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Installation, Operation, & Maintenance Manual For A120MAN Remote Manual Release

214.357.4591 DALLAS TEXAS 800.345.8105 | Distributed By Squibb Taylor | March 2021

IMPORTANT: KEEP THIS DOCUMENT WITH THE PRODUCT UNTIL IT REACHES THE END USER.

⚠WARNING

The A120MAN Fail Safe Remote Manual Release must be used for *ANHYDROUS AMMONIA APPLICATIONS ONLY.* DO NOT USE IN LPG/PROPANE SERVICE.

USER SAFETY RESPONSIBILITY STATEMENT FOR SQUIBB TAYLOR PRODUCTS

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

- This document and other information from Squibb Taylor and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Squibb Taylor or authorized distributors.

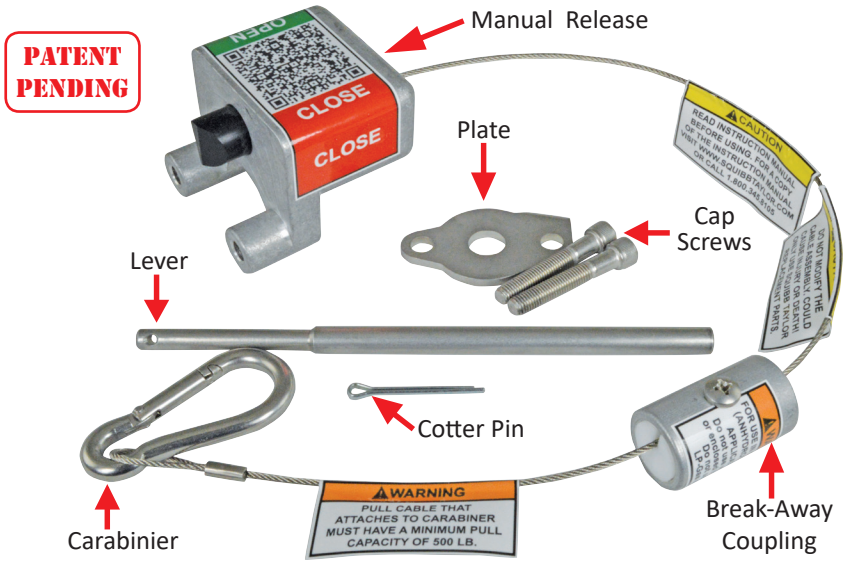
To the extent that Squibb Taylor or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

Failure to follow these instructions or to properly install and maintain this equipment could result in personal injury or death. Equipment must be installed, operated and maintained in accordance with federal, state and local codes. The installation must also comply with NFPA No. 70 and ANSI K61.1, (CGA G-2.1) standards and/or local authority having jurisdiction. Only personnel trained in the proper procedures, codes, standards and regulations of the Anhydrous Ammonia industry shall install and service this equipment.

Scope of the Manual

This instruction manual covers installation, operation, & maintenance for the A120MAN Manual Release for 1 1/4" (A120) & 1 1/2" (A125 & A15) internal valves manufactured by Marshall Excelsior Co. for outdoor Anhydrous Ammonia (NH3) applications.

PATENT PENDING



Parts List

Part Description	Qty.
Manual Release with Break-Away Coupling	1 Pc.
Lever	1 Pc.
Plate	1 Pc.
Cotter Pin	1 Pc.
Hex Mounting Cap Screws	2 Pc.
Carabinier	1 Pc.

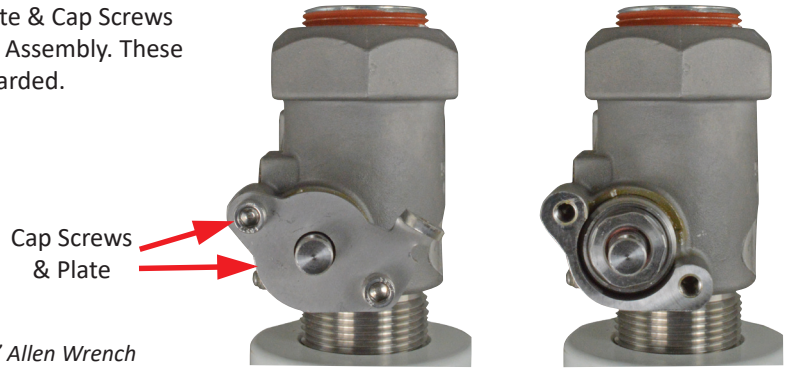
NOTE: REFER TO THE INSTRUCTION MANUAL SUPPLIED WITH THE INTERNAL VALVE OR SQUIBB TAYLOR'S WEBSITE FOR ALL WARNINGS, CUSTOMER NOTIFICATIONS, SPECIFICATIONS, OPERATION, CAUTIONS, MAINTENANCE, & PARTS. CALL SQUIBB TAYLOR @ 800.345.8105 WITH ANY QUESTIONS BEFORE PROCEEDING.

Installation On The A120-45A & A120-60A Valves

⚠WARNING

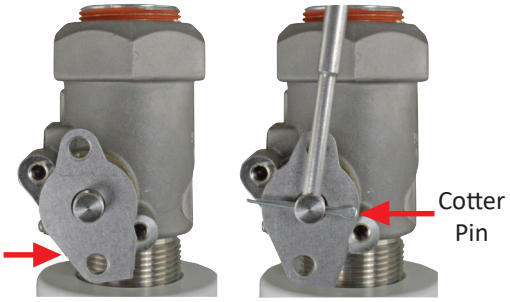
When installing or removing Internal Valve from tank, make sure all Product & Pressure has been removed from Nurse Tank and any Downstream Piping.

1. Remove Plate & Cap Screws from Gland Assembly. These can be discarded.

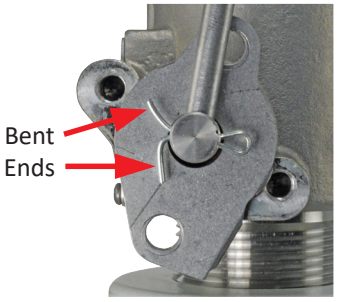


Tool Used: 5/16" Allen Wrench

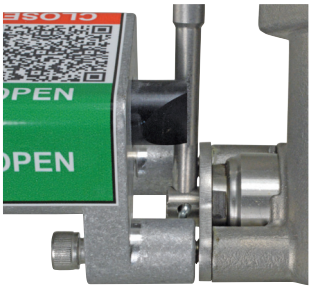
2. Install the Plate as shown. Insert the thin end of the Lever into the shaft of the Gland Assembly. Line up the hole in Lever with the hole in the Gland Assembly Shaft & insert the Cotter Pin.



3. Secure the Lever to the Gland Assembly Shaft by bending the ends of the Cotter Pin back to secure it. Verify that the Cotter Pin ends DO NOT rub against the Plate.

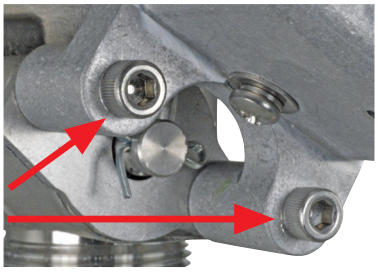


4. Attach the Manual Release onto the valve. Insert the New Cap Screws(2) into the Manual Release. Line up the holes on the plate with the holes on the valve. Line up the Manual Release with the holes on the plate & valve. Start threading the screws into the valve.

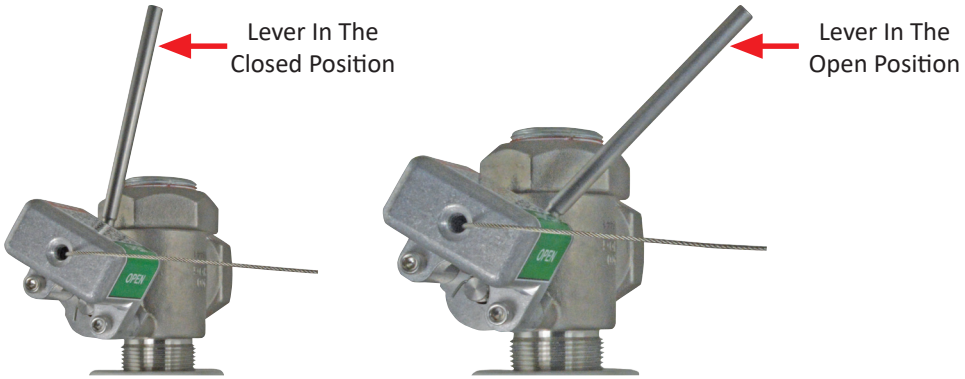


5. Secure the Manual Release onto the valve by tightening the Cap Screws(2) with an Allen Wrench to 25 - 30 Inch-Pounds of Torque.

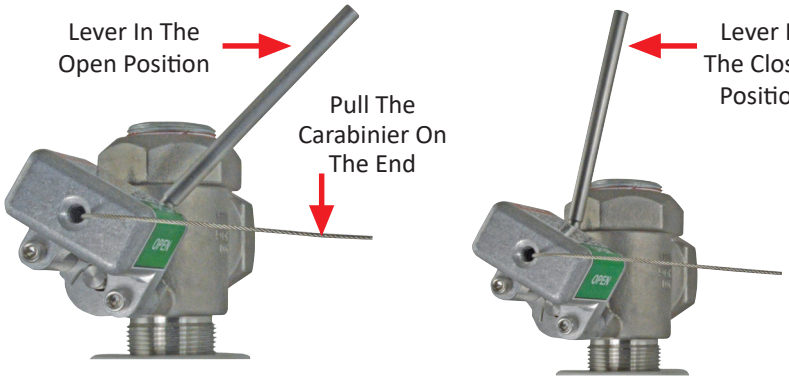
Tool Used: 5/16" Allen Wrench



6. Test the Open operation of the Manual Release. Move the Lever to the right until it stops & release it. The plunger on the Manual Release should have retracted into the Release Housing to allow movement of the lever. Once the Lever moves past the plunger it should pop out to prevent it from moving back to the Closed Position.



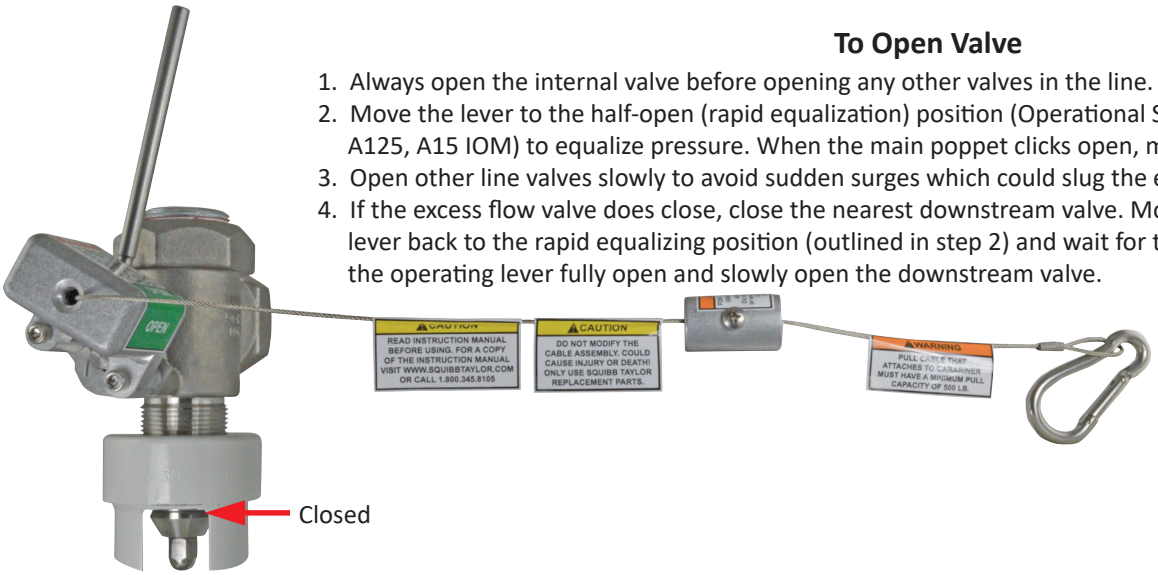
7. Test the Close operation of the Manual Release. Pull on the Carabinier on the end of the cable until the plunger retracts & allowing the Lever to move to the Closed Position. Release the cable. Check the position of the lever to make sure that valve is closed. Check the plunger to make sure that it has popped back out.



⚠WARNING

Since there is strong spring force on the operating lever, avoid getting in the way of the lever as it moves to the closed position. Failure to do so could result in personal injury.

Operation Of The A120-45A & A120-60A Valves

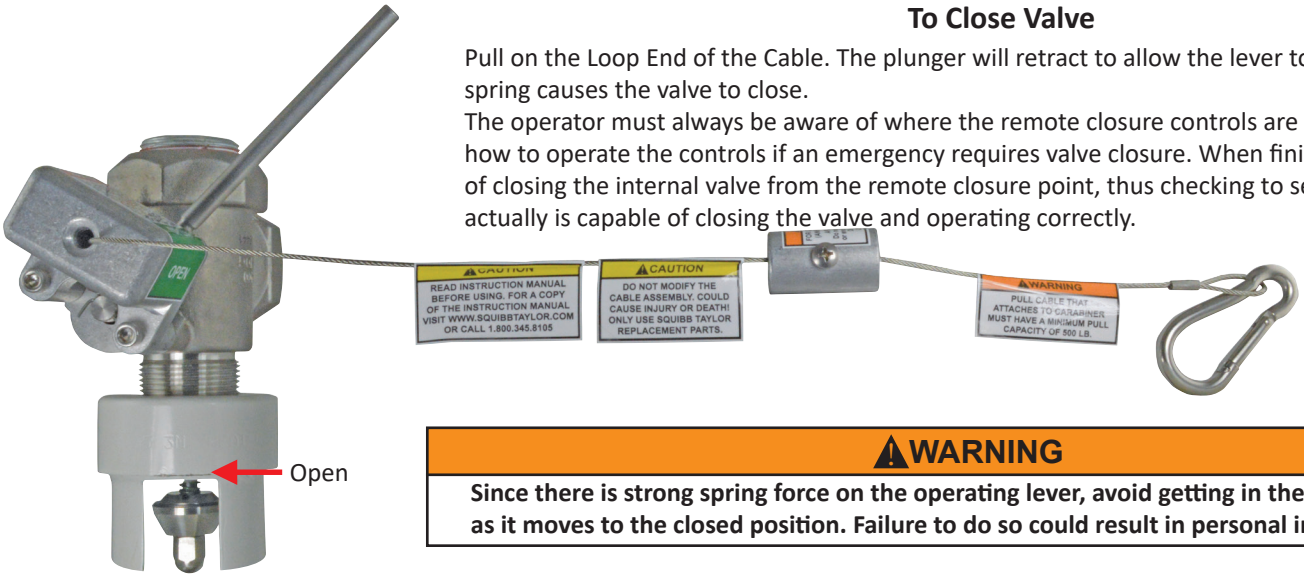


To Open Valve

1. Always open the internal valve before opening any other valves in the line.
2. Move the lever to the half-open (rapid equalization) position (Operational Schematic Figure 1, View #2 - A120, A125, A15 IOM) to equalize pressure. When the main poppet clicks open, move the operating lever fully open.
3. Open other line valves slowly to avoid sudden surges which could slug the excess flow valve shut.
4. If the excess flow valve does close, close the nearest downstream valve. Move the internal valve's operating lever back to the rapid equalizing position (outlined in step 2) and wait for the valve to click open. Then move the operating lever fully open and slowly open the downstream valve.

⚠CAUTION

DO NOT Force open lever against NH3 Nurse Tank flow before pressure is equalized on each side of the main valve disk.
DO NOT Modify the Cable/Carabinier Assembly. Could cause Injury or Death! Only Use Squibb Taylor Replacement Parts.



To Close Valve

Pull on the Loop End of the Cable. The plunger will retract to allow the lever to move. The closing spring causes the valve to close.

The operator must always be aware of where the remote closure controls are located and know how to operate the controls if an emergency requires valve closure. When finished, make a habit of closing the internal valve from the remote closure point, thus checking to see that the control actually is capable of closing the valve and operating correctly.

⚠WARNING

Since there is strong spring force on the operating lever, avoid getting in the way of the lever as it moves to the closed position. Failure to do so could result in personal injury.

Assembled Valve & Manual Release is now an Emergency Shutoff Valve for Anhydrous Ammonia (NH3) Nurse Tank.

- **Test For Proper Operation @ A Minimum Of Once A Month & Daily During Field Application Periods.**
- **Always Test Operation Before Sending To Field For Use.**

Maintenance

⚠WARNING

ONLY PERSONNEL TRAINED IN THE PROPER PROCEDURES, CODES, STANDARDS & REGULATIONS OF THE ANHYDROUS AMMONIA INDUSTRY SHALL PERFORM MAINTENANCE ON THIS EQUIPMENT. Before starting any type of maintenance, close off the A120MAN valve(s) & remove all Anhydrous Ammonia (NH3) pressure from the Outlet of the Internal Shutoff Valve. If maintenance or repairs are to be made on the internal valve(s), refer to the Instruction Manual for the particular valve model. An A120MAN manual release that has been disassembled must be tested for proper operation before being returned to service.

CHECK ACTUATOR PERIODICALLY FOR THE FOLLOWING:

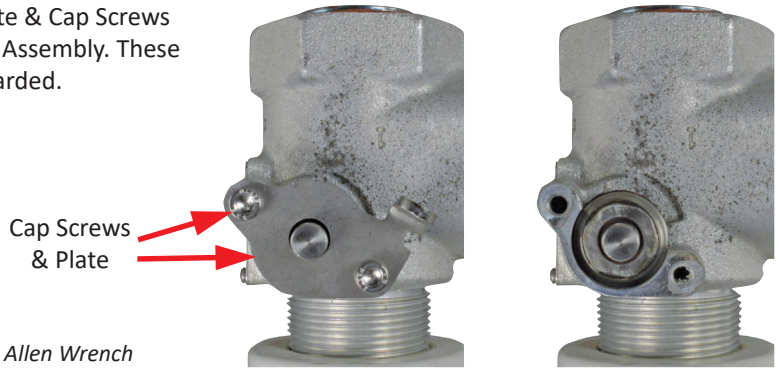
1. See that the manual release is properly connected, works freely and is not worn.
2. Make sure there are no obstructions or debris to block the valve and lever from closing.
3. Make sure that both cables move freely inside the Break-Away Coupling.

Installation On The A125-45A, A125-60A, A15-45A, & A15-60A Valves

⚠WARNING

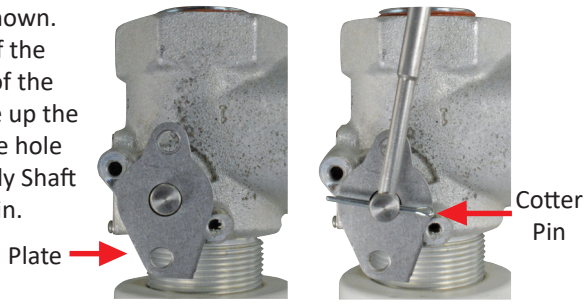
When installing or removing Internal Valve from tank, make sure all Product & Pressure has been removed from Nurse Tank and any Downstream Piping.

1. Remove Plate & Cap Screws from Gland Assembly. These can be discarded.

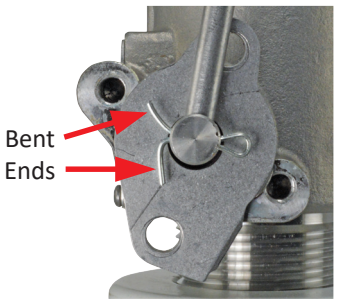


Tool Used: 5/16" Allen Wrench

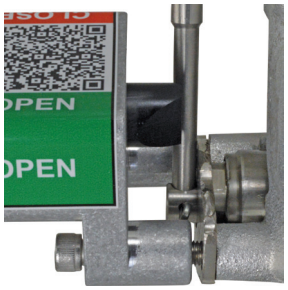
2. Install the Plate as shown. Insert the thin end of the Lever into the shaft of the Gland Assembly. Line up the hole in Lever with the hole in the Gland Assembly Shaft & insert the Cotter Pin.



3. Secure the Lever to the Gland Assembly Shaft by bending the ends of the Cotter Pin back to secure it. Verify that the Cotter Pin ends DO NOT rub against the Plate.



4. Attach the Manual Release onto the valve. Insert the New Cap Screws(2) into the Manual Release. Line up the holes on the plate with the holes on the valve. Line up the Manual Release with the holes on the plate & valve. Start threading the screws into the valve.



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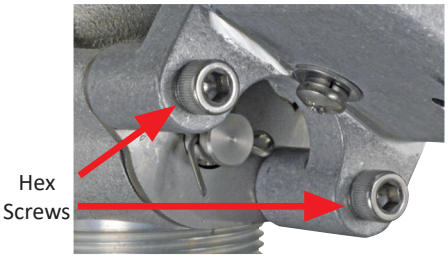
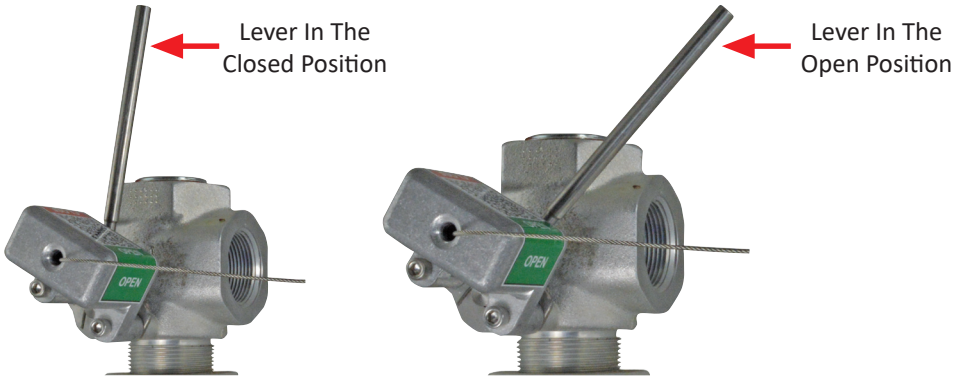


6. Test the Open operation of the Manual Release. Move the Lever to the right until it stops & release it. The plunger on the Manual Release should have retracted into the Release Housing to allow movement of the lever. Once the Lever moves past the plunger it should pop out to prevent it from moving back to the Closed Position.



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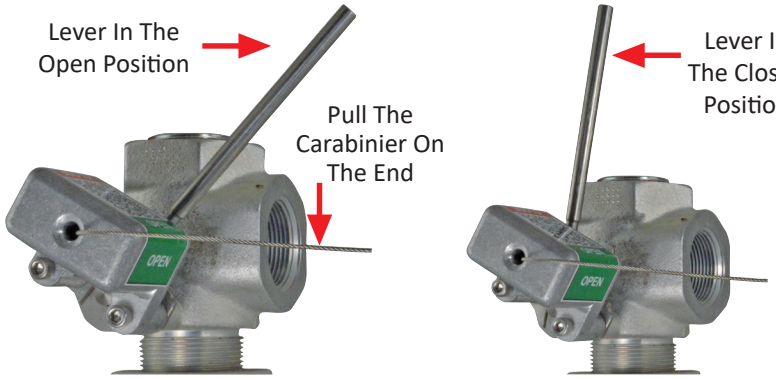

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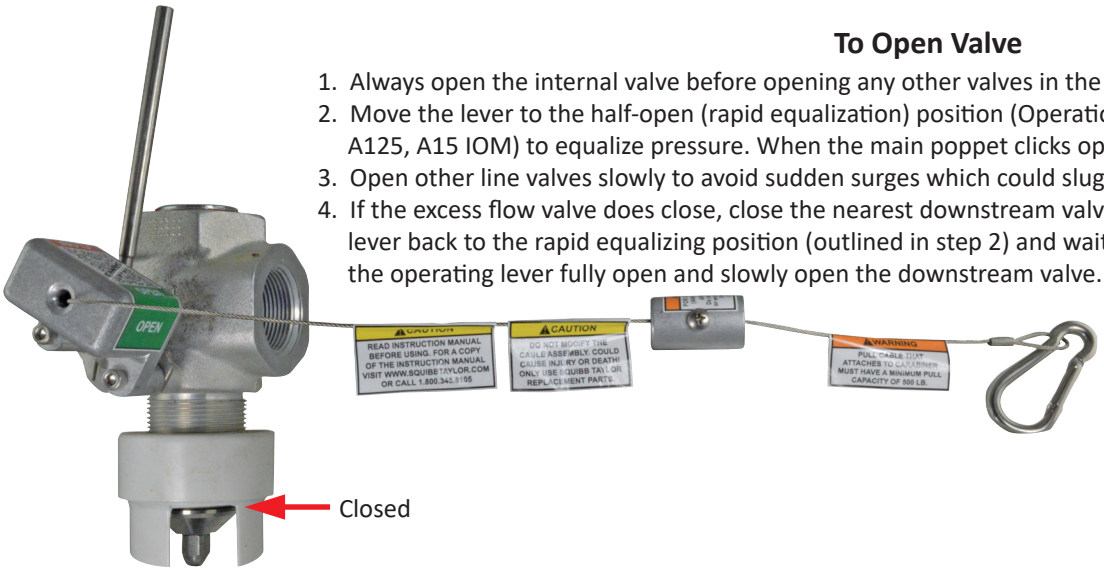
Operation Of The A125-45A, A125-60A, A15-45A, & A15-60A Valves



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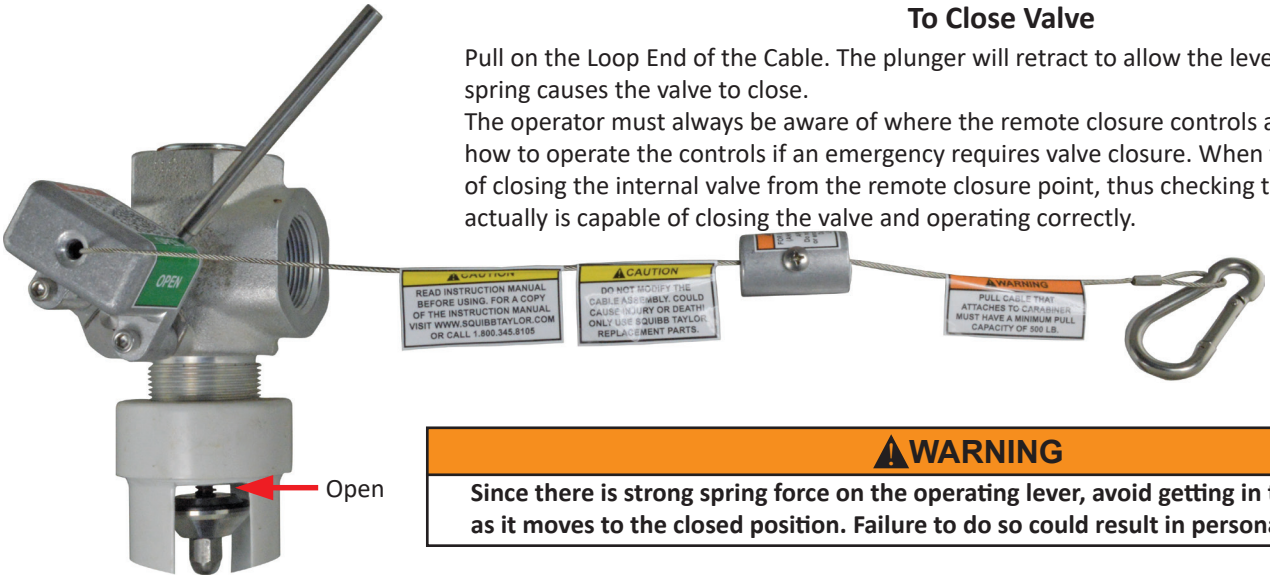

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CHECK ACTUATOR PERIODICALLY FOR THE FOLLOWING:

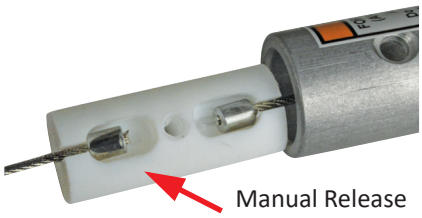
1. See that the manual release is properly connected, works freely and is not worn.
2. Make sure there are no obstructions or debris to block the valve and lever from closing.
3. Make sure that both cables move freely inside the Break-Away Coupling.

Replacement Of The Break-Away Insert

1. Remove the Phillips Head Screw from the Break-Away Coupling.

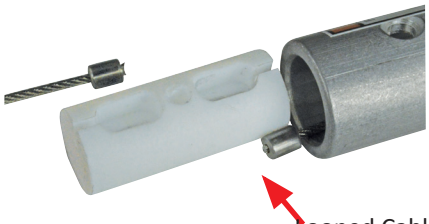
2. Remove the Break-Away Insert from the Break-Away Coupling. Grasp the outside of the Coupling & push on the Break-Away Insert until it is free of the Coupling.

3. Make sure that you push the Break-Away Insert out of the Coupling on the side that is attached to the Manual Release.

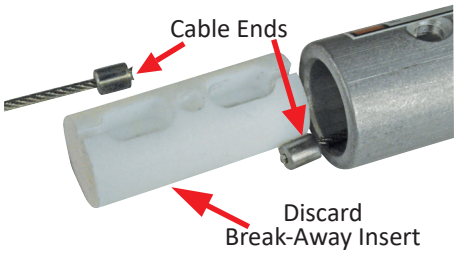


4. Remove the Manual Release cable from the Break-Away Insert.

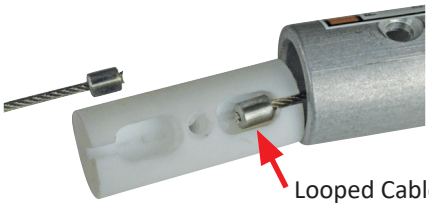
5. Remove the Looped Cable from the Break-Away Insert.



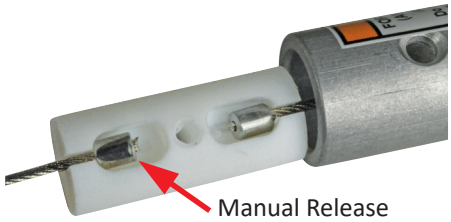
6. Discard the Break-Away Insert. Inspect the Crimped Ends of the Cables for wear or deterioration.



7. Replace the Looped Cable End back into the New Break-Away Insert.



8. Replace the Manual Release Cable End back into the new Break-Away Insert.



9. Keep both cables spread apart from the center of the Break-Away Insert. Slide the Coupling over the Break-Away Insert, just enough to cover the ends of the cables.

10. Line the Big Hole in the Coupling up with the hole that is in the Break-Away Insert.

11. Replace the Phillips Head Screw as shown. Tighten the screw with a Phillips Head Screw driver.

12. Check both cables. Make sure that each cable rotates in & out.

Note:

The Break-Away Insert should be replaced after a Break-Away.

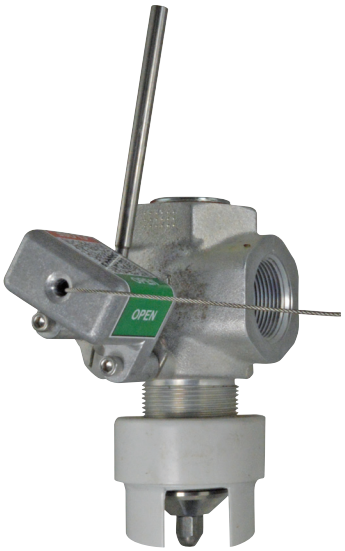
⚠CAUTION

DO NOT Modify the Cable/Carabinier Assembly. Could cause Injury or Death! Only Use Squibb Taylor Replacement Parts.

Replacement Remote Manual Release Valve & Assemblies

Item Number	Part Number	Tank Connection	Valve Outlet	Body	Excess Flow Rate
111901	A120-45AM	1 1/4” MNPT	1 1/4” FNPT	Angle	45 GPM
111903	A120-45SM			Straight	
111906	A125-45AM	1 1/2” MNPT	1 1/4” FNPT	Angle	45 GPM
111908	A125-45SM			Straight	
111911	A125-60AM			Angle	60 GPM
111913	A125-60SM			Straight	
111916	A15-45AM	1 1/2” MNPT	1 1/2” FNPT	Angle	45 GPM
111918	A15-45SM			Straight	
111921	A15-60AM			Angle	60 GPM
111923	A15-60SM			Straight	

WARNING - For Anhydrous Ammonia (NH3) Service Only

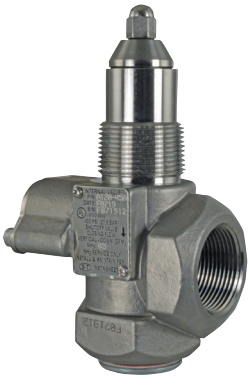


A120-45AM

Replacement Nurse Tank Valves

Item Number	Part Number	Tank Connection	Valve Outlet	Body	Excess Flow Rate
111904	A120-45A	1 1/4” MNPT	1 1/4” FNPT	Angle or Straight	45 GPM
111909	A125-45A	1 1/2” MNPT	1 1/4” FNPT		45 GPM
111914	A125-60A				60 GPM
111919	A15-45A	1 1/2” MNPT	1 1/2” FNPT		45 GPM
111924	A15-60A				60 GPM

WARNING - For Anhydrous Ammonia (NH3) Service Only


A120-45A

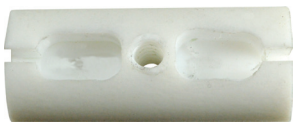
Replacement Parts

Item Number	Part Number	Part Description
111930	LB-1	Latch Block Break-Away Assembly
111931	LC	Lanyard & Carabinier Kit
111932	BAI	Break-Away Insert

WARNING - For Anhydrous Ammonia (NH3) Service Only


LB-1

LC


BAI

While this information is presented in good faith and believed to be accurate, Individuals using this literature must exercise their independent judgment in evaluating product selection and determining product appropriateness for their particular purpose, system requirements and certifications. The manufacturer reserves the right to change product designs and specifications without notice.