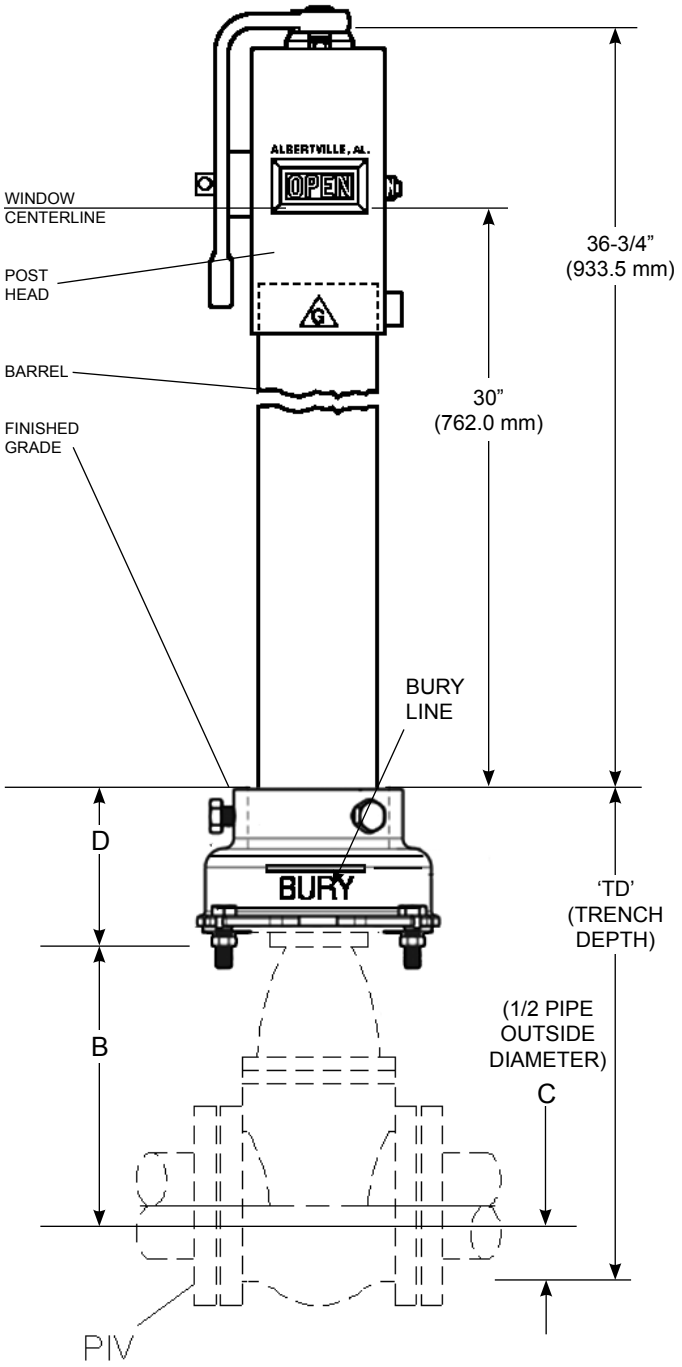

Fig. B

NOMINAL INSTALLATION DIMENSIONS FOR MODEL A-20808/A-20809 INDICATOR POSTS

MUELLER® A-20808/A-20809 NON-ADJUSTABLE VERTICAL INDICATOR POST

INSTALLATION INSTRUCTIONS

Table 1 Dimension 'B'
for Mueller Resilient Wedge Post Indicator Valves

Valve Size	Dimensions in Inches	Turns To Open
	B	
4"	10.95	14
6"	14.91	20-1/2
8"	18.02	26-1/2
10"	21.62	33
12"	24.52	38-1/2
14"	29.13	43-1/2
16"	32.35	49
18"	38.35	57
20"	41.48	63
24"	47.94	75

Table 2 Dimension 'C' - 1/2 of Pipe O.D.
(Typical for underground pipe)

Pipe Size	Dimension 'C' in Inches
4"	2.40
6"	3.45
8"	4.53
10"	5.55
12"	6.60
14"	7.65
16"	8.70
18"	9.75
20"	10.80
24"	12.90

Table 3 Dimension 'D' Size

Size No.	Dimension 'D' in Inches
0	2"
1	8"
2	14"

Table 4 Nominal Trench Depths
for Mueller IBBM Double Disc and Resilient Wedge Post Indicator Valves

Size No.	Valve Size									
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**20**	**24**
0	1' - 3"	1' - 8"	2' - 1"	2' - 5"	2' - 9"	3' - 3"	3' - 7"	4' - 2"	4' - 6"	5' - 3"
1	1' - 9"	2' - 2"	2' - 7"	3' - 11"	3' - 3"	3' - 9"	4' - 1"	4' - 8"	5' - 0"	5' - 9"
2	2' - 3"	2' - 8"	3' - 1"	4' - 5"	3' - 9"	4' - 3"	4' - 7"	5' - 2"	5' - 6"	6' - 3"

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INSTALLATION INSTRUCTIONS

Supervisory Control Valve Switch:
Figures E and F illustrate attachment of the Supervisory Control Valve Switch (supplied by customer).

INSTALLATION
Post Targets must be positioned for use with the appropriate number of turns to open the post indicator valve. Improper positioning of the Targets can result in an erroneous indication of the open or shut position of the valve. The A-20808 Indicator Post will accommodate positioning of the Targets to operate PIVs requiring 14 to 43 turns to open; the A-20809 Indicator Post will accommodate positioning the Targets to operate PIVs requiring 49 to 75 turns to open.

NOTE

The Targets for the A-20808 Indicator Post have been factory set for use with a 6 inch Mueller PIV and the Targets for the A-20809 Indicator Post have been factory set for a 24 inch Mueller PIV. Consequently, Steps 6 through 10 need not be performed when installing the A-20808 Indicator Post with a 6 inch Mueller PIV (or with a PIV that requires 20-1/2 turns to open) or the A-20809 Indicator Post with a 24 inch Mueller PIV (or with a PIV that requires 75 turns to open).

Proceed to install the Post as follows:

1. Completely close the PIV.

2. Place approximately 5 inch high blocks onto the stuffing box flange of the installed valve. Set the Indicator Post onto the blocks and generally centered over the PIV operating nut.

3. Slide out the Shipping Disk (20), and allow the Coupling (5b) to drop down over the PIV operating nut. Attach the Coupling to the operating nut with the Cotter Pin (5d).

4. Remove the blocks and lower the Indicator Post onto the PIV stuffing box flange. Bolt the Bell and stuffing box flange together using the four Cap Screws and Nuts (17, 18).

NOTES

If the pipe is sloped, it may be necessary to shim some of the Cap Screws (18) with steel washers, so that the Post will be plumb and the Stem will run true with the center of the Post Head. Coupling clearances can accommodate a maximum pipe slope of 5 degrees.

It is recommended that a spirit level be used to set the vertical alignment of the Indicator Post.

1. Post Head
2. Lower Barrel
3. Bell
4. Hex HD Cap Screw 3/4-10 UNC x 1" (3 Required)
5. Lower Stem Assembly
   a. Lower Stem
   b. Coupling
   c. Coupling insert
   d. Cotter Pin, 1/4" x 3" (2 req'd)
7. Hex Socket Set Screw 3/4-10UNC x 1"
8. Pipe Plug, 1/2" NPT
9. Window (2 req'd)
11. Wrench
12. Upper Stem Assembly
    a. Operating Nut
    b. Spring Pin, 1/8" x 2-1/4"
    c. Cotter Pin, 1/8" x 1-1/2"
    d. Threaded sleeve
    e. Upper Stem
13. Weather Cap
14. Retaining Ring
15. "OPEN" Target
16. "SHUT" Target
17. Hex Head Cap Screw, 5/8-11UNC x 2-1/4" (4 req'd)
18. Hex Nut, 5/8-11UNC (4 req'd)
19. Washer
20. Shipping Disc

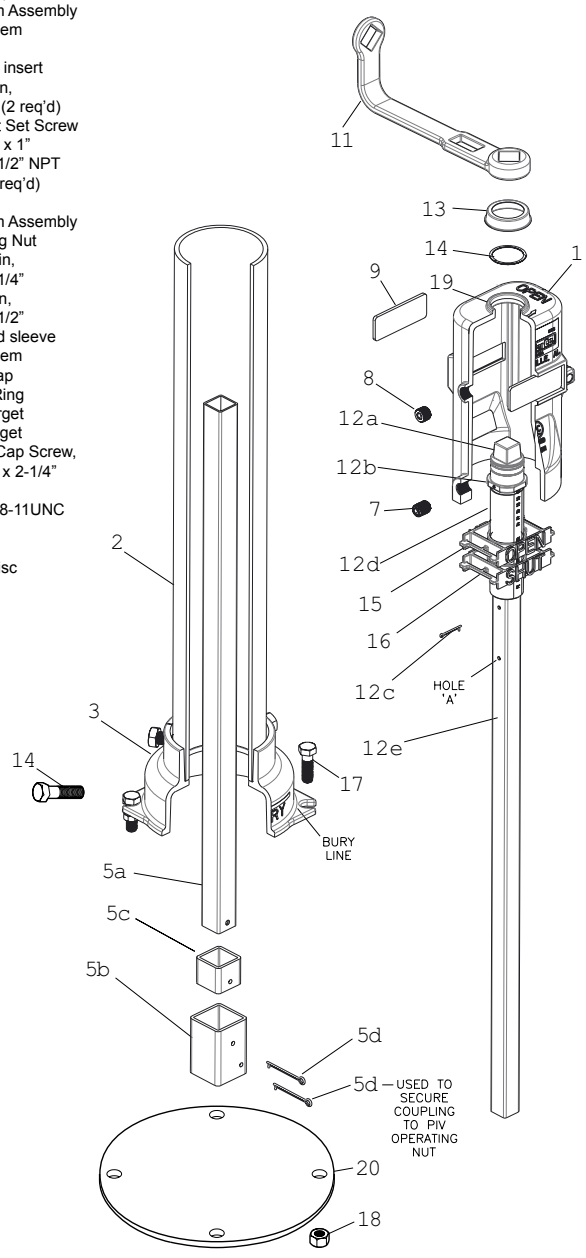


Fig. C

MODEL A-20808/A-20809
VERTICAL INDIATOR POST ASSEMBLY

MUELLER® A-20808/A-20809 NON-ADJUSTABLE VERTICAL INDICATOR POST

INSTALLATION INSTRUCTIONS

5. Loosen the Set Screw (7), and lift the Post Head/ Upper Stem Assembly (1, 12) just high enough to insert a philips head screwdriver through Hole “A” in the Upper Stem (12e). The philips head screwdriver will temporarily hold the Post Head (1) above the Barrel (2).

6. Remove the Wrench (11), pry off the Cap (13), remove the Retaining Ring (14), remove the Washer (19)*, and then lift the Post Head clear of the Upper Stem Assembly (12).

7. Position the Targets per Figure D.

8. Replace the Post Head (1), Washer (19)*, Retaining Ring (14), and Cap (13).

9. Remove the phillips head screwdriver, lower the Post Head, and tighten the Set Screw (7).

10. Using the Wrench (11), open and close the valve and check to see that the “SHUT” and “OPEN” Targets are clearly in view in the Windows, at their respective positions, and that there is no feeling of binding of the Upper or Lower Stem Assemblies (5, 12). It is recommended that the turns to open/close be counted and compared to the valve manufacturer’s specification, in order to verify full valve opening.

NOTES

If there is any indication of binding of the internal operating parts, the vertical alignment of the Indicator Post must be corrected.

If the Target Plates are not properly in view, completely close the PIV and then repeat Steps 5 through 10.

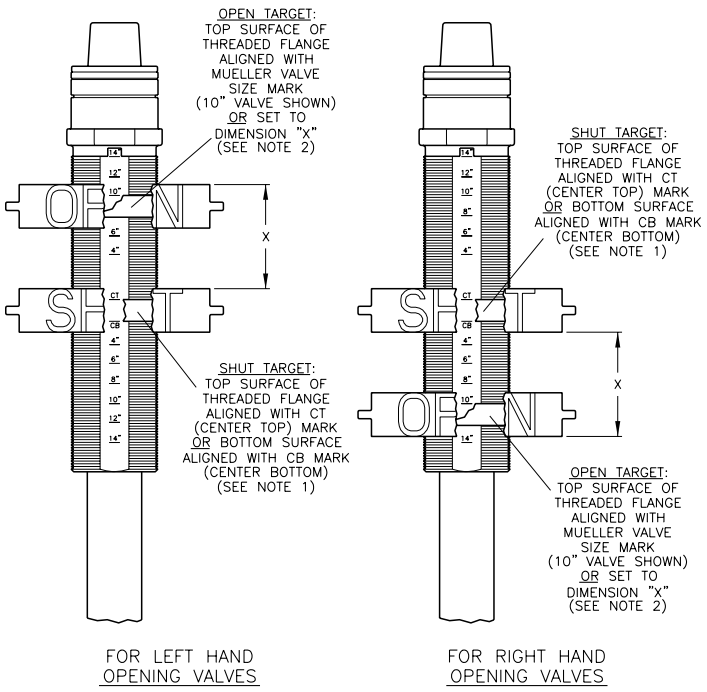
11. Back-fill to final grade and repeat Step 10.

12. Tighten the switch mounting hole plug if the Supervisory Control Valve Switch is not to be immediately attached.

13. Proceed to install the Supervisory Control Valve Switch (supplied by customer) as follows:

13a. Remove the Cover from the Switch assembly, and then loosen the Trip Rod Locking Screw. Adjust the position of the Trip Rod so that it extends about 1-3/8 inches beyond the Nipple, and then securely tighten the Trip Rod Locking Screw.

13b. Rotate the Post Operating Nut until the PIV is fully open. Note the position of one of the “OPEN” Targets in its Window.



A-20808 INDICATOR POST

NOTES
1. SET SHUT TARGET FIRST.
2. FOR 16” MUELLER VALVES (prior to 2012) SET TO DIMENSION ‘X’ (3.5”)
3. FOR VALVES MANUFACTURED BY OTHER THAN MUELLER COMPANY, SET TO DIMENSION ‘X’ CALCULATED AS FOLLOWS:

$$\text{‘X’ IN INCHES} = \frac{\text{NO. OF TURNS TO OPEN VALVE}}{14}$$

A-20809 INDICATOR POST

NOTES
1. SET SHUT TARGET FIRST.
2. FOR VALVES MANUFACTURED BY OTHER THAN MUELLER COMPANY, SET TO DIMENSION ‘X’ CALCULATED AS FOLLOWS:

$$\text{‘X’ IN INCHES} = \frac{\text{NO. OF TURNS TO OPEN VALVE}}{22}$$

Fig. D

POSITIONING OF TARGETS

13c. Rotate the Operating Stem until the “OPEN” Targets are out of the Post Windows. Note the direction in which the “OPEN” Target will move when it is returned to the Post Window.

13d. Remove the Nipple from the Switch assembly, and then with the Locknut screwed over the Nipple threads, hand tighten the Nipple into the 1/2 inch NPT hole provided in the Post Head, and then tighten the Locknut against the Post Head to secure the Nipple firmly in place.

13e. Refer to Figure E or F as appropriate, and note the

*A-20806 build before 2012 (washer is not required when cap is used).

direction in which the Trip Rod must move when the "OPEN" Target is returned to the Post Window.

Slide the Switch assembly as far as possible onto the Nipple while maintaining proper orientation of the Switch assembly, and then tighten the Set Screw that holds the Switch assembly onto the Nipple.

13f. Attach leads from an electrical continuity meter to the appropriate terminals.

13g. Return the valve to its fully open position. Verify that the "OPEN" Target returns to the position noted in Step b. Also, verify that the Switch contacts change position within two turns of the valve being fully open.

13h. Begin to return the valve to its closed position. Verify that the Switch contacts change back to their original position within two turns from full open.

NOTE

If the Upper Stem Assembly binds before the "OPEN" Target reaches its full open position, or the switch contacts do not change position as described in Steps g and h, then the Targets must be readjusted.

If the Targets require readjustment, close the PIV, remove the Switch assembly, and repeat Steps 5 and 10; however, when positioning the Targets, rotate both Targets at the same time as necessary so that the "OPEN" target will trip the Actuator Rod of the Switch. Repositioning of the "OPEN" and "SHUT" Targets relative to each other should not be necessary. Repeat Steps b through h.

13i. Remove the electrical continuity test leads. The external field wiring connections can now be made to the Switch.

NOTE

Use of a weathertight conduit connector with a gasket seal is recommended.

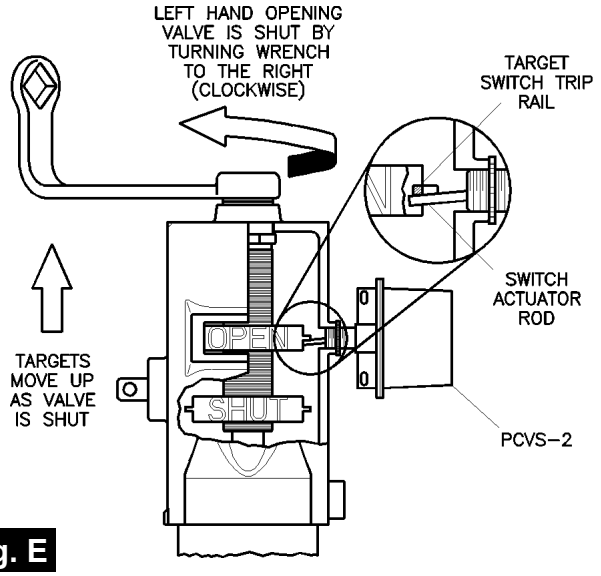


Fig. E

ATTACHMENT OF THE SUPERVISORY CONTROL VALVE SWITCH FOR LEFT HAND OPENING VALVES

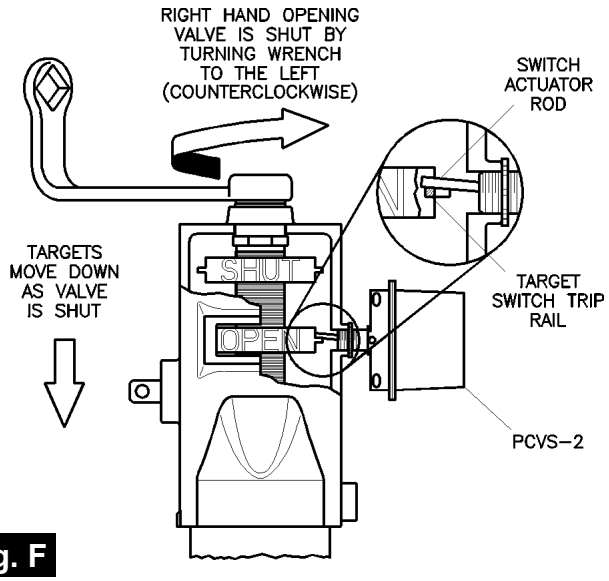


Fig. F

ATTACHMENT OF THE SUPERVISORY CONTROL VALVE SWITCH FOR RIGHT HAND OPENING VALVES

MUELLER® A-20808/A-20809 NON-ADJUSTABLE VERTICAL INDICATOR POST

INSTALLATION INSTRUCTIONS

CARE AND MAINTENANCE

Model A-20808/A-20809 Indicator Posts do not require any regular schedule maintenance.

It is recommended that Indicator Posts used to operate fire protection system water control valves be locked in the fully-open position using the Post Wrench as shown in Figure A. The locks must be sturdy and resistant to breakage except by heavy bolt cutters.

It is also recommended that once a month a visual inspection procedure be followed, with the following items checked:

1. The Post Head, Barrel, and Windows have not been damaged.

2. The Targets indicate that the valve is open.

3. The Wrench is in place on the Indicator Post, and it is properly locked open.

In addition, on a quarterly basis, the Indicator Post should be closed two turns and then reopened tight to verify that the PIV is in the full open position and properly engages with the Post and, that the Supervisory Switch contacts (if applicable) properly change position.

Any damaged parts must be immediately replaced.
The Indicator Post should also be physically tried to be sure that the valve is in the fully-open position, if there are any damaged parts, sign of tampering, or the position of the valve is questionable.

NOTES

Before closing a fire protection system main valve for maintenance work on either the Indicator Post or fire protection systems which is controls, permission to shut down the affected fire protection systems must first be obtained from the proper authorities and all personnel who may be affected by this decision must be notified.

It is recommended that fire protection systems be inspected by a qualified Inspection Service.

REPLACEMENT PARTS:

Specify: (specify description) for use with
Model A-20808/A-20809 Indicator Post, Part No. (specify).

1.	O.L. Post Head (A-20808)	148692
1.	O.R. Post Head (A-20808)	148649
1.	O.L. Post Head (A-20809)	241029
1.	O.R. Post Head (A-20809)	241030
2.	Barrel “0”	241272
2.	Barrel “1”	241273
2.	Barrel “2”	241274
3.	Bell	290636
4.	Hex HD Cap Screw 3/4-10 UNC x 1”	190560
5.	Lower Stem Assembly	287085
7.	Hex Socket Set Screw 3/4 - 10 UNC x 1”	198428
8.	Pipe Plug 1/2” NPT	198582
9.	Window	148790
11.	Wrench (A-20808)	148690-1
12.	Upper Stem Assembly “0” (A-20808)	287080
12.	Upper Stem Assembly “1” (A-20808)	287081
12.	Upper Stem Assembly “2” (A-20808)	287082
12.	Upper Stem Assembly “0” (A-20809)	287646
12.	Upper Stem Assembly “1” (A-20809)	287647
12.	Upper Stem Assembly “2” (A-20809)	287648
13.	Weather Cap	290143
14.	Retaining Ring	290157
15.	Target Open (A-20808)	290144
15.	Target Open (A-20809)	290552
16.	Target Shut (A-20808)	290145
16.	Target Shut (A-20809)	290553
17.	Hex Bolt	290191
18.	Hex Nut	190939
19.	Washer*	290175

*Washer use discontinued in 2011 (washer is not required when cap is used).
+ Barrel, Bell, and Hex HD cap screws replaced fabricated barrel & bell in 2015

NOTE: For models with handwheels, contact customer service for replacement parts.

MUELLER® A-20808/A-20809 NON-ADJUSTABLE VERTICAL INDICATOR POST

INSTALLATION INSTRUCTIONS

Mueller Co.

CUSTOMER SERVICE - Decatur, IL (800) 423-1323
Canada – Mueller Canada Inc., Barrie, ON (705) 719-4959

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